

Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- Product identifier
- Trade name: (+)-JQ1
- · Article number: 11187
- · CAS Number: 1268524-70-4
- · Application of the substance / the mixture This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- · Details of the supplier of the safety data sheet · Manufacturer/Supplier: Cayman Chemical Co.
- 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- · Information department: Product safety department · Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

· Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS). · Label elements · GHS label elements None · Hazard pictograms None · Signal word None · Hazard statements None · Classification system: NFPA ratings (scale 0 - 4) Health = 0Fire = 0Reactivity = 0· HMIS-ratings (scale 0 - 4) HEALTH 0 Health = 0

0 Fire = 0 FIRE Reactivity = 0 REACTIVITY 0

(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 1)

Trade name: (+)-JQ1

- · Other hazards
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1268524-70-4 (+)-JQ1

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 2)

Trade name: (+)-JQ1

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
- Appearance:
 Form: Solid
 Color: Not de
 Odor: Charac
 Structural Formula
 Molecular Weight
 Odor threshold: Not de

Not determined. Characteristic C23H25CIN4O2S 457 g/mol Not determined.

(Contd. on page 4)

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Printing date 07/14/2023

Revision date 07/14/2023

Trade name: (+)-JQ1

	(Contd. from page 3
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wa	ater): Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 16 mg/ml; DMF:PBS (pH 7.2) (1:9): 0.1 mg/ml; DMSO: 10 mg/ml; Ethanol: 14 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- Hazardous decomposition products: carbon oxides, hydrogen chloride, nitrogen oxides, sulfur oxides

11 Toxicological information

· RTECS Number XJ9095198

(Contd. on page 5)

US -

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: (+)-JQ1

(Contd. from page 4)

- Information on toxicological effects
- · Acute toxicity:
- · LD/LC50 values that are relevant for classification:
- Oral TDLO 840 mg/kg (mouse)
- Primary irritant effect:
- · on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- · Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- · **Bioaccumulative potential** No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.

• Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- Recommendation: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · DOT, IMDG, IATA

not regulated

(Contd. on page 6)

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Printing date 07/14/2023

Revision date 07/14/2023

Trade name: (+)-JQ1

		(Contd. from page
· UN proper shipping name · DOT, IMDG, IATA	not regulated	
Transport hazard class(es)		
· DOT, ADN, IMDG, IATA · Class	not regulated	
· Packing group · DOT, IMDG, IATA	not regulated	
Environmental hazards:	Not applicable.	
Special precautions for user	Not applicable.	
Transport in bulk according to Anne MARPOL73/78 and the IBC Code	x II of Not applicable.	
UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

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- Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- · TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

· Department issuing SDS: Environment protection department.

· Contact: -

· Date of preparation / last revision 07/14/2023

(Contd. on page 7)

[—] US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: (+)-JQ1

 Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPVB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health 	from page 6)
vPvB: very Persistent and very Bioaccumulative	
TLV: Threshold Limit Value	
PEL: Permissible Exposure Limit	
REL: Recommended Exposure Limit	
• * Data compared to the previous version altered.	US



Printing date 03/22/2022

Revision date 03/22/2022

Page 1/7

1 Identification

- Product identifier
- Trade name: GSK-J4 (hydrochloride)
- · Article number: 12073
- · CAS Number: 1797983-09-5
- · Application of the substance / the mixture This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- · Details of the supplier of the safety data sheet · Manufacturer/Supplier:
- Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- · Information department: Product safety department · Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- · Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS). · Label elements
- · GHS label elements None
- · Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

Health = 0Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)

HEALTH 0 Health = 00 Fire = 0 FIRE Reactivity = 0 REACTIVITY 0

(Contd. on page 2)

US

Printing date 03/22/2022

Revision date 03/22/2022

(Contd. from page 1)

Trade name: GSK-J4 (hydrochloride)

- · Other hazards
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 1797983-09-5 GSK-J4 (hydrochloride)

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- Most important symptoms and effects, both acute and delayed May cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects. No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- \cdot Methods and material for containment and cleaning up: Pick up mechanically.
- Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- · PAC-2: Substance is not listed.

(Contd. on page 3)

⁻ US

Printing date 03/22/2022

Revision date 03/22/2022

(Contd. from page 2)

Trade name: GSK-J4 (hydrochloride)

• **PAC-3:** Substance is not listed.

7 Handling and storage

- · Handling:
- Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage:
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.

• **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:
- The usual precautionary measures for handling chemicals should be followed.
- Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

Information on basic physica General Information	al and chemical properties	
Appearance:		
Form:	Solid	
Color:	Not determined.	
Odor:	Characteristic	
Structural Formula	C24H27N5O2 • HCI	
Molecular Weight	454 g/mol	

Printing date 03/22/2022

Revision date 03/22/2022

Trade name: GSK-J4 (hydrochloride)

	(Contd. from page 3
· Odor threshold:	Not determined.
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wat	ter): Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 30 mg/ml; DMSO: 30 mg/ml; DMSO:PBS (pH 7.2) (1: 7): 0.1 mg/ml;Ethanol: 20 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- · Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: Strong oxidizing agents.
- Hazardous decomposition products: Carbon oxides. Nitrogen oxides (NOx)

(Contd. on page 5)

US

Printing date 03/22/2022

Revision date 03/22/2022

Trade name: GSK-J4 (hydrochloride)

(Contd. from page 4)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- Toxicity
- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · DOT, IMDG, IATA

not regulated

(Contd. on page 6)

US

Printing date 03/22/2022

Revision date 03/22/2022

Trade name: GSK-J4 (hydrochloride)

		(Contd. from page 5
 UN proper shipping name DOT, IMDG, IATA 	not regulated	
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA · Class	not regulated	
 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Anne MARPOL73/78 and the IBC Code 	x II of Not applicable.	
UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- Section 355 (extremely hazardous substances): Substance is not listed.
- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- · TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

· Department issuing SDS: Environment protection department.

· Contact: -

· Date of preparation / last revision 03/22/2022 / -

(Contd. on page 7)

⁻ US

Printing date 03/22/2022

Revision date 03/22/2022

Trade name: GSK-J4 (hydrochloride)

 Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit (Contd. from page 6)



Printing date 06/16/2023

Revision date 06/16/2023

Page 1/8

1 Identification

- · Product identifier
- Trade name: SGC0946
- Article number: 13967
- CAS Number: 1561178-17-3
- EC number: 808-588-8
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Cayman Chemical Co.
 1180 E. Ellsworth Rd.
 Ann Arbor, MI 48108
 USA
- · Information department: Product safety department

Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

· Classification of the substance or mixture



GHS06 Skull and crossbones

Acute Toxicity - Oral 3 H301 Toxic if swallowed.

- · Label elements
- · GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS). • Hazard pictograms



· Signal word Danger

(Contd. on page 2)

Printing date 06/16/2023

Revision date 06/16/2023

Trade name: SGC0946

 Hazard statements Hazard statements H301 Toxic if swallowed. Precautionary statements P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P301+P310 If swallowed: Immediately call a poison center/doctor. P321 Specific treatment (see on this label). P330 Rinse mouth. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. Classification system: NFPA ratings (scale 0 - 4) Health = 2 Fire = 0 Reactivity = 0
 Precautionary statements P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P301+P310 If swallowed: Immediately call a poison center/doctor. P321 Specific treatment (see on this label). P330 Rinse mouth. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. Classification system: NFPA ratings (scale 0 - 4) Health = 2 Fire = 0
 P264 Wash thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P301+P310 If swallowed: Immediately call a poison center/doctor. P321 Specific treatment (see on this label). P330 Rinse mouth. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. Classification system: NFPA ratings (scale 0 - 4) Health = 2 Fire = 0
 P270 Do not eat, drink or smoke when using this product. P301+P310 If swallowed: Immediately call a poison center/doctor. P321 Specific treatment (see on this label). P330 Rinse mouth. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. Classification system: NFPA ratings (scale 0 - 4) Health = 2 Fire = 0
 P301+P310 If swallowed: Immediately call a poison center/doctor. P321 Specific treatment (see on this label). P330 Rinse mouth. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. Classification system: NFPA ratings (scale 0 - 4) Health = 2 Fire = 0
 P321 Specific treatment (see on this label). P330 Rinse mouth. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. Classification system: NFPA ratings (scale 0 - 4) Health = 2 Fire = 0
 P330 Rinse mouth. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. Classification system: NFPA ratings (scale 0 - 4) Health = 2 Fire = 0
 P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. Classification system: NFPA ratings (scale 0 - 4) Health = 2 Fire = 0
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations. Classification system: NFPA ratings (scale 0 - 4) Health = 2 Fire = 0
regulations. • Classification system: • NFPA ratings (scale 0 - 4) Health = 2 Fire = 0
• NFPA ratings (scale 0 - 4) Health = 2 Fire = 0
• NFPA ratings (scale 0 - 4) Health = 2 Fire = 0
Health = 2 Fire = 0
· HMIS-ratings (scale 0 - 4)
HEALTH2FIRE0Fire = 0REACTIVITYReactivity = 0
· Other hazards
· Results of PBT and vPvB assessment
· PBT: Not applicable.
· vPvB: Not applicable.
3 Composition/information on ingredients

- · Chemical characterization: Substances
- CAS No. Description 1561178-17-3 SGC0946
- · Identification number(s)
- EC number: 808-588-8

4 First-aid measures

· Description of first aid measures

• General information:

Immediately remove any clothing soiled by the product.

- In case of irregular breathing or respiratory arrest provide artificial respiration.
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.
- After swallowing: Do not induce vomiting; immediately call for medical help.
- · Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

US

Printing date 06/16/2023

Revision date 06/16/2023

(Contd. from page 2)

Trade name: SGC0946

• Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- · Suitable extinguishing agents:

Use fire fighting measures that suit the environment.

- A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures Not required.

- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to section 13.

- Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- PAC-2: Substance is not listed.
- · PAC-3: Substance is not listed.

7 Handling and storage

- · Handling:
- · Precautions for safe handling Thorough dedusting.
- · Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities Keep container tightly closed.
- Store in accordance with information listed on the product insert.
- \cdot Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.

(Contd. on page 4)

US

Printing date 06/16/2023

Revision date 06/16/2023

Trade name: SGC0946

(Contd. from page 3)

- Exposure controls
 Personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.
- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

• Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

Information on basic physical and	chemical properties
General Information	
Appearance:	
Form: Color:	Solid
Odor:	Not determined. Characteristic
Structural Formula	Claracteristic C28H40BrN7O4
Molecular Weight	618.6 g/mol
Odor threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Product is not flammable.
Decomposition temperature:	Not determined.
Ignition temperature:	Not determined.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not applicable.
Density:	Not determined.

Printing date 06/16/2023

Revision date 06/16/2023

Trade name: SGC0946

	(Contd. from page 4
· Relative density	Not determined.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
Water:	Not determined.
· Partition coefficient (n-octanol/wa	ater): Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
SOLUBILITY	DMF: 10 mg/ml; DMSO: 10 mg/ml; Ethanol: 10 mg/ml;
	Ethanol:PBS (pH 7.2) (1:4): 0.2 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- · Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxiizing agents
- · Hazardous decomposition products: carbon oxides, hydrogen bromide, nitrogen oxides

11 Toxicological information

- · RTECS Number UY8825000
- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.

(Contd. on page 6)

US -

Printing date 06/16/2023

Revision date 06/16/2023

(Contd. from page 5)

Trade name: SGC0946

· Additional ecological information:

· General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- · PBT: Not applicable.

vPvB: Not applicable.

• Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

• Recommendation: Disposal must be made according to official regulations.

Transport information	
· UN-Number · DOT, IMDG, IATA	UN2811
 UN proper shipping name DOT IMDG IATA 	Toxic solids, organic, n.o.s. (SGC0946) TOXIC SOLID, ORGANIC, N.O.S. (SGC0946) Toxic solid, organic, n.o.s. (SGC0946)
· Transport hazard class(es)	
·DOT	
Toxic	
· Class · Label	6.1 Toxic substances 6.1
· IMDG, IATA	
6 8	
· Class	6.1 Toxic substances
· Label	6.1
 Packing group DOT, IMDG, IATA 	Ш
· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Toxic substances
	(Contd. on page

Printing date 06/16/2023

Revision date 06/16/2023

Trade name: SGC0946

	(Contd. from page 6)
 Hazard identification number (Kemler code EMS Number: Stowage Category 	e): 60 F-A,S-A A
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
• Transport/Additional information:	
DOT Quantity limitations	On passenger aircraft/rail: 100 kg On cargo aircraft only: 200 kg
 IMDG Limited quantities (LQ) Excepted quantities (EQ) 	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· IATA · Remarks:	When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.
· UN "Model Regulation":	UN 2811 TOXIC SOLID, ORGANIC, N.O.S. (SGC0946), 6.1, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara
- Section 355 (extremely hazardous substances): Substance is not listed.
- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- · Chemicals known to cause cancer: Substance is not listed.
- Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes (Contd. on page 8)

____US-

Printing date 06/16/2023

Revision date 06/16/2023

Trade name: SGC0946

(Contd. from pag no responsibility for incidental or consequential damages, including lost profits, arising from the use these data. It shall be the user's responsibility to develop proper methods of handling and perso protection based on the actual conditions of use. While this SDS is based on technical data judged be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy the information contained herein.	e of onal d to
• Department issuing SDS: Environment protection department.	
· Contact: -	
· Date of preparation / last revision 06/16/2023	
· Abbreviations and acronyms:	
IMDG: International Maritime Code for Dangerous Goods	
DOT: US Department of Transportation	
IATA: International Air Transport Association	
EINECS: European Inventory of Existing Commercial Chemical Substances	
CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA)	
HMIS: Hazardous Materials Identification System (USA)	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
NIOSH: National Institute for Occupational Safety	
OSHA: Occupational Safety & Health	
TLV: Threshold Limit Value	
PEL: Permissible Exposure Limit	
REL: Recommended Exposure Limit Acute Toxicity - Oral 3: Acute toxicity – Category 3	
* * Data compared to the previous version altered.	
Data compared to the previous version altered.	

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Printing date 07/11/2023

Revision date 07/11/2023

Page 1/7

1 Identification

- Product identifier
- Trade name: UNC1215
- · Article number: 13968
- · CAS Number: 1415800-43-9
- · Application of the substance / the mixture This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- · Information department: Product safety department · Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- · Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS). · Label elements · GHS label elements None
- · Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

Health = 0Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

US

Printing date 07/11/2023

Revision date 07/11/2023

Trade name: UNC1215

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1415800-43-9 UNC1215

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.

(Contd. on page 3)

(Contd. from page 1)

Printing date 07/11/2023

Revision date 07/11/2023

(Contd. from page 2)

Trade name: UNC1215

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities Keep container tightly closed.

Store in accordance with information listed on the product insert.

- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:
- The usual precautionary measures for handling chemicals should be followed.
- Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

Information on basic physica General Information	al and chemical properties	
Appearance:		
Form:	Solid	
Color:	Not determined.	
Odor:	Characteristic	
Structural Formula	C32H43N5O2	
Molecular Weight	529.7 g/mol	

Printing date 07/11/2023

Revision date 07/11/2023

Trade name: UNC1215

	(Contd. from page 3
Odor threshold:	Not determined.
pH-value:	Not applicable.
Change in condition Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Product is not flammable.
Decomposition temperature:	Not determined.
Ignition temperature:	Not determined.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits: Lower: Upper:	Not determined. Not determined.
Vapor pressure:	Not applicable.
Density: Relative density Vapor density Evaporation rate	Not determined. Not determined. Not applicable. Not applicable.
Solubility in / Miscibility with Water:	Not determined.
Partition coefficient (n-octanol/water): Not determined.	
Viscosity: Dynamic: Kinematic: SOLUBILITY	Not applicable. Not applicable. DMF: 16 mg/ml; DMF:PBS (pH 7.2) (1:1): 0.50 mg/m DMSO: 5 mg/ml; Ethanol: 14 mg/ml
Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- · Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · **Incompatible materials:** strong oxidizing agents
- · Hazardous decomposition products: carbon oxides, nitrogen oxides

11 Toxicological information

· RTECS Number PC4973500

(Contd. on page 5)

US

Printing date 07/11/2023

Revision date 07/11/2023

(Contd. from page 4)

Trade name: UNC1215

· Information on toxicological effects

- · Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- · NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- Recommendation: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

* 14 Transport information · UN-Number · DOT, IMDG, IATA · UN proper shipping name · DOT, IMDG, IATA · ODT, IMDG, IATA · ODT, IMDG, IATA · ODT, IMDG, IATA · DOT, IMDG, IATA · OT, IMDG, IATA

Printing date 07/11/2023

Revision date 07/11/2023

Trade name: UNC1215

		(Contd. from page 5)
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA · Class	not regulated	
 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Anne MARPOL73/78 and the IBC Code 	x II of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara
- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- Contact: -
- · Date of preparation / last revision 07/11/2023
- Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association

(Contd. on page 7)

US

US

Safety Data Sheet acc. to OSHA HCS

Printing date 07/11/2023

Revision date 07/11/2023

Trade name: UNC1215

CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit	(Contd. from page 6)
REL: Recommended Exposure Limit • * Data compared to the previous version altered.	



Printing date 06/28/2023

Revision date 06/28/2023

Page 1/7

1 Identification

- · Product identifier
- Trade name: GSK 343
- Article number: 14094
- CAS Number: 1346704-33-3
- EC number: 806-050-7
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Cayman Chemical Co.
 1180 E. Ellsworth Rd.
 Ann Arbor, MI 48108
 USA
- · Information department: Product safety department

Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

· Classification of the substance or mixture



Acute Toxicity - Oral 4 H302 Harmful if swallowed.

- · Label elements
- · GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS). • Hazard pictograms



· Signal word Warning

(Contd. on page 2)

Printing date 06/28/2023

Revision date 06/28/2023

Trade name: GSK 343

· Hazard state	(Contd. from page 1)
	ul if swallowed.
	iry statements
	Wash thoroughly after handling.
	Do not eat, drink or smoke when using this product.
	If swallowed: Call a poison center/doctor if you feel unwell.
	Rinse mouth.
	Dispose of contents/container in accordance with local/regional/national/international
r	regulations.
 Classification 	
• NFPA rating	ıs (scale 0 - 4)
	Health = 2
	Fire = 0
	Reactivity = 0
· minis-rating	s (scale 0 - 4)
HEALTH 2	Health = 2
FIRE 0	
REACTIVITY 0	Reactivity – 0
· Other hazar	ds
	PBT and vPvB assessment
Results of f	
. DRT. Not an	plicable
• PBT: Not app	
· PBT: Not ap · vPvB: Not ap	
• vPvB: Not a	pplicable.
• vPvB: Not a	
vPvB: Not an 3 Compositi	pplicable. ion/information on ingredients
• vPvB: Not an 3 Compositi • Chemical ch	pplicable. ion/information on ingredients naracterization: Substances
• vPvB: Not a 3 Compositi • Chemical ch • CAS No. Des	pplicable. ion/information on ingredients naracterization: Substances scription
vPvB: Not a 3 Compositi Chemical ch CAS No. Des 1346704-33-	pplicable. ion/information on ingredients naracterization: Substances scription -3 GSK 343
• vPvB: Not a 3 Compositi • Chemical ch • CAS No. Des 1346704-33- • Identificatio	ion/information on ingredients naracterization: Substances scription -3 GSK 343 on number(s)
• vPvB: Not a 3 Compositi • Chemical ch • CAS No. Des 1346704-33-	ion/information on ingredients naracterization: Substances scription -3 GSK 343 on number(s)
• vPvB: Not a 3 Compositi • Chemical ch • CAS No. Des 1346704-33- • Identificatio	ion/information on ingredients naracterization: Substances scription -3 GSK 343 on number(s)
• vPvB: Not a 3 Compositi • Chemical ch • CAS No. Des 1346704-33- • Identificatio • EC number:	pplicable. ion/information on ingredients maracterization: Substances scription .3 GSK 343 .n number(s) .8 806-050-7
• vPvB: Not a 3 Compositi • Chemical ch • CAS No. Des 1346704-33- • Identificatio	pplicable. ion/information on ingredients maracterization: Substances scription .3 GSK 343 .n number(s) .8 806-050-7
• vPvB: Not a 3 Compositi • Chemical ch • CAS No. Des 1346704-33- • Identificatio • EC number: 4 First-aid n	ion/information on ingredients naracterization: Substances scription .3 GSK 343 .n number(s) .806-050-7 measures
vPvB: Not a 3 Compositi Chemical ch CAS No. Des 1346704-33- Identificatio EC number: 4 First-aid n Description	ion/information on ingredients haracterization: Substances scription .3 GSK 343 in number(s) .806-050-7 neasures of first aid measures
vPvB: Not a 3 Compositi Chemical ch CAS No. Des 1346704-33- Identificatio EC number: 4 First-aid n Description General info	ion/information on ingredients naracterization: Substances scription 3 GSK 343 n number(s) : 806-050-7 neasures of first aid measures prmation:
vPvB: Not a 3 Compositi Chemical ch CAS No. Des 1346704-33- Identificatio EC number: 4 First-aid n General info Symptoms o	ion/information on ingredients maracterization: Substances scription 3 GSK 343 m number(s) 8 806-050-7 neasures of first aid measures ormation: f poisoning may even occur after several hours; therefore medical observation for at least
 vPvB: Not approximately service of the service of the	ion/information on ingredients iaracterization: Substances scription 3 GSK 343 in number(s) 8 806-050-7 neasures of first aid measures ormation: if poisoning may even occur after several hours; therefore medical observation for at least er the accident.
 vPvB: Not approximately service of the service of the	pplicable. ion/information on ingredients maracterization: Substances scription 3 GSK 343 n number(s) 5 806-050-7 measures of first aid measures ormation: if poisoning may even occur after several hours; therefore medical observation for at least er the accident. tion: Supply fresh air; consult doctor in case of complaints.
 vPvB: Not approximately service of the service of the	pplicable. ion/information on ingredients maracterization: Substances scription 3 GSK 343 n number(s) 5 806-050-7 measures of first aid measures ormation: If poisoning may even occur after several hours; therefore medical observation for at least er the accident. tion: Supply fresh air; consult doctor in case of complaints. ontact: Generally the product does not irritate the skin.
 vPvB: Not approximately service of the service of the	pplicable. ion/information on ingredients maracterization: Substances scription 3 GSK 343 n number(s) 5 806-050-7 measures of first aid measures ormation: if poisoning may even occur after several hours; therefore medical observation for at least er the accident. tion: Supply fresh air; consult doctor in case of complaints.
vPvB: Not a 3 Compositi Chemical ch CAS No. Des 1346704-33- Identificatio EC number: 4 First-aid n Oescription General info Symptoms o 48 hours afte After inhalat After skin co After eye co	pplicable. ion/information on ingredients maracterization: Substances scription 3 GSK 343 n number(s) 5 806-050-7 measures of first aid measures ormation: If poisoning may even occur after several hours; therefore medical observation for at least er the accident. tion: Supply fresh air; consult doctor in case of complaints. ontact: Generally the product does not irritate the skin.
vPvB: Not a 3 Compositi Chemical ch CAS No. Des 1346704-33- Identificatio EC number: 4 First-aid n Oescription General info Symptoms o 48 hours afte After inhalat After skin co After eye co	pplicable. ion/information on ingredients haracterization: Substances scription 3 GSK 343 n number(s) 8 806-050-7 measures of first aid measures ormation: If poisoning may even occur after several hours; therefore medical observation for at least er the accident. tion: Supply fresh air; consult doctor in case of complaints. ontact: Generally the product does not irritate the skin. Intact: Rinse opened eye for several minutes under running water. wing: Immediately call a doctor.
 vPvB: Not approximately service of the service of the	pplicable. ion/information on ingredients maracterization: Substances scription 3 GSK 343 n number(s) 806-050-7 measures of first aid measures ormation: if poisoning may even occur after several hours; therefore medical observation for at least er the accident. tion: Supply fresh air; consult doctor in case of complaints. ontact: Generally the product does not irritate the skin. intact: Rinse opened eye for several minutes under running water. wing: Immediately call a doctor. for doctor:
 vPvB: Not approximately service of the service of the	pplicable. ion/information on ingredients maracterization: Substances scription 3 GSK 343 n number(s) 806-050-7 Measures of first aid measures ormation: if poisoning may even occur after several hours; therefore medical observation for at least er the accident. tion: Supply fresh air; consult doctor in case of complaints. ontact: Generally the product does not irritate the skin. intact: Rinse opened eye for several minutes under running water. wing: Immediately call a doctor. for doctor: tant symptoms and effects, both acute and delayed
 vPvB: Not approximately service of the service of the	pplicable. ion/information on ingredients maracterization: Substances scription 3 GSK 343 n number(s) 8 806-050-7 neasures of first aid measures ormation: If poisoning may even occur after several hours; therefore medical observation for at least er the accident. tion: Supply fresh air; consult doctor in case of complaints. ontact: Generally the product does not irritate the skin. ontact: Rinse opened eye for several minutes under running water. wing: Immediately call a doctor. for doctor: tant symptoms and effects, both acute and delayed levant information available.
 vPvB: Not approximately service of the service of the	pplicable. ion/information on ingredients maracterization: Substances scription 3 GSK 343 n number(s) 806-050-7 Measures of first aid measures ormation: if poisoning may even occur after several hours; therefore medical observation for at least er the accident. tion: Supply fresh air; consult doctor in case of complaints. ontact: Generally the product does not irritate the skin. intact: Rinse opened eye for several minutes under running water. wing: Immediately call a doctor. for doctor: tant symptoms and effects, both acute and delayed

Printing date 06/28/2023

Revision date 06/28/2023

Trade name: GSK 343

(Contd. from page 2)

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- · Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
 Protective Action Criteria for Chemicals
- PAC-1: Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.

7 Handling and storage

· Handling:

· Precautions for safe handling

No special precautions are necessary if used correctly. Avoid breathing dust/fume/gas/mist/vapours/spray.

- Avoid prolonged or repeated exposure.
- Keep away from sources of ignition.
- Take precautionary measures against static discharge.re.
- · Information about protection against explosions and fires: No special measures required.

\cdot Conditions for safe storage, including any incompatibilities

- Keep container tightly closed.
- Store in accordance with information listed on the product insert.
- · Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.

(Contd. on page 4)

US

Printing date 06/28/2023

Revision date 06/28/2023

Trade name: GSK 343

(Contd. from page 3)

- Exposure controls
- Personal protective equipment:
- · General protective and hygienic measures: Wash hands before breaks and at the end of work.
- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

Information on basic physical and o General Information Appearance: Form:	chemical properties
Appearance:	
••	
Form:	
	Solid
Color:	Not determined.
Odor:	Characteristic
Structural Formula	C31H39N7O2
Molecular Weight	541.7 g/mol
Odor threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Product is not flammable.
Decomposition temperature:	Not determined.
Ignition temperature:	Not determined.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not applicable.
Density:	Not determined.
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.

Printing date 06/28/2023

Revision date 06/28/2023

Trade name: GSK 343

	(Contd. from page 4
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/w	
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
SOLUBILITY	DMF: 25 mg/ml; DMF:PBS (pH 7.2) (1:1): 0.5 mg/ml; DMSO 1 mg/ml; Ethanol: 2 mg/ml
Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- · Hazardous decomposition products: carbon oxides, nitrogen oxides

11 Toxicological information

- RTECS Number NK7882021
- · Information on toxicological effects
- · Acute toxicity:
- Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.

(Contd. on page 6)

119

Printing date 06/28/2023

Revision date 06/28/2023

(Contd. from page 5)

Trade name: GSK 343

· Additional ecological information:

· General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- · PBT: Not applicable.

vPvB: Not applicable.

• Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

• **Recommendation:** Disposal must be made according to official regulations.

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14 ransp	ort information

· UN-Number	
· DOT, IMDG, IATA	not regulated
	5
[.] UN proper shipping name	
· DOT, IMDG, IATA	not regulated
 Transport hazard class(es) 	
· DOT, ADN, IMDG, IATA	
· Class	not regulated
Class	not regulated
· Packing group	
	not regulated
DOT, INIDO, IATA	liot regulated
• Environmental hazards:	Not applicable.
• Special precautions for user	Not applicable.
T	
 Transport in bulk according to Annex II 	
MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	not regulated

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

· Section 355 (extremely hazardous substances): Substance is not listed.

- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- Hazardous Air Pollutants Substance is not listed.

(Contd. on page 7)

– US

Printing date 06/28/2023

Revision date 06/28/2023

(Contd. from page 6)

Trade name: GSK 343

· Proposition 65

- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- Contact: -
- · Date of preparation / last revision 06/28/2023
- Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit **REL: Recommended Exposure Limit** Acute Toxicity - Oral 4: Acute toxicity - Category 4 ** Data compared to the previous version altered.

US ·



Printing date 09/09/2022

Revision date 09/09/2022

Page 1/7

1 Identification

- Product identifier
- Trade name: <u>GSK2801</u>
- · Article number: 14120
- CAS Number: 1619994-68-1
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
- **Manufacturer/Supplier:** Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
- · GHS label elements None
- · Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

0 0 0 Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)

HEALTHImage: OFIREImage: OFIREImage: OReactivityImage: OReactivityImage: O

(Contd. on page 2)

US

Printing date 09/09/2022

Revision date 09/09/2022

(Contd. from page 1)

Trade name: GSK2801

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1619994-68-1 GSK2801

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** May cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects. No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- A solid water stream may be inefficient. • Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- \cdot Methods and material for containment and cleaning up: Pick up mechanically.
- Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- · PAC-2: Substance is not listed.

(Contd. on page 3)

⁻ US

Printing date 09/09/2022

Revision date 09/09/2022

(Contd. from page 2)

Trade name: GSK2801

· PAC-3: Substance is not listed.

7 Handling and storage

- · Handling:
- Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.

• Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

- Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:
- The usual precautionary measures for handling chemicals should be followed.
- · Breathing equipment: Not required.
- · Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

Information on basic physica General Information	al and chemical properties	
Appearance:		
Form:	Solid	
Color:	Not determined.	
Odor:	Characteristic	
Structural Formula	C20H21NO4S	
Molecular Weight	371.4 g/mol	

Printing date 09/09/2022

Revision date 09/09/2022

Trade name: GSK2801

	(Contd. from page 3
· Odor threshold:	Not determined.
· pH-value:	Not applicable.
Change in condition	
Melting point/Melting range: Boiling point/Boiling range:	Undetermined. Undetermined.
••••••	
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not applicable.
· Density:	Not determined.
· Relative density	Not determined.
Vapor density	Not applicable.
· Evaporation rate	Not applicable.
 Solubility in / Miscibility with 	
Water:	Not determined.
· Partition coefficient (n-octanol/wa	iter): Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
SOLUBILITY	DMSO: 10 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- Primary irritant effect:
- · on the skin: No irritant effect.

(Contd. on page 5)

US

Printing date 09/09/2022

Revision date 09/09/2022

(Contd. from page 4)

Trade name: GSK2801

- · on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.

• Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

UN-Number		
DOT, IMDG, IATA	not regulated	
UN proper shipping name		
DOT, IMDG, IATA	not regulated	
Transport hazard class(es)		
DOT, ADN, IMDG, IATA		
Class	not regulated	

Printing date 09/09/2022

Revision date 09/09/2022

Trade name: GSK2801

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	(-	entar nem page e
 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Ann MARPOL73/78 and the IBC Code 	ex II of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 09/09/2022 / -
- Abbreviations and acronyms:
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

US

Printing date 09/09/2022

Trade name: GSK2801

NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Revision date 09/09/2022

(Contd. from page 6)



Printing date 07/11/2023

Revision date 07/11/2023

Page 1/7

1 Identification

- · Product identifier
- · Trade name: I-CBP112 (hydrochloride)
- · Article number: 14468
- CAS Number: 2147701-33-3
- Application of the substance / the mixture This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier:
- Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
 GHS label elements None
- · Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

US

Printing date 07/11/2023

Revision date 07/11/2023

(Contd. from page 1)

Trade name: I-CBP112 (hydrochloride)

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 2147701-33-3 I-CBP112 (hydrochloride)

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

Printing date 07/11/2023

Revision date 07/11/2023

Trade name: I-CBP112 (hydrochloride)

(Contd. from page 2)

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities Keep container tightly closed.

Store in accordance with information listed on the product insert.

- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:
- The usual precautionary measures for handling chemicals should be followed.
- Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form:	Solid
Color:	Not determined.
· Odor:	Characteristic
 Structural Formula 	C27H36N2O5 • HCI
· Molecular Weight	505.1 g/mol

(Contd. on page 4)

US

Printing date 07/11/2023

Revision date 07/11/2023

Trade name: I-CBP112 (hydrochloride)

	(Contd. from page 3
· Odor threshold:	Not determined.
[·] pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits: Lower: Upper:	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wate	er): Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 16 mg/ml; DMSO: 16 mg/ml; Ethanol: 16 mg/ml; PBS (pH 7.2): 10 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

(Contd. on page 5)

US

Printing date 07/11/2023

Revision date 07/11/2023

Trade name: I-CBP112 (hydrochloride)

(Contd. from page 4)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · DOT, IMDG, IATA

not regulated

(Contd. on page 6)

JS

Printing date 07/11/2023

Revision date 07/11/2023

Trade name: I-CBP112 (hydrochloride)

		(Contd. from page §
 UN proper shipping name DOT, IMDG, IATA 	not regulated	
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA · Class	not regulated	
· Packing group · DOT, IMDG, IATA	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Anne MARPOL73/78 and the IBC Code 	x II of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- Section 355 (extremely hazardous substances): Substance is not listed.
- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- · TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

· Department issuing SDS: Environment protection department.

· Contact: -

· Date of preparation / last revision 07/11/2023

(Contd. on page 7)

[–] US

Printing date 07/11/2023

Revision date 07/11/2023

Trade name: I-CBP112 (hydrochloride)

	(Contd. from page 6)
Abbreviations and acronyms:	
IMDG: International Maritime Code for Dangerous Goods	
DOT: US Department of Transportation	
IATA: International Air Transport Association	
CAS: Chemical Abstracts Service (division of the American Chemical Society)	
NFPA: National Fire Protection Association (USA)	
HMIS: Hazardous Materials Identification System (USA)	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
NIOSH: National Institute for Occupational Safety	
OSHA: Occupational Safety & Health	
TLV: Threshold Limit Value	
PEL: Permissible Exposure Limit	
REL: Recommended Exposure Limit	
* Data compared to the previous version altered.	
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Printing date 07/11/2023

Revision date 07/11/2023

Page 1/7

1 Identification

- · Product identifier
- Trade name: <u>SGC-CBP30</u>
- · Article number: 14469
- CAS Number: 1613695-14-9
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
- **Manufacturer/Supplier:** Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
- · GHS label elements None
- · Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

0 0 0 Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

US

Printing date 07/11/2023

Revision date 07/11/2023

Trade name: SGC-CBP30

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1613695-14-9 SGC-CBP30

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- PAC-1: Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

(Contd. from page 1)

Printing date 07/11/2023

Revision date 07/11/2023

(Contd. from page 2)

Trade name: SGC-CBP30

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities Keep container tightly closed.

Store in accordance with information listed on the product insert.

- Storage: Store in accordance with information listed on the product insert.
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:
- The usual precautionary measures for handling chemicals should be followed.
- Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

 Information on basic physical and chemical properties General Information 		
Appearance:		
Form:	Solid	
Color:	Not determined.	
Odor:	Characteristic	
Structural Formula	C28H33CIN4O3	
Molecular Weight	509 g/mol	

Printing date 07/11/2023

Revision date 07/11/2023

Trade name: SGC-CBP30

	(Contd. from page 3
· Odor threshold:	Not determined.
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits: Lower: Upper:	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wa	ter): Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 15 mg/ml; DMF:PBS (pH 7.2) (1:5): 0.1 mg/ml; DMSO 10 mg/ml; Ethanol: 5 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- · Hazardous decomposition products: carbon oxides, nitrogem oxides, phosgene

(Contd. on page 5)

US

Printing date 07/11/2023

Revision date 07/11/2023

Trade name: SGC-CBP30

(Contd. from page 4)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · DOT, IMDG, IATA

not regulated

(Contd. on page 6)

JS

Printing date 07/11/2023

Revision date 07/11/2023

Trade name: SGC-CBP30

		(Contd. from page 5
 [.] UN proper shipping name [.] DOT, IMDG, IATA 	not regulated	
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA · Class	not regulated	
 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Anne MARPOL73/78 and the IBC Code 	x II of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- · TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

· Department issuing SDS: Environment protection department.

· Contact: -

Date of preparation / last revision 07/11/2023

(Contd. on page 7)

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Printing date 07/11/2023

Revision date 07/11/2023

(Contd. from page 6)

Trade name: SGC-CBP30

· Abbreviations and acronyms:
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
* * Data compared to the previous version altered.

US -



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- · Product identifier
- Trade name: UNC0642
- · Article number: 14604
- CAS Number: 1481677-78-4
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier:
- Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
- · GHS label elements None
- Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

000 Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 1)

Trade name: UNC0642

- · Other hazards
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1481677-78-4 UNC0642

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- PAC-1: Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 2)

Trade name: UNC0642

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- · General Information

· Appearance:	
Form:	Solid
Color:	Not determined.
· Odor:	Characteristic
 Structural Formula 	C29H44F2N6O2
· Molecular Weight	546.7 g/mol
Odor threshold:	Not determined.

(Contd. on page 4)

⁻US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: UNC0642

	(Contd. from page 3
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/water): Not determined.	
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 30 mg/ml; DMF:PBS(pH 7.2)(1:1): 0.5 mg/ml; DMSO 20 mg/ml;Ethanol: 2 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- · Hazardous decomposition products: carbon dioxide

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.

(Contd. on page 5)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 4)

Trade name: UNC0642

- · on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.

• Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

· UN-Number · DOT, IMDG, IATA	not regulated	
· ·	notrogalated	
 UN proper shipping name DOT, IMDG, IATA 	not regulated	
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA		
Class	not regulated	

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: UNC0642

(Contd.	from	page	5)

· Packing group		· · · · · · · · · · · · · · · · · · ·
· DOT, IMDG, IATA	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Anne MARPOL73/78 and the IBC Code 	x II of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 07/14/2023
- Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: UNC0642

NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit • * Data compared to the previous version altered.

(Contd. from page 6)

US



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- · Product identifier
- Trade name: UNC1999
- · Article number: 14621
- CAS Number: 1431612-23-5
- EC number: 806-336-1
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Cayman Chemical Co.
 1180 E. Ellsworth Rd.
 Ann Arbor, MI 48108
 USA
- · Information department: Product safety department

Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

· Classification of the substance or mixture



Acute Toxicity - Oral 4 H302 Harmful if swallowed.

- · Label elements
- · GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS). • Hazard pictograms



· Signal word Warning

(Contd. on page 2)

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: UNC1999

*

*

· Hazard state	(Contd. from page 1)
H302 Harmfu	Il if swallowed.
	ry statements
	Wash thoroughly after handling.
	Do not eat, drink or smoke when using this product.
	f swallowed: Call a poison center/doctor if you feel unwell.
	Rinse mouth.
	Dispose of contents/container in accordance with local/regional/national/international
	regulations.
Classificatio	
· NFPA rating	s (scale 0 - 4)
	Health = 2
	Fire = 0
	Reactivity = 0
· HMIS-rating	s (scale u - 4)
HEALTH 2	Health = 2
FIRE 0	Fire = 0
REACTIVITY 0	Reactivity = 0
· Other hazar	do.
	BT and vPvB assessment
· PBT: Not app	
· vPvB: Not ap	oplicable.
3 Compositi	on/information on ingredients
•	, and the second se
· Chemical ch	aracterization: Substances
· Chemical ch · CAS No. Des	aracterization: Substances scription
· Chemical ch	aracterization: Substances scription
Chemical ch CAS No. Des 1431612-23-	aracterization: Substances scription 5 UNC1999
Chemical ch CAS No. Des 1431612-23- Identification	aracterization: Substances scription 5 UNC1999 n number(s)
• Chemical ch • CAS No. Des 1431612-23-	aracterization: Substances scription 5 UNC1999 n number(s)
Chemical ch CAS No. Des 1431612-23- Identification	aracterization: Substances scription 5 UNC1999 n number(s)
Chemical ch CAS No. Des 1431612-23- Identification EC number:	aracterization: Substances scription 5 UNC1999 n number(s) 806-336-1
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Chemical ch CAS No. Des 1431612-23- Identification EC number: 4 First-aid n	aracterization: Substances scription 5 UNC1999 n number(s) 806-336-1
 Chemical ch CAS No. Des 1431612-23- Identification EC number: 4 First-aid n Description 	aracterization: Substances scription 5 UNC1999 n number(s) 806-336-1 neasures of first aid measures
 Chemical ch CAS No. Des 1431612-23- Identification EC number: 4 First-aid n Description General info 	aracterization: Substances scription 5 UNC1999 n number(s) 806-336-1 neasures of first aid measures rmation:
 Chemical ch CAS No. Des 1431612-23- Identification EC number: 4 First-aid n Description General info Symptoms of 	aracterization: Substances scription 5 UNC1999 n number(s) 806-336-1 neasures of first aid measures rmation: f poisoning may even occur after several hours; therefore medical observation for at least
Chemical ch CAS No. Des 1431612-23- Identification EC number: A First-aid n Description General info Symptoms of 48 hours afte	aracterization: Substances scription 5 UNC1999 n number(s) 806-336-1 neasures of first aid measures rmation: f poisoning may even occur after several hours; therefore medical observation for at least r the accident.
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 Chemical ch CAS No. Des 1431612-23- Identification EC number: 4 First-aid n Description General info Symptoms of 48 hours afte After inhalat After skin co 	aracterization: Substances scription 5 UNC1999 n number(s) 806-336-1 neasures of first aid measures rmation: f poisoning may even occur after several hours; therefore medical observation for at least r the accident. ion: Supply fresh air; consult doctor in case of complaints. ontact: Generally the product does not irritate the skin.
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 Chemical ch CAS No. Des 1431612-23- Identification EC number: 4 First-aid n Description General info Symptoms of 48 hours after After inhalatt After skin co After swallor Information 	aracterization: Substances scription 5 UNC 1999 n number(s) 806-336-1 Teasures rmation: f poisoning may even occur after several hours; therefore medical observation for at least r the accident. ion: Supply fresh air; consult doctor in case of complaints. ion: Supply fresh air; consult doctor in case of complaints. iontact: Generally the product does not irritate the skin. intact: Rinse opened eye for several minutes under running water. wing: Immediately call a doctor. for doctor:
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 Chemical ch CAS No. Des 1431612-23- Identification EC number: 4 First-aid n Description General info Symptoms of 48 hours afte After inhalatt After skin co After swallor Information Most import No further rel 	aracterization: Substances scription 5 UNC1999 n number(s) 806-336-1 neasures of first aid measures rmation: f poisoning may even occur after several hours; therefore medical observation for at least r the accident. ion: Supply fresh air; consult doctor in case of complaints. ontact: Generally the product does not irritate the skin. ntact: Rinse opened eye for several minutes under running water. wing: Immediately call a doctor. for doctor: ant symptoms and effects, both acute and delayed evant information available.
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Chemical ch CAS No. Des 1431612-23- Identification EC number: A First-aid n Description General info Symptoms of 48 hours afte After skin co After skin co After swallo Information Most import No further rel Indication of	aracterization: Substances scription 5 UNC1999 n number(s) 806-336-1 neasures of first aid measures rmation: f poisoning may even occur after several hours; therefore medical observation for at least r the accident. ion: Supply fresh air; consult doctor in case of complaints. ontact: Generally the product does not irritate the skin. ntact: Rinse opened eye for several minutes under running water. wing: Immediately call a doctor. for doctor: ant symptoms and effects, both acute and delayed evant information available.
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Printing date 07/14/2023

Revision date 07/14/2023

Trade name: UNC1999

(Contd. from page 2)

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
 Protective Action Criteria for Chemicals
- PAC-1: Substance is not listed.
- **PAC-2:** Substance is not listed.
- PAC-3: Substance is not listed.

7 Handling and storage

· Handling:

· Precautions for safe handling

No special precautions are necessary if used correctly. Avoid breathing dust/fume/gas/mist/vapours/spray.

Avoid prolonged or repeated exposure.

Keep away from sources of ignition.

Take precautionary measures against static discharge.re.

Information about protection against explosions and fires: No special measures required.

- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.

• Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists that were valid during the creation were used as basis.

(Contd. on page 4)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: UNC1999

(Contd. from page 3)

- · Exposure controls
- Personal protective equipment:
- · General protective and hygienic measures: Wash hands before breaks and at the end of work.
- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

• Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

Physical and chemical prope	rties	
Information on basic physical and chemical properties		
· General Information		
· Appearance:		
Form:	Solid	
Color:	Not determined.	
Odor:	Characteristic	
Structural Formula	C33H43N7O2	
Molecular Weight	569.8 g/mol	
Odor threshold:	Not determined.	
pH-value:	Not applicable.	
Change in condition		
Melting point/Melting range:	Undetermined.	
Boiling point/Boiling range:	Undetermined.	
Flash point:	Not applicable.	
Flammability (solid, gaseous):	Product is not flammable.	
Decomposition temperature:	Not determined.	
Ignition temperature:	Not determined.	
Danger of explosion:	Product does not present an explosion hazard.	
Explosion limits:		
Lower:	Not determined.	
Upper:	Not determined.	
Vapor pressure:	Not applicable.	
Density:	Not determined.	
Relative density	Not determined.	
Vapor density	Not applicable.	
Evaporation rate	Not applicable.	
	(Contd. on p	bage

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Printing date 07/14/2023

Revision date 07/14/2023

Trade name: UNC1999

	(0	Contd. from page 4)
 Solubility in / Miscibility with Water: 	Not determined.	
· Partition coefficient (n-octanol/	water): Not determined.	
· Viscosity:		
Dynamic:	Not applicable.	
Kinematic:	Not applicable.	
SOLUBILITY	DMF: 1 mg/ml; Ethanol: 0.1 mg/ml	
Other information	No further relevant information available.	

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- · Hazardous decomposition products: carbon oxides, nitrogen oxides

11 Toxicological information

- · RTECS Number NK7882014
- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- · on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- · Additional ecological information:
- General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

(Contd. on page 6)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: UNC1999

(Contd. from page 5) Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· Results of PBT and vPvB assessment

• **PBT:** Not applicable.

· vPvB: Not applicable.

• Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

• **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· UN-Number · DOT, IMDG, IATA	not regulated
 UN proper shipping name DOT, IMDG, IATA 	not regulated
· Transport hazard class(es)	
· DOT, ADN, IMDG, IATA · Class	not regulated
 Packing group DOT, IMDG, IATA 	not regulated
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. 	
· UN "Model Regulation":	not regulated

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

• Section 355 (extremely hazardous substances): Substance is not listed.

- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.

(Contd. on page 7)

- US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: UNC1999

(Contd. from page 6)

- Chemicals known to cause reproductive toxicity for males: Substance is not listed.
 Chemicals known to cause developmental toxicity: Substance is not listed.
- Chemicals known to cause developmental toxicity: Substance I
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- Date of preparation / last revision 07/14/2023
- · Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety **OSHA: Occupational Safety & Health** TLV: Threshold Limit Value PEL: Permissible Exposure Limit **REL: Recommended Exposure Limit** Acute Toxicity - Oral 4: Acute toxicity - Category 4 * * Data compared to the previous version altered.



Printing date 09/07/2022

Revision date 09/07/2022

Page 1/7

1 Identification

- Product identifier
- · Trade name: (R)-PFI-2 (hydrochloride)
- · Article number: 14678
- CAS Number: 1627607-87-7
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet • Manufacturer/Supplier: Cayman Chemical Co.
- 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
Label elements
GHS label elements None
Hazard pictograms None
Signal word None
Hazard statements None
Classification system:
NFPA ratings (scale 0 - 4)

Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

US

Printing date 09/07/2022

Revision date 09/07/2022

(Contd. from page 1)

Trade name: (R)-PFI-2 (hydrochloride)

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1627607-87-7 (R)-PFI-2 (hydrochloride)

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** May cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects. No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- \cdot Methods and material for containment and cleaning up: Pick up mechanically.
- Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- · PAC-2: Substance is not listed.

(Contd. on page 3)

⁻ US

Printing date 09/07/2022

Revision date 09/07/2022

Trade name: (R)-PFI-2 (hydrochloride)

(Contd. from page 2)

· PAC-3: Substance is not listed.

7 Handling and storage

- · Handling:
- Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.

• **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

- Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

Information on basic physica General Information	al and chemical properties	
Appearance:		
Form:	Solid	
Color:	Not determined.	
Odor:	Characteristic	
Structural Formula	C23H25F4N3O3S • HCI	
Molecular Weight	536 g/mol	

Printing date 09/07/2022

Revision date 09/07/2022

Trade name: (R)-PFI-2 (hydrochloride)

	(Contd. from page 3)
· Odor threshold:	Not determined.
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
[·] Explosion limits: Lower: Upper:	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/water)	: Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 5 mg/ml; DMF:PBS(pH 7.2)(1:1): 0.5 mg/ml; DMSO: 2 mg/ml; Ethanol: 0.5 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- · Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- Hazardous decomposition products: carbon dioxide, carbon monoxide, hydrogen chloride gas, hydrogen fluoride, nitrogen oxides

(Contd. on page 5)

US

Printing date 09/07/2022

Revision date 09/07/2022

Trade name: (R)-PFI-2 (hydrochloride)

(Contd. from page 4)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · DOT, IMDG, IATA

not regulated

(Contd. on page 6)

US

Printing date 09/07/2022

Revision date 09/07/2022

Trade name: (R)-PFI-2 (hydrochloride)

		(Contd. from page
 UN proper shipping name DOT, IMDG, IATA 	not regulated	
· Transport hazard class(es)		
[·] DOT, ADN, IMDG, IATA [·] Class	not regulated	
· Packing group · DOT, IMDG, IATA	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Anne MARPOL73/78 and the IBC Code 	x II of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- Section 355 (extremely hazardous substances): Substance is not listed.
- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- · TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

· Department issuing SDS: Environment protection department.

· Contact: -

· Date of preparation / last revision 09/07/2022 / -

(Contd. on page 7)

Printing date 09/07/2022

Revision date 09/07/2022

Trade name: (R)-PFI-2 (hydrochloride)

 Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit (Contd. from page 6)



Printing date 07/14/2023

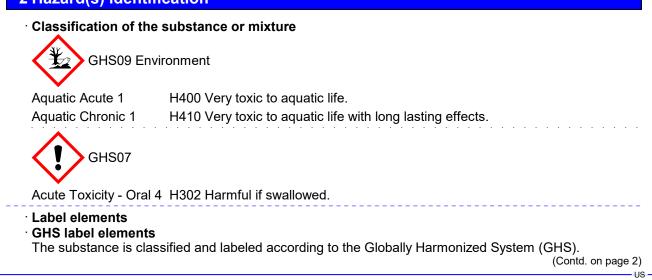
Revision date 07/14/2023

Page 1/8

1 Identification

- · Product identifier
- · Trade name: PFI-3
- · Article number: 15267
- · CAS Number: 1819363-80-8
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Cayman Chemical Co. 1180 E. Ellsworth Rd.
- Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification



Printing date 07/14/2023

Revision date 07/14/2023

Trade name: PFI-3

Uazard .	pictograms (Contd. from page
nazaru	pictograms
$\langle \rangle$	
	∇
GHS07	GHS09
	vord Warning
	statements
	armful if swallowed.
	ery toxic to aquatic life with long lasting effects.
	ionary statements
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
	312 If swallowed: Call a poison center/doctor if you feel unwell.
P330	Rinse mouth.
P391	Collect spillage.
P501	Dispose of contents/container in accordance with local/regional/national/internation regulations.
Classifi	cation system:
	atings (scale 0 - 4)
NFFAIa	anigs (scale 0 - 4)
	Health = 2
	Fire = 0
\mathbf{Z}	C Reactivity = 0
HMIS-ra	tings (scale 0 - 4)
HEALTH	² Health = 2
FIRE	\circ Fire = 0
REACTIVI	
Other ha	
	of PBT and vPvB assessment
PBT: No	ot applicable.

• **РВІ:** Not applicable. • **vPvB:** Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 1819363-80-8 PFI-3

4 First-aid measures

- · Description of first aid measures
- General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.

(Contd. on page 3)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 2)

Trade name: PFI-3

- · After swallowing: Immediately call a doctor.
- · Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- PAC-2: Substance is not listed.
- · PAC-3: Substance is not listed.

7 Handling and storage

- · Handling:
- · Precautions for safe handling

No special precautions are necessary if used correctly.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Avoid prolonged or repeated exposure.

Keep away from sources of ignition.

Take precautionary measures against static discharge.re.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: None.

(Contd. on page 4)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: PFI-3

(Contd. from page 3)

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
- · General protective and hygienic measures: Wash hands before breaks and at the end of work.
- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties · Information on basic physical and chemical properties General Information · Appearance: Form: Solid Color: Not determined. · Odor: Characteristic · Structural Formula C19H19N3O2 · Molecular Weight 321.4 g/mol · Odor threshold: Not determined. · pH-value: Not applicable. · Change in condition Melting point/Melting range: Undetermined. **Boiling point/Boiling range:** Undetermined. · Flash point: Not applicable. · Flammability (solid, gaseous): Product is not flammable. · Decomposition temperature: Not determined. · Ignition temperature: Not determined. Danger of explosion: Product does not present an explosion hazard. (Contd. on page 5)

-US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: PFI-3

	(Contd. from page 4
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not applicable.
· Density:	Not determined.
· Relative density	Not determined.
· Vapor density	Not applicable.
Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
Water:	Not determined.
· Partition coefficient (n-octanol/wa	ater): Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
SOLUBILITY	DMF: 25 mg/ml; DMSO: 25 mg/ml; DMSO:PBS (pH 7.2)(1:5 0.15 mg/ml; Ethanol: 0.3 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: strong acids, strong bases, strong oxidizing agents, strong reducing agents
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- · NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

(Contd. on page 6)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 5)

Trade name: PFI-3

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Ecotoxical effects:
- **Remark:** Very toxic for fish
- Additional ecological information:
- · General notes:
- Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into the ground. Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

 \cdot **Recommendation:** Disposal must be made according to official regulations.

UN-Number DOT, IMDG, IATA	UN3077
UN proper shipping name	
DOT, IATA	Environmentally hazardous substance, solid, n.o (PFI-3)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANC SOLID, N.O.S. (PFI-3)
Transport hazard class(es)	
DOT	
Class	9 Miscellaneous dangerous substances and articles

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: PFI-3

	(Contd. from page 6
· Label	9
· IMDG, IATA	
· Class · Label	9 Miscellaneous dangerous substances and articles 9
 Packing group DOT, IMDG, IATA 	III
 Environmental hazards: Marine pollutant: Special marking (IATA): 	Symbol (fish and tree) Symbol (fish and tree)
 Special precautions for user Hazard identification number (Kemler code): EMS Number: Stowage Category Stowage Code 	Warning: Miscellaneous dangerous substances and articles 90 F-A,S-F A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
 Transport/Additional information: DOT Quantity limitations 	On passenger aircraft/rail: 400 kg On cargo aircraft only: 400 kg
 IMDG Limited quantities (LQ) Excepted quantities (EQ) 	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· IATA · Remarks:	When sold in quantities of less than or equal to 1 mL or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.
· UN "Model Regulation":	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (PFI-3), 9, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara
- Section 355 (extremely hazardous substances): Substance is not listed.

(Contd. on page 8)

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Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 7)

Trade name: PFI-3

- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- Contact: -
- · Date of preparation / last revision 07/14/2023
- Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit **REL: Recommended Exposure Limit** Acute Toxicity - Oral 4: Acute toxicity - Category 4 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard - Category 1 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1 * * Data compared to the previous version altered.



Printing date 03/01/2023

Revision date 03/01/2023

Page 1/8

1 Identification

- · Product identifier
- · Trade name: A-366
- Article number: 16081
- · CAS Number: 1527503-11-2
- EC number: 808-907-0
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Cayman Chemical Co.
 1180 E. Ellsworth Rd.
 Ann Arbor, MI 48108
 USA
- · Information department: Product safety department
- Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

· Classification of the substance or mixture



GHS09 Environment

Aquatic Acute 1H400 Very toxic to aquatic life.Aquatic Chronic 1H410 Very toxic to aquatic life with long lasting effects.

- · Label elements
- · GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS). • Hazard pictograms



(Contd. on page 2)

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Printing date 03/01/2023

Revision date 03/01/2023

(Contd. from page 1)

Trade name: A-366

- · Signal word Warning
- · Hazard statements

H410 Very toxic to aquatic life with long lasting effects.

· Precautionary statements

P273 Avoid release to the environment.

P391 Collect spillage.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- · Classification system:
- NFPA ratings (scale 0 4)

Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



· Other hazards

- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- CAS No. Description 1527503-11-2 A-366
- · Identification number(s)
- EC number: 808-907-0

4 First-aid measures

- · Description of first aid measures
- · After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- · After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
- Use fire fighting measures that suit the environment.
- A solid water stream may be inefficient.

(Contd. on page 3)

US

Printing date 03/01/2023

Revision date 03/01/2023

Trade name: A-366

- (Contd. from page 2) • Special hazards arising from the substance or mixture No further relevant information available. • Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures Not required.
 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.

- Methods and material for containment and cleaning up: Pick up mechanically.
- **Reference to other sections** See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- · PAC-1: Substance is not listed.
- PAC-2: Substance is not listed.
- **PAC-3:** Substance is not listed.

7 Handling and storage

- · Handling:
- · Precautions for safe handling

No special precautions are necessary if used correctly.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Avoid prolonged or repeated exposure.

Keep away from sources of ignition.

Take precautionary measures against static discharge.re.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- Personal protective equipment:
- · General protective and hygienic measures: Wash hands before breaks and at the end of work.
- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

(Contd. on page 4)

Printing date 03/01/2023

Revision date 03/01/2023

Trade name: A-366

(Contd. from page 3) Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical prope	erties
 Information on basic physical and chemical properties General Information 	
 Appearance: Form: Color: Odor: Structural Formula Molecular Weight Odor threshold: pH-value: 	Solid According to product specification Characteristic C19H27N3O2 329.4 g/mol Not determined. Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wa	ter): Not determined.
· Viscosity: Dynamic:	Not applicable.
	(Contd. on page

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Safety Data Sheet acc. to OSHA HCS

Printing date 03/01/2023

Revision date 03/01/2023

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Trade name: A-366

	(Contd. from page 4)
Kinematic: SOLUBILITY	Not applicable. DMF: 30 mg/ml; DMSO: 30 mg/ml; Ethanol: 30 mg/ml; Ethanol:PBS(pH 7.2) (1:1): 0.5 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- · Hazardous decomposition products: carbon dioxide; carbon monoxide; nitrogen oxides

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- · Primary irritant effect:
- · on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- · Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- · NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- Ecotoxical effects:
- · Remark: Very toxic for fish
- Additional ecological information:
- · General notes:
- Water hazard class 2 (Self-assessment): hazardous for water
- Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.

(Contd. on page 6)

US

Printing date 03/01/2023

Revision date 03/01/2023

(Contd. from page 5)

Trade name: A-366

- · **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

UN-Number DOT, IMDG, IATA	UN3077
UN proper shipping name	
DOT, IATA	Environmentally hazardous substance, solid, n.o.s. (366)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANC SOLID, N.O.S. (A-366)
Transport hazard class(es)	
DOT	
Class Label	9 Miscellaneous dangerous substances and articles 9
Class Label	9 Miscellaneous dangerous substances and articles 9
Packing group DOT, IMDG, IATA	111
Environmental hazards:	
Marine pollutant:	Symbol (fish and tree)
Special marking (IATA):	Symbol (fish and tree)
Special precautions for user	Warning: Miscellaneous dangerous substances a articles
Hazard identification number (Kemler co EMS Number:	de): 90 F-A,S-F

Printing date 03/01/2023

Revision date 03/01/2023

Trade name: A-366

	(Contd. from page 6)
 Stowage Category Stowage Code 	A SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
· Transport/Additional information:	
· DOT · Quantity limitations	On passenger aircraft/rail: 400 kg On cargo aircraft only: 400 kg
 IMDG Limited quantities (LQ) Excepted quantities (EQ) 	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· IATA · Remarks:	When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.
· UN "Model Regulation":	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (A-366), 9, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara
- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes (Contd. on page 8)

____US

Printing date 03/01/2023

Revision date 03/01/2023

Trade name: A-366

(Contd. from page 7) no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.
 Department issuing SDS: Environment protection department. Contact: - Date of preparation / last revision 03/01/2023 Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPVB: very Persistent and very Bioaccumulative NIOSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit Recommended Exposure Limit Aquatic Acute 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1



Printing date 03/01/2023

Revision date 03/01/2023

Page 1/7

1 Identification

- Product identifier
- Trade name: OICR-9429
- · Article number: 16095
- CAS Number: 1801787-56-3
- Application of the substance / the mixture This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet • Manufacturer/Supplier: Cayman Chemical Co. 1180 E. Ellsworth Rd.
- Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

· Classification of the substance or mixture



Skin Irritation 2 H315 Causes skin irritation.

- · Label elements
- · GHS label elements
- The substance is classified and labeled according to the Globally Harmonized System (GHS). Hazard pictograms



• Signal word Warning • Hazard statements

H315 Causes skin irritation.

(Contd. on page 2)

Printing date 03/01/2023

Revision date 03/01/2023

Trade name: OICR-9429

	(Contd. from page
Precautionary statements	、 1 ⁻³
P264 Wash thoroughly after handling.	
P302+P352 If on skin: Wash with plenty of water.	
P321 Specific treatment (see on this label).	
P332+P313 If skin irritation occurs: Get medical advice/attention.	
P362+P364 Take off contaminated clothing and wash it before reuse.	
Classification system:	
NFPA ratings (scale 0 - 4)	
Health = 1	
Fire = 0	
1 Reactivity = 0	
HMIS-ratings (scale 0 - 4)	
HEALTH 1 Health = 1	
Fire 0 Fire = 0	
REACTIVITY 0 Reactivity = 0	
REACTIVITY OF TRADE OF TO TRADE OF TRAD	
Other hazards	
Results of PBT and vPvB assessment	
PBT: Not applicable.	
vPvB: Not applicable.	

- · Chemical characterization: Substances
- · CAS No. Description
- 1801787-56-3 OICR-9429

4 First-aid measures

- Description of first aid measures
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
- Use fire fighting measures that suit the environment.
- A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.

(Contd. on page 3)

⁻ US -

Printing date 03/01/2023

Revision date 03/01/2023

Trade name: OICR-9429

· Advice for firefighters

· Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

- Protective Action Criteria for Chemicals
- PAC-1: Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.

7 Handling and storage

· Handling:

· Precautions for safe handling

No special precautions are necessary if used correctly.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Avoid prolonged or repeated exposure.

Keep away from sources of ignition.

Take precautionary measures against static discharge.re.

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- · Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the skin. Avoid contact with the eyes and skin.
- · Breathing equipment: Not required.

(Contd. on page 4)

(Contd. from page 2)

Printing date 03/01/2023

Revision date 03/01/2023

(Contd. from page 3)

Trade name: OICR-9429

· Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical prope	erties
· Information on basic physical and	chemical properties
General Information	
· Appearance:	
Form: Color:	Solid
· Odor:	Not determined. Characteristic
• Structural Formula	C29H32F3N5O3
Molecular Weight	555.6 g/mol
· Odor threshold:	Not determined.
· pH-value:	Not applicable.
•	Not applicable.
• Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not applicable.
· Density:	Not determined.
Relative density	Not determined.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
	(Contd. on page

Printing date 03/01/2023

Revision date 03/01/2023

Trade name: OICR-9429

	(Contd. from page 4
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/	vater): Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
SOLUBILITY	DMSO: .5 mg/ml (with gentle warming); Methanol: .5 mg/ml (with gentle warming)
· Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- Hazardous decomposition products: carbon dioxide; carbon monoxide; hydrogen fluoride; nitrogen oxides

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- · on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- · NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- **Mobility in soil** No further relevant information available.

(Contd. on page 6)

Printing date 03/01/2023

Revision date 03/01/2023

(Contd. from page 5)

Trade name: OICR-9429

· Additional ecological information:

· General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- · PBT: Not applicable.

vPvB: Not applicable.

· Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· Uncleaned packagings:

• **Recommendation:** Disposal must be made according to official regulations.

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14 Transp	bort in	ormai	lon
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· UN-Number	
· DOT, IMDG, IATA	not regulated
UN proper shipping name	
· DOT, IMDG, IATA	not regulated
· Transport hazard class(es)	
• • • • •	
· DOT, ADN, IMDG, IATA	
· Class	not regulated
· Packing group	
· DOT, IMĎĞ, IATA	not regulated
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex I	ll of
MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	not regulated

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

· Section 355 (extremely hazardous substances): Substance is not listed.

- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- Hazardous Air Pollutants Substance is not listed.

(Contd. on page 7)

– US

Printing date 03/01/2023

Revision date 03/01/2023

Trade name: OICR-9429

· Proposition 65

- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- Contact: -
- · Date of preparation / last revision 03/01/2023
- Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

- DOT: US Department of Transportation
- IATA: International Air Transport Association
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety
- OSHA: Occupational Safety & Health
- TLV: Threshold Limit Value
- PEL: Permissible Exposure Limit
- REL: Recommended Exposure Limit
- Skin Irritation 2: Skin corrosion/irritation Category 2
- ** Data compared to the previous version altered.



Printing date 09/23/2022

Revision date 09/23/2022

Page 1/7

1 Identification

- Product identifier
- · Trade name: GSK-LSD1 (hydrochloride)
- · Article number: 16439
- CAS Number: 2102933-95-7
- Application of the substance / the mixture This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
- **Manufacturer/Supplier:** Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
 GHS label elements None
 Hazard pictograms None
 Signal word None
 - · Hazard statements None
 - · Classification system:
 - NFPA ratings (scale 0 4)

000 Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

US

Printing date 09/23/2022

Revision date 09/23/2022

(Contd. from page 1)

Trade name: GSK-LSD1 (hydrochloride)

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 2102933-95-7 GSK-LSD1 (hydrochloride)

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- Most important symptoms and effects, both acute and delayed May cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects. No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:

Dispose of the collected material according to regulations.

- Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- **PAC-2:** Substance is not listed.

(Contd. on page 3)

US

Printing date 09/23/2022

Revision date 09/23/2022

(Contd. from page 2)

Trade name: GSK-LSD1 (hydrochloride)

• **PAC-3:** Substance is not listed.

7 Handling and storage

- · Handling:
- Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.

• **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

- Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:
- The usual precautionary measures for handling chemicals should be followed.
- Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

Information on basic physica General Information	al and chemical properties	
Appearance:		
Form:	Solid	
Color:	Not determined.	
Odor:	Characteristic	
Structural Formula	C14H20N2 • 2HCI	
Molecular Weight	289.2 g/mol	

Printing date 09/23/2022

Revision date 09/23/2022

Trade name: GSK-LSD1 (hydrochloride)

	(Contd. from page 3
· Odor threshold:	Not determined.
· pH-value:	Not determined.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Not applicable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits: Lower: Upper:	Not determined. Not determined.
· Vapor pressure:	Not determined.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not determined. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wat	t er): Not determined.
· Viscosity: Dynamic: Kinematic: SOLUBILITY	Not determined. Not determined. DMF: 1 mg/ml; DMSO: 25 mg/ml; Ethanol: 0.1 mg/ml; PBS (pH 7.2): 10 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- · Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- Hazardous decomposition products: carbon dioxide, carbon monoxide, hydrogen chloride gas, nitrogen oxides

(Contd. on page 5)

US

Printing date 09/23/2022

Revision date 09/23/2022

Trade name: GSK-LSD1 (hydrochloride)

(Contd. from page 4)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · DOT, IMDG, IATA

not regulated

(Contd. on page 6)

JS

Printing date 09/23/2022

Revision date 09/23/2022

Trade name: GSK-LSD1 (hydrochloride)

		(Contd. from page 5
 UN proper shipping name DOT, IMDG, IATA 	not regulated	
· Transport hazard class(es)		
[·] DOT, ADN, IMDG, IATA [·] Class	not regulated	
 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Anne MARPOL73/78 and the IBC Code 	x II of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- Section 355 (extremely hazardous substances): Substance is not listed.
- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- · TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

· Department issuing SDS: Environment protection department.

· Contact: -

· Date of preparation / last revision 09/23/2022 / -

(Contd. on page 7)

Printing date 09/23/2022

Revision date 09/23/2022

Trade name: GSK-LSD1 (hydrochloride)

	(Contd. from page
Abbreviations and acronyms:	(· · · ·
IMDG: International Maritime Code for Dangerous Goods	
DOT: US Department of Transportation	
IATA: International Air Transport Association	
CAS: Chemical Abstracts Service (division of the American Chemical Society)	
NFPA: National Fire Protection Association (USA)	
HMIS: Hazardous Materials Identification System (USA)	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
NIOSH: National Institute for Occupational Safety	
OSHA: Occupational Safety & Health	
TLV: Threshold Limit Value	
PEL: Permissible Exposure Limit	
REL: Recommended Exposure Limit	
* Data compared to the previous version altered.	



Printing date 11/03/2022

Revision date 11/03/2022

Page 1/7

1 Identification

- · Product identifier
- Trade name: SGC707
- Article number: 17017
- CAS Number: 1687736-54-4
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet • Manufacturer/Supplier: Cayman Chemical Co.
- 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture
 The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
- · GHS label elements None
- Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

000 Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

US

Printing date 11/03/2022

Revision date 11/03/2022

Trade name: SGC707

- · Other hazards
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- CAS No. Description 1687736-54-4 SGC707
- _____

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** May cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive effects, teratogenic effects. No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- Suitable extinguishing agents: Use fire fighting measures that suit the environment.
- A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- \cdot Methods and material for containment and cleaning up: Pick up mechanically.
- Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- · PAC-2: Substance is not listed.

(Contd. on page 3)

(Contd. from page 1)

⁻ US

Printing date 11/03/2022

Revision date 11/03/2022

(Contd. from page 2)

Trade name: SGC707

· PAC-3: Substance is not listed.

7 Handling and storage

- · Handling:
- Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.

• Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see item 7.

- Control parameters
- Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
- The usual precautionary measures for handling chemicals should be followed.
- Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

Information on basic physica General Information	I and chemical properties	
Appearance:		
Form:	Solid	
Color:	According to product specification	
Odor:	Characteristic	
Structural Formula	C16H18N4O2	
Molecular Weight	298.3 g/mol	

Printing date 11/03/2022

Revision date 11/03/2022

Trade name: SGC707

	(Contd. from page 3
· Odor threshold:	Not determined.
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits: Lower: Upper:	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wat	ter): Not determined.
[·] Viscosity: Dynamic: Kinematic: SOLUBILITY	Not applicable. Not applicable. DMF: 2 mg/ml; DMSO: 2 mg/ml; Ethanol: 5 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: strong reducing agents, strong oxidizing agents, strong bases, strong acids
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- · on the skin: No irritant effect.

(Contd. on page 5)

US

Printing date 11/03/2022

Revision date 11/03/2022

(Contd. from page 4)

Trade name: SGC707

- · on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.

• Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

UN-Number		
DOT, IMDG, IATA	not regulated	
UN proper shipping name		
DOT, IMDG, IATA	not regulated	
Transport hazard class(es)		
DOT, ADN, IMDG, IATA		
Class	not regulated	

Printing date 11/03/2022

Revision date 11/03/2022

Trade name: SGC707

(Contd.	from	page	5)

		`	10,
· Packing group			
· DOT, IMDG, IATA	not regulated		
· Environmental hazards:	Not applicable.		
· Special precautions for user	Not applicable.		
· Transport in bulk according to Anne	x II of		
MARPOL73/78 and the IBC Code	Not applicable.		
· UN "Model Regulation":	not regulated		

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- Date of preparation / last revision 11/03/2022
- Abbreviations and acronyms:
- IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation
- IATA: International Air Transport Association
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

US

119

Safety Data Sheet acc. to OSHA HCS

Printing date 11/03/2022

Trade name: SGC707

NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Revision date 11/03/2022

(Contd. from page 6)



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/8

1 Identification

- · Product identifier
- · Trade name: OF-1
- Article number: 17124
- CAS Number: 919973-83-4
- **EC number:** 809-510-5
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Cayman Chemical Co.
 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- · Information department: Product safety department

Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

Classification of the substance or mixture

GH

GHS06 Skull and crossbones

Acute Toxicity - Oral 3 H301 Toxic if swallowed.

GHS07

H319 Causes serious eye irritation.

Eye Irritation 2A

· GHS label elements

The substance is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: OF-1

Hazard pictogra GHS06 GHS07 Signal word Dar	
Signal word Dar	7
Signal word Dar	
-	
Hazard statemer	
H301 Toxic if swa	
	rious eye irritation.
Precautionary st	
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear eye protection / face protection.
P301+P310	If swallowed: Immediately call a poison center/doctor.
P321	Specific treatment (see on this label).
P330	Rinse mouth.
P305+P351+P33	8 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if
	present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
Classification sy	
NFPA ratings (se	
Hea	lth = 2
Fire	
2 0 Rea	ictivity = 0
HMIS-ratings (so	cale 0 - 4)
HEALTH 2 He	alth = 2
FIRE 0 Fire	e = 0
REACTIVITY 0 Rea	activity = 0
Other hazards	
	and vPvB assessment
PBT: Not applica	
vPvB: Not applic	

3 Composition/information on ingredients

- · Chemical characterization: Substances
- CAS No. Description 919973-83-4 OF-1
- Identification number(s)
- EC number: 809-510-5

(Contd. on page 3)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: OF-1

(Contd. from page 2)

4 First-aid measures

· Description of first aid measures

· General information:

Immediately remove any clothing soiled by the product.

- In case of irregular breathing or respiratory arrest provide artificial respiration.
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact:
- Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: Do not induce vomiting; immediately call for medical help.
- · Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- · Suitable extinguishing agents:

Use fire fighting measures that suit the environment. A solid water stream may be inefficient.

- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up:
- Dispose contaminated material as waste according to section 13.
- Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- · Protective Action Criteria for Chemicals
- · PAC-1: Substance is not listed.
- **PAC-2:** Substance is not listed.
- · PAC-3: Substance is not listed.

7 Handling and storage

- · Handling:
- Precautions for safe handling Thorough dedusting.
- · Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities Keep container tightly closed.

Store in accordance with information listed on the product insert.

(Contd. on page 4)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: OF-1

(Contd. from page 3)

- **Storage:** Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes.
- Avoid contact with the eyes and skin.
- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- Penetration time of glove material
- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

- Information on basic physical and chemical properties
- · General Information
- · Appearance:
- Form:
- Color:
- · Odor:
- · Structural Formula
- · Molecular Weight

Crystalline Not determined. Characteristic C17H18BrN3O4S 440.3 g/mol

(Contd. on page 5)

⁻ U

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: OF-1

	(Contd. from page 4
Odor threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Product is not flammable.
Decomposition temperature:	Not determined.
Ignition temperature:	Not determined.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not applicable.
Density:	Not determined.
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water:	Not determined.
Partition coefficient (n-octanol/wat	ter): Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
SOLUBILITY	DMF: 5 mg/ml; DMF:PBS(pH 7.2)(1:1): 0.5 mg/ml; DMSO: mg/ml
Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- Hazardous decomposition products: carbon oxides, hydrogen bromide, nitrogen oxides, sulfur oxides

(Contd. on page 6)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: OF-1

(Contd. from page 5)

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: Irritating effect.
- Sensitization: No sensitizing effects known.
- · Additional toxicological information:

· Carcinogenic categories

- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

· UN-Number	
· DOT, IMDG, IATA	UN2811
· UN proper shipping name	
DOT	Toxic solids, organic, n.o.s. (OF-1)
·IMDG	TOXIC SOLID, ORGANIC, N.O.S. (OF-1)

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: OF-1

	(Contd. from page
ΙΑΤΑ	Toxic solid, organic, n.o.s. (OF-1)
Transport hazard class(es)	
DOT	
TOXIC 6	
Class	6.1 Toxic substances
Label	6.1
IMDG, IATA	
6	
Class Label	6.1 Toxic substances 6.1
Packing group DOT, IMDG, IATA	
Environmental hazards:	Not applicable.
Special precautions for user Hazard identification number (Kemler code): EMS Number: Stowage Category	Warning: Toxic substances 60 F-A,S-A A
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 100 kg On cargo aircraft only: 200 kg
IMDG	
Limited quantities (LQ)	5 kg
Excepted quantities (EQ)	Code: E1
	Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
IATA Remarks:	When sold in quantities of less than or equal to 1 ml
	or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimi Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled a Dangerous Goods/Excepted Quantity.
UN "Model Regulation":	UN 2811 TOXIC SOLID, ORGANIC, N.O.S. (OF-1 6.1, III

(Contd. on page 8)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 7)

Trade name: OF-1

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara
- · Section 355 (extremely hazardous substances): Substance is not listed.
- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

· Department issuing SDS: Environment protection department.

- · Contact: -
- Date of preparation / last revision 07/14/2023
 Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation
- IATA: International Air Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Acute Toxicity - Oral 3: Acute toxicity – Category 3 Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
- ** Data compared to the previous version altered.



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- · Product identifier
- Trade name: BAZ2-ICR
- Article number: 17448
- CAS Number: 1665195-94-7
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
- **Manufacturer/Supplier:** Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
- · GHS label elements None
- · Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

0 0 0 Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)

HEALTHImage: OFIREImage: OFIREImage: OReactivityImage: OReactivityImage: O

(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 1)

Trade name: BAZ2-ICR

- · Other hazards
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- CAS No. Description
- 1665195-94-7 BAZ2-ICR

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 2)

Trade name: BAZ2-ICR

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information

· Appearance:	
Form:	Solid
Color:	Not determined.
· Odor:	Characteristic
 Structural Formula 	C20H19N7
 Molecular Weight 	357.4 g/mol
· Odor threshold:	Not determined.

(Contd. on page 4)

⁻ US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: BAZ2-ICR

	(Contd. from page 3
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wa	ter): Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 20 mg/ml; DMF:PBS(pH 7.2)(1:1): 0.5 mg/ml; DMSO: 10 mg/ml; Ethanol: 10 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: strong acids, strong bases, strong oxidizing agents, strong reducing agents
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.

(Contd. on page 5)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 4)

Trade name: BAZ2-ICR

- · on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.

• Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

· UN-Number · DOT, IMDG, IATA	not regulated	
· ·	notrogalated	
 UN proper shipping name DOT, IMDG, IATA 	not regulated	
Transport hazard class(es)		
· DOT, ADN, IMDG, IATA		
Class	not regulated	

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: BAZ2-ICR

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(Contd.	from	page 5	5)

		`	10 /
· Packing group			
· DOT, IMDG, IATA	not regulated		
· Environmental hazards:	Not applicable.		
 Special precautions for user 	Not applicable.		
· Transport in bulk according to Anne	x II of		
MARPOL73/78 and the IBC Code	Not applicable.		
· UN "Model Regulation":	not regulated		

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 07/14/2023
- Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

US

US

Safety Data Sheet acc. to OSHA HCS

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: BAZ2-ICR

NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit • * Data compared to the previous version altered.

(Contd. from page 6)



Printing date 05/10/2023

Revision date 05/10/2023

Page 1/7

1 Identification

- Product identifier
- Trade name: GSK484 (hydrochloride)
- · Article number: 17488
- · CAS Number: 1652591-81-5
- · Application of the substance / the mixture This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- · Details of the supplier of the safety data sheet · Manufacturer/Supplier:
- Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- · Information department: Product safety department · Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- · Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS). · Label elements
- · GHS label elements None · Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system: NFPA ratings (scale 0 - 4)

Health = 0Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)

HEALTH 0 Health = 00 Fire = 0 FIRE Reactivity = 0 REACTIVITY 0

(Contd. on page 2)

US

Printing date 05/10/2023

Revision date 05/10/2023

(Contd. from page 1)

Trade name: GSK484 (hydrochloride)

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 1652591-81-5 GSK484 (hydrochloride)

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

Printing date 05/10/2023

Revision date 05/10/2023

Trade name: GSK484 (hydrochloride)

(Contd. from page 2)

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- **Storage:** Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- · Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection: Not required.

9 Physical and chemical properties

- · Information on basic physical and chemical properties
- General Information
- · Appearance: Form: Solid Color: · Odor: Characteristic · Structural Formula · Molecular Weight 510 g/mol · Odor threshold:

Not determined. C27H31N5O3 • HCI Not determined.

(Contd. on page 4)

119

Printing date 05/10/2023

Revision date 05/10/2023

Trade name: GSK484 (hydrochloride)

	(Contd. from page 3)
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wa	iter): Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 30 mg/ml; DMSO: 25 mg/ml; Ethanol: 25 mg/ml; PBS (pH 7.2): 5 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- · Hazardous decomposition products: carbon dioxide, carbon monoxide, nitrogen oxides

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.

(Contd. on page 5)

US

Printing date 05/10/2023

Revision date 05/10/2023

(Contd. from page 4)

Trade name: GSK484 (hydrochloride)

- · on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.

• Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

UN-Number		
DOT, IMDG, IATA	not regulated	
UN proper shipping name		
DOT, IMDG, IATA	not regulated	
Transport hazard class(es)		
DOT, ADN, IMDG, IATA		
· Class	not regulated	

Printing date 05/10/2023

Revision date 05/10/2023

Trade name: GSK484 (hydrochloride)

	-		
(Contd.	from	page	5)

 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. 		
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 05/10/2023
- Abbreviations and acronyms:
- IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation IATA: International Air Transport Association
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

US

Printing date 05/10/2023

Revision date 05/10/2023

Trade name: GSK484 (hydrochloride)

NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit (Contd. from page 6)



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- Product identifier
- · Trade name: NI-57
- · Article number: 17662
- CAS Number: 1883548-89-7
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier:
- Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
 GHS label elements None
 Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: NI-57

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1883548-89-7 NI-57

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- PAC-1: Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

(Contd. from page 1)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 2)

Trade name: NI-57

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities Keep container tightly closed.

Store in accordance with information listed on the product insert.

- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:
- The usual precautionary measures for handling chemicals should be followed.
- Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

Information on basic physica General Information	l and chemical properties	
Appearance:		
Form:	Solid	
Color:	Not determined.	
Odor:	Characteristic	
Structural Formula	C19H17N3O4S	
Molecular Weight	383.4 g/mol	

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: NI-57

	(Contd. from page
Odor threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
Flash point:	Not applicable.
Flammability (solid, gaseous):	Product is not flammable.
Decomposition temperature:	Not determined.
Ignition temperature:	Not determined.
Danger of explosion:	Product does not present an explosion hazard.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not applicable.
Density:	Not determined.
Relative density	Not determined.
Vapor density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with	
Water:	Not determined.
Partition coefficient (n-octanol/wat	t er): Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
SOLUBILITY	DMF: 30 mg/ml; DMF:PBS (pH 7.2) (1:1): 0.5 mg/ml; DMS(
	25 mg/ml
Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- · Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- Incompatible materials: strong acids, strong bases, strong oxidizing agents, strong reducing agents
- · Hazardous decomposition products: No dangerous decomposition products known.

(Contd. on page 5)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: NI-57

(Contd. from page 4)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · DOT, IMDG, IATA

not regulated

(Contd. on page 6)

JS

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: NI-57

		(Contd. from page 5
 UN proper shipping name DOT, IMDG, IATA 	not regulated	
· Transport hazard class(es)		
[·] DOT, ADN, IMDG, IATA [·] Class	not regulated	
 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Anne MARPOL73/78 and the IBC Code 	x II of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- · TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

· Department issuing SDS: Environment protection department.

· Contact: -

· Date of preparation / last revision 07/14/2023

(Contd. on page 7)

^{- 115}

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 6)

Trade name: NI-57

 Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit * Data compared to the previous version altered.

US



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/8

1 Identification

- · Product identifier
- · Trade name: I-BRD9
- Article number: 17749
- CAS Number: 1714146-59-4
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Cayman Chemical Co.
 1180 E. Ellsworth Rd.
 Ann Arbor, MI 48108
 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

· Classification of the substance or mixture



GHS06 Skull and crossbones

Acute Toxicity - Oral 3 H301 Toxic if swallowed.

- · Label elements
- · GHS label elements
- The substance is classified and labeled according to the Globally Harmonized System (GHS). Hazard pictograms



Signal word Danger
 Hazard statements
 H301 Toxic if swallowed.

(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: I-BRD9

. Procoutionary statements	(Contd. from page 1)
 Precautionary statements P264 Wash thoroughly after handling. 	
P270 Do not eat, drink or smoke when using this product.	
P301+P310 If swallowed: Immediately call a poison center/doctor.	
P321 Specific treatment (see on this label).	
P330 Rinse mouth.	
P405 Store locked up.	
P501 Dispose of contents/container in accordance with local/re	gional/national/international
regulations.	g
· Classification system:	
· NFPA ratings (scale 0 - 4)	
Health = 2	
Fire = 0	
2 U Reactivity = 0	
· HMIS-ratings (scale 0 - 4)	
HEALTH 2 Health = 2	
FIRE 0 Fire = 0	
REACTIVITY 0 Reactivity = 0	
[·] Other hazards	
Results of PBT and vPvB assessment	
· PBT: Not applicable.	
· vPvB: Not applicable.	
3 Composition/information on ingredients	
· Chemical characterization: Substances	
· CAS No. Description	
1714146-59-4 I-BRD9	
4 First-aid measures	
· Description of first aid measures	
· General information:	
Immediately remove any clothing soiled by the product.	
In case of irregular breathing or respiratory arrest provide artificial respirati	on
• After inhalation: In case of unconsciousness place patient stably in side p	
• After skin contact: Immediately wash with water and soap and rinse thore	
• After eye contact: Rinse opened eye for several minutes under running w	
• After swallowing: Do not induce vomiting: immediately call for medical be	

- **After swallowing:** Do not induce vomiting; immediately call for medical help.
- Information for doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

(Contd. on page 3)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: I-BRD9

(Contd. from page 2)

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- · Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up:
- Dispose contaminated material as waste according to section 13.
- Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- · PAC-1: Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.

7 Handling and storage

- · Handling:
- · Precautions for safe handling Thorough dedusting.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- · Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.

(Contd. on page 4)

[–] US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 3)

Trade name: I-BRD9

· Breathing equipment: Not required.

• Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

Information on basic physical and chemical propertiesGeneral InformationAppearance:Form:SolidColor:Not determined.Odor:CharacteristicStructural FormulaC22H22F3N3O3S2Molecular Weight497.6 g/molOdor threshold:Not determined.• pH-value:Not applicable.• Change in conditionUndetermined.Melting point/Melting range:Undetermined.• Flash point:Not applicable.• Flammability (solid, gaseous):Product is not flammable.• Ignition temperature:Not determined.• Danger of explosion:Product does not present an explosion hazard.• Explosion limits:Lower:Lower:Not determined.• Vapor pressure:Not applicable.	
Form:SolidColor:Not determined.Odor:CharacteristicStructural FormulaC22H22F3N3O3S2Molecular Weight497.6 g/molOdor threshold:Not determined.• pH-value:Not applicable.• Change in condition Melting point/Melting range: Boiling point/Boiling range:Undetermined.• Flash point:Not applicable.• Flash point:Not applicable.• Flash point:Not applicable.• Ignition temperature:Not determined.• Danger of explosion:Product is not flammable.• Explosion limits: Lower: Upper:Not determined.• Not determined.Not determined.• Not determined.Not determined.• Danger of explosion:Product is not flammable.• Explosion limits: Lower: Upper:Not determined.	
Color:Not determined.Odor:CharacteristicStructural FormulaC22H22F3N3O3S2Molecular Weight497.6 g/molOdor threshold:Not determined.'pH-value:Not applicable.'Change in condition Melting point/Melting range: Boiling point/Boiling range:Undetermined.'Flash point:Not applicable.'Flash point:Not applicable.'Flash point:Not applicable.'Decomposition temperature:Not determined.'Ignition temperature:Not determined.'Danger of explosion:Product does not present an explosion hazard.'Explosion limits: Lower: Upper:Not determined.Not determined.Not determined.	
Odor:CharacteristicStructural FormulaC22H22F3N3O3S2Molecular Weight497.6 g/molOdor threshold:Not determined.• pH-value:Not applicable.• Change in condition Melting point/Melting range: Boiling point/Boiling range:Undetermined.• Flash point:Not applicable.• Flash point:Not applicable.• Flash point:Not applicable.• Ignition temperature:Not determined.• Decomposition temperature:Not determined.• Danger of explosion:Product does not present an explosion hazard.• Explosion limits: Lower: Upper:Not determined.• Not determined.Not determined.	
Structural FormulaC22H22F3N3O3S2Molecular Weight497.6 g/molOdor threshold:Not determined.pH-value:Not applicable.Change in condition Melting point/Melting range: Boiling point/Boiling range:Undetermined.'Flash point:Not applicable.Flash point:Not applicable.'Flash point:Not applicable.'Decomposition temperature:Not determined.'Ignition temperature:Not determined.'Danger of explosion:Product does not present an explosion hazard.'Explosion limits: Lower: Upper:Not determined.Not determined.Not determined.	
Molecular Weight497.6 g/molOdor threshold:Not determined.pH-value:Not applicable.Change in condition Melting point/Melting range:Undetermined.Boiling point/Melting range:Undetermined.Flash point:Not applicable.Flash point:Not applicable.Flammability (solid, gaseous):Product is not flammable.Decomposition temperature:Not determined.Ignition temperature:Not determined.Danger of explosion:Product does not present an explosion hazard.Explosion limits: Upper:Not determined.Not determined.Not determined.	
Odor threshold:Not determined.• pH-value:Not applicable.• Change in condition Melting point/Melting range:Undetermined.Boiling point/Melting range:Undetermined.• Flash point:Not applicable.• Flammability (solid, gaseous):Product is not flammable.• Decomposition temperature:Not determined.• Ignition temperature:Not determined.• Danger of explosion:Product does not present an explosion hazard.• Explosion limits: Upper:Not determined.• Not determined.Not determined.	
· pH-value:Not applicable.· Change in condition Melting point/Melting range:Undetermined.Boiling point/Boiling range:Undetermined.· Flash point:Not applicable.· Flash point:Not applicable.· Flammability (solid, gaseous):Product is not flammable.· Decomposition temperature:Not determined.· Ignition temperature:Not determined.· Danger of explosion:Product does not present an explosion hazard.· Explosion limits: Upper:Not determined.· Not determined.Not determined.	
Change in condition Melting point/Melting range:Undetermined.Boiling point/Boiling range:Undetermined.Flash point:Not applicable.Flammability (solid, gaseous):Product is not flammable.Decomposition temperature:Not determined.Ignition temperature:Not determined.Danger of explosion:Product does not present an explosion hazard.Explosion limits: Lower: Upper:Not determined.Not determined.Not determined.	
Melting point/Melting range:Undetermined.Boiling point/Boiling range:Undetermined.Flash point:Not applicable.Flammability (solid, gaseous):Product is not flammable.Decomposition temperature:Not determined.Ignition temperature:Not determined.Danger of explosion:Product does not present an explosion hazard.Explosion limits:Not determined.Lower:Not determined.Upper:Not determined.	
Melting point/Melting range:Undetermined.Boiling point/Boiling range:Undetermined.Flash point:Not applicable.Flammability (solid, gaseous):Product is not flammable.Decomposition temperature:Not determined.Ignition temperature:Not determined.Danger of explosion:Product does not present an explosion hazard.Explosion limits:Not determined.Lower:Not determined.Upper:Not determined.	
· Flash point: Not applicable. · Flammability (solid, gaseous): Product is not flammable. · Decomposition temperature: Not determined. · Ignition temperature: Not determined. · Danger of explosion: Product does not present an explosion hazard. · Explosion limits: Not determined. Lower: Not determined. · Not determined. Not determined.	
• Flammability (solid, gaseous): Product is not flammable. • Decomposition temperature: Not determined. • Ignition temperature: Not determined. • Danger of explosion: Product does not present an explosion hazard. • Explosion limits: Lower: Lower: Not determined. Upper: Not determined.	
• Decomposition temperature: Not determined. • Ignition temperature: Not determined. • Danger of explosion: Product does not present an explosion hazard. • Explosion limits: Lower: Lower: Not determined. Upper: Not determined.	
Ignition temperature: Not determined. Danger of explosion: Product does not present an explosion hazard. Explosion limits: Lower: Lower: Not determined. Upper: Not determined.	
• Danger of explosion: Product does not present an explosion hazard. • Explosion limits: Lower: Lower: Not determined. Upper: Not determined.	
Explosion limits: Lower: Not determined. Upper: Not determined.	
Lower:Not determined.Upper:Not determined.	
Upper: Not determined.	
· Vapor pressure: Not applicable.	
· Density: Not determined.	
· Relative density Not determined.	
Vapor density Not applicable.	
• Evaporation rate Not applicable.	
· Solubility in / Miscibility with	
Water: Not determined.	
(Contd. on	

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: I-BRD9

	(Contd. from page 4)
· Partition coefficient (n-octan	ol/water): Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
SOLUBILITY	DMF: 30 mg/ml; DMF:PBS (pH 7.2) (1:1): 0.5 mg/ml; DMSO: 25 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- · Hazardous decomposition products: carbon oxides, hydrogen fluoride, nitrogen oxides, sulfur oxides

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- · Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- · PBT: Not applicable.

(Contd. on page 6)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 5)

Trade name: I-BRD9

- · **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

UN-Number	
DOT, IMDG, IATA	UN2811
UN proper shipping name	
DOT	Toxic solids, organic, n.o.s. (I-BRD9)
IMDG	TOXIC SOLID, ORGANIC, N.O.S. (I-BRD9)
ΙΑΤΑ	Toxic solid, organic, n.o.s. (I-BRD9)
Transport hazard class(es)	
DOT	
TOXIC 6	
Class	6.1 Toxic substances
Label	6.1
Class	6.1 Toxic substances
Label	6.1
Packing group	
DOT, IMĎĞ, IATA	III
Environmental hazards:	Not applicable.
Special precautions for user	Warning: Toxic substances
Hazard identification number (Keml	
EMS Number:	F-A,S-A
Stowage Category	Α
Transport in bulk according to Anne MARPOL73/78 and the IBC Code	ex II of Not applicable.

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: I-BRD9

	(Contd. from page 6
· Transport/Additional information:	
· DOT · Quantity limitations	On passenger aircraft/rail: 100 kg
	On cargo aircraft only: 200 kg
·IMDG	
 Limited quantities (LQ) 	5 kg
 Excepted quantities (EQ) 	Code: E1
	Maximum net quantity per inner packaging: 30 g
	Maximum net quantity per outer packaging: 1000 g
Remarks:	When sold in quantities of less than or equal to 1 mL or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimi Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled a Dangerous Goods/Excepted Quantity.
· UN "Model Regulation":	UN 2811 TOXIC SOLID, ORGANIC, N.O.S. (I-BRD9 6.1, III

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

- · Sara
- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

(Contd. on page 8)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: I-BRD9

	(Contd. from page 7)
 Department issuing SDS: Environment protection department. 	
Contact: -	
· Date of preparation / last revision 07/14/2023	
Abbreviations and acronyms:	
IMDG: International Maritime Code for Dangerous Goods	
DOT: US Department of Transportation	
IATA: International Air Transport Association	
CAS: Chemical Abstracts Service (division of the American Chemical Society)	
NFPA: National Fire Protection Association (USA)	
HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
NIOSH: National Institute for Occupational Safety	
OSHA: Occupational Safety & Health	
TLV: Threshold Limit Value	
PEL: Permissible Exposure Limit	
REL: Recommended Exposure Limit	
Acute Toxicity - Oral 3: Acute toxicity – Category 3	
* * Data compared to the previous version altered.	
	US



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/8

1 Identification

- · Product identifier
- Trade name: BI-9564
- · Article number: 17897
- CAS Number: 1883429-22-8
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Cayman Chemical Co.
 1180 E. Ellsworth Rd.
 Ann Arbor, MI 48108
 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

· Classification of the substance or mixture



GHS06 Skull and crossbones

Acute Toxicity - Oral 3 H301 Toxic if swallowed.

- · Label elements
- · GHS label elements
- The substance is classified and labeled according to the Globally Harmonized System (GHS). Hazard pictograms



Signal word Danger
 Hazard statements
 H301 Toxic if swallowed.

(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: BI-9564

	(Contd. from page 1)
 Precautionary statements P264 Wash thoroughly after handling. 	
P270 Do not eat, drink or smoke when using this product.	
P301+P310 If swallowed: Immediately call a poison center/doctor.	
P321 Specific treatment (see on this label).	
P330 Rinse mouth.	
P405 Store locked up.	/
P501 Dispose of contents/container in accordance with local/	regional/national/international
regulations.	
Classification system:	
· NFPA ratings (scale 0 - 4)	
Health = 2	
Fire = 0	
2 0 Reactivity = 0	
· HMIS-ratings (scale 0 - 4)	
HEALTH 2 Health = 2	
FIRE 0 Fire = 0	
$\frac{1}{100} = 0$	
REACTIVITY 0	
· Other hazards	
• Results of PBT and vPvB assessment	
· PBT: Not applicable.	
· vPvB: Not applicable.	
3 Composition/information on ingredients	
o composition/mormation on ingredients	
· Chemical characterization: Substances	
· CAS No. Description	
1883429-22-8 BI-9564	
4 First-aid measures	
Description of first aid measures	
General information:	
Immediately remove any clothing soiled by the product.	
In case of irregular breathing or respiratory arrest provide artificial respira	ation.
• After inhalation: In case of unconsciousness place patient stably in side	
• After skin contact: Immediately wash with water and soap and rinse the	
• After eye contact: Rinse opened eye for several minutes under running	
• After swallowing: Do not induce vomiting; immediately call for medical	
After Swallowing: Do not induce vorniting, immediately call for medical	neih.

- · Information for doctor:
- Most important symptoms and effects, both acute and delayed No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

(Contd. on page 3)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: BI-9564

(Contd. from page 2)

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- · Methods and material for containment and cleaning up:
- Dispose contaminated material as waste according to section 13.
- Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- · PAC-1: Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.

7 Handling and storage

- · Handling:
- · Precautions for safe handling Thorough dedusting.
- · Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities Keep container tightly closed.
- Store in accordance with information listed on the product insert.
- · Storage: Store in accordance with information listed on the product insert.
- · Requirements to be met by storerooms and receptacles: No special requirements.
- Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
- General protective and hygienic measures: Keep away from foodstuffs, beverages and feed.

(Contd. on page 4)

⁻ US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 3)

Trade name: BI-9564

Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.

· Breathing equipment: Not required.

· Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

 Information on basic physical and General Information 	chemical properties
· Appearance:	
Form:	Solid
Color:	Not determined.
· Odor:	Characteristic
Structural Formula	C20H23N3O3
· Molecular Weight	353.4 g/mol
· Odor threshold:	Not determined.
· pH-value:	Not applicable.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not applicable.
· Density:	Not determined.
· Relative density	Not determined.
· Vapor density	Not applicable.
 Evaporation rate 	Not applicable.
	(Contd. on page

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: BI-9564

	(Contd. from page 4
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/	water): Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
SOLUBILITY	DMF: 5 mg/ml; DMF:PBS(pH 7.2)(1:1): 0.5 mg/ml; DMSO: 5 mg/ml; Ethanol: 2 mg/ml
Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- · Hazardous decomposition products: carbon oxides, nitrogen oxides

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- · Additional ecological information:
- General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

(Contd. on page 6)

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Printing date 07/14/2023

Revision date 07/14/2023

Trade name: BI-9564

(Contd. from page 5) Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· Results of PBT and vPvB assessment

- · **PBT:** Not applicable.
- · **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

· Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings:

• Recommendation: Disposal must be made according to official regulations.

UN-Number	
· DOT, IMDG, IATA	UN2811
· UN proper shipping name	
DOT	Toxic solids, organic, n.o.s. (BI-9564)
IMDG	TOXIC SOLID, ORGANIC, N.O.S. (BI-9564)
	Toxic solid, organic, n.o.s. (BI-9564)
[.] Transport hazard class(es)	
DOT	
TOXIC 8	
Class	6.1 Toxic substances
· Label	6.1
· IMDG, IATA	
· Class	6.1 Toxic substances
Label	6.1
Packing group	
· DOT, IMDG, IATA	
· Environmental hazards:	Not applicable.
 Special precautions for user Hazard identification number (Kemler code): 	Warning: Toxic substances 60
· EMS Number:	F-A,S-A

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: BI-9564

	(Contd. from page 6
· Stowage Category	A
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable.
· Transport/Additional information:	
· DOT · Quantity limitations	On passenger aircraft/rail: 100 kg On cargo aircraft only: 200 kg
 IMDG Limited quantities (LQ) Excepted quantities (EQ) 	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· IATA · Remarks:	When sold in quantities of less than or equal to 1 mL or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimi Quantities exemption, per IATA 2.6.10. Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.
· UN "Model Regulation":	UN 2811 TOXIC SOLID, ORGANIC, N.O.S. (BI-9564) 6.1, III

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

- · Sara
- · Section 355 (extremely hazardous substances): Substance is not listed.
- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal

(Contd. on page 8)

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: BI-9564

(Contd. from page 7) protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 07/14/2023

 Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Acute Toxicity - Oral 3: Acute toxicity – Category 3 ** Data compared to the previous version altered.



Printing date 05/11/2023

Revision date 05/11/2023

Page 1/7

1 Identification

- · Product identifier
- [·] Trade name: (S)-PFI-2 (hydrochloride)
- · Article number: 18119
- CAS Number: 1627607-88-8
- Application of the substance / the mixture This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet • Manufacturer/Supplier:
- Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
Label elements
GHS label elements None
Hazard pictograms None
Signal word None
Hazard statements None
Classification system:
NFPA ratings (scale 0 - 4)

Health = 0 Fire = 0 Reactivity = 0

HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

US

Printing date 05/11/2023

Revision date 05/11/2023

(Contd. from page 1)

Trade name: (S)-PFI-2 (hydrochloride)

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1627607-88-8 (S)-PFI-2 (hydrochloride)

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

Printing date 05/11/2023

Revision date 05/11/2023

Trade name: (S)-PFI-2 (hydrochloride)

(Contd. from page 2)

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
- Appearance:

 Form:
 Color:
 Odor:
 Odor:
 Structural Formula
 Molecular Weight
 Odor threshold:

(Contd. on page 4)

⁻ US

Printing date 05/11/2023

Revision date 05/11/2023

Trade name: (S)-PFI-2 (hydrochloride)

	(Contd. from page 3)
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wa	ter): Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 5 mg/ml; DMF:PBS(pH 7.2)(1:1): 0.5 mg/ml; DMSO: 2 mg/ml; Ethanol: 0.5 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- · Hazardous decomposition products:

carbon dioxide; carbon monoxide; hydrogen chloride gas; hydrogen fluoride; nitrogen oxides

(Contd. on page 5)

Printing date 05/11/2023

Revision date 05/11/2023

Trade name: (S)-PFI-2 (hydrochloride)

(Contd. from page 4)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- · Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · DOT, IMDG, IATA

not regulated

(Contd. on page 6)

US

Printing date 05/11/2023

Revision date 05/11/2023

Trade name: (S)-PFI-2 (hydrochloride)

		(Contd. from page 5
 UN proper shipping name DOT, IMDG, IATA 	not regulated	
· Transport hazard class(es)		
[·] DOT, ADN, IMDG, IATA [·] Class	not regulated	
 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Anne MARPOL73/78 and the IBC Code 	x II of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- Section 355 (extremely hazardous substances): Substance is not listed.
- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- · TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

· Department issuing SDS: Environment protection department.

· Contact: -

· Date of preparation / last revision 05/11/2023

(Contd. on page 7)

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Printing date 05/11/2023

Revision date 05/11/2023

(Contd. from page 6)

Trade name: (S)-PFI-2 (hydrochloride)

 Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- · Product identifier
- · Trade name: (S)-BAY-598
- · Article number: 18238
- CAS Number: 1906919-67-2
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier:
- Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
- · GHS label elements None
- · Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

000 Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)

HEALTHImage: OFIREImage: OFIREImage: OReactivityImage: OReactivityImage: O

(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 1)

Trade name: (S)-BAY-598

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1906919-67-2 (S)-BAY-598

4 First-aid measures

- Description of first aid measures
- General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.

(Contd. on page 3)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 2)

Trade name: (S)-BAY-598

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
- Appearance:
 Form: Solid
 Color: Not deterr
 Odor: Character
 Structural Formula
 Molecular Weight
 Odor threshold: Not deterr

Not determined. Characteristic C22H20Cl2F2N6O3 525.3 g/mol Not determined.

(Contd. on page 4)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: (S)-BAY-598

	(Contd. from page 3
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
Partition coefficient (n-octanol/wat	ter): Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 30 mg/ml; DMSO: 30 mg/ml; Ethanol: 30 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: strong acids, strong bases, strong oxidizing agents, strong reducing agents
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.

(Contd. on page 5)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: (S)-BAY-598

• Sensitization: No sensitizing effects known.

(Contd. from page 4)

- Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- Recommendation: Smaller quantities can be disposed of with household waste.
- Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

· UN-Number		
· DOT, IMDG, IATA	not regulated	
· UN proper shipping name		
· DOT, IMDG, IATA	not regulated	
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA		
· Class	not regulated	
· Packing group		
· DOT, IMDG, IATA	not regulated	

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: (S)-BAY-598

	(Contd. from page 5)
Not applicable.	
Not applicable.	
ll of Not applicable.	
not regulated	
	Not applicable. Il of Not applicable.

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara
- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 07/14/2023
- Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value

(Contd. on page 7)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 6)

US

Trade name: (S)-BAY-598

PEL: Permissible Exposure Limit REL: Recommended Exposure Limit

* Data compared to the previous version altered.



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- · Product identifier
- Trade name: NVS-CECR2-1
- · Article number: 18316
- CAS Number: 1992047-61-6
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet • Manufacturer/Supplier:
- Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
- · GHS label elements None
- · Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

000 Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 1)

Trade name: NVS-CECR2-1

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1992047-61-6 NVS-CECR2-1

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.

(Contd. on page 3)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 2)

Trade name: NVS-CECR2-1

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information

Solid
Not determined.
Characteristic
C27H37N5O2S
495.7 g/mol
Not determined.

(Contd. on page 4)

⁻ US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: NVS-CECR2-1

	(Contd. from page
· pH-value:	Not applicable.
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
[.] Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure:	Not applicable.
· Density:	Not determined.
· Relative density	Not determined.
· Vapor density	Not applicable.
· Evaporation rate	Not applicable.
· Solubility in / Miscibility with	
Water:	Not determined.
· Partition coefficient (n-octanol/wa	ater): Not determined.
· Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
SOLUBILITY	DMSO: 0.3 mg/ml
• Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- · Hazardous decomposition products: carbon oxides, nitrogen oxides, sulfur oxides

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.

(Contd. on page 5)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: NVS-CECR2-1

Sensitization: No sensitizing effects known.

(Contd. from page 4)

- Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- Recommendation: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- Recommendation: Disposal must be made according to official regulations.

· UN-Number		
· DOT, IMDG, IATA	not regulated	
· UN proper shipping name		
· DOT, IMDG, IATA	not regulated	
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA		
· Class	not regulated	
· Packing group		
· DOT, IMDG, IATA	not regulated	

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: NVS-CECR2-1

		(Contd. from page 5
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Annex MARPOL73/78 and the IBC Code 	t II of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara
- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 07/14/2023
- Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value

(Contd. on page 7)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: NVS-CECR2-1

PEL: Permissible Exposure Limit REL: Recommended Exposure Limit

- * Data compared to the previous version altered.

(Contd. from page 6)

US



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- · Product identifier
- · Trade name: A-196
- · Article number: 18317
- CAS Number: 1982372-88-2
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Cayman Chemical Co. 1180 E. Ellsworth Rd.
- Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
 GHS label elements None
 Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

000 Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 1)

Trade name: A-196

- · Other hazards
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1982372-88-2 A-196

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- PAC-1: Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 2)

Trade name: A-196

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information

· Appearance:	
Form:	Solid
Color:	Not determined.
· Odor:	Characteristic
 Structural Formula 	C18H16Cl2N4
· Molecular Weight	359.3 g/mol
· Odor threshold:	Not determined.

(Contd. on page 4)

[—] US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: A-196

	(Contd. from page 3
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wa	ter): Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 10 mg/ml; DMSO: 10 mg/ml; DMSO:PBS(pH 7.2) (1:2): 0.3 mg/ml; Ethanol: 2 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: strong acids, strong bases, strong oxidizing agents, strong reducing agents
- Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.

(Contd. on page 5)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 4)

Trade name: A-196

- · on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.

• Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

· UN-Number · DOT, IMDG, IATA	not regulated	
· ·	notrogalated	
 UN proper shipping name DOT, IMDG, IATA 	not regulated	
Transport hazard class(es)		
· DOT, ADN, IMDG, IATA		
Class	not regulated	

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: A-196

		(Contd. from page 5)
 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
 Special precautions for user 	Not applicable.	
 Transport in bulk according to Annex II MARPOL73/78 and the IBC Code 	of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 07/14/2023
- Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: A-196

NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit • * Data compared to the previous version altered.

(Contd. from page 6)

US



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- · Product identifier
- · Trade name: MS049 (hydrochloride)
- · Article number: 18348
- CAS Number: 2095432-59-8
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
- **Manufacturer/Supplier:** Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
 GHS label elements None
- · Hazard pictograms None
- · Hazaro pictograms N
- Signal word None
- · Hazard statements None
- Classification system:
- NFPA ratings (scale 0 4)

000 Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)

HEALTHImage: OFIREImage: OREACTIVITYImage: O

(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 1)

Trade name: MS049 (hydrochloride)

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 2095432-59-8 MS049 (hydrochloride)

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: MS049 (hydrochloride)

(Contd. from page 2)

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- · Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information

· Appearance:	
Form:	Solid
Color:	Not determined.
· Odor:	Characteristic
• Structural Formula	C15H24N2O • 2HCI
· Molecular Weight	321.3 g/mol
· Odor threshold:	Not determined.

(Contd. on page 4)

⁻US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: MS049 (hydrochloride)

	(Contd. from page 3)
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wa	ter): Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 30 mg/ml; DMSO: 30 mg/ml; Ethanol: 30 mg/ml; PBS (pH 7.2): 10 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.

(Contd. on page 5)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 4)

Trade name: MS049 (hydrochloride)

· on the eye: No irritating effect.

• Sensitization: No sensitizing effects known.

• Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

· UN-Number		
· DOT, IMDG, IATA	not regulated	
 UN proper shipping name 		
· DOT, IMDG, IATA	not regulated	
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA		
Class	not regulated	

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: MS049 (hydrochloride)

	-		
(Contd.	from	page	5)

 Packing group DOT, IMDG, IATA 	not regulated
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
 Transport in bulk according to Anney MARPOL73/78 and the IBC Code 	x II of Not applicable.
· UN "Model Regulation":	not regulated

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 07/14/2023
- Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: MS049 (hydrochloride)

NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit • * Data compared to the previous version altered.

(Contd. from page 6)

US



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- · Product identifier
- · Trade name: GSK591
- · Article number: 18354
- CAS Number: 1616391-87-7
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet • Manufacturer/Supplier: Cayman Chemical Co.
- 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
 GHS label elements None
- · Hazard pictograms None
- Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

000 Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 1)

Trade name: GSK591

- · Other hazards
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1616391-87-7 GSK591

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 2)

Trade name: GSK591

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information

· Appearance:	
Form:	Solid
Color:	Not determined.
· Odor:	Characteristic
• Structural Formula	C22H28N4O2
Molecular Weight	380.5 g/mol
· Odor threshold:	Not determined.

(Contd. on page 4)

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Printing date 07/14/2023

Revision date 07/14/2023

Trade name: GSK591

	(Contd. from page 3
[·] pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wa	ater): Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 16 mg/ml; DMSO: 16 mg/ml; DMSO:PBS (pH 7.2) (1 3): 0.25 mg/ml; Ethanol: 12 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- · Hazardous decomposition products: carbon oxides, nitrogen oxides

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.

(Contd. on page 5)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 4)

Trade name: GSK591

- · on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.

• Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

· UN-Number		
· DOT, IMDG, IATA	not regulated	
 UN proper shipping name 		
· DOT, IMDG, IATA	not regulated	
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA		
Class	not regulated	

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: GSK591

		(Contd. from page 5)
 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. 		
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 07/14/2023
- Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- PBT: Persistent. Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: GSK591

NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit • * Data compared to the previous version altered.

(Contd. from page 6)

US



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- Product identifier
- Trade name: MS023 (hydrochloride)
- · Article number: 18361
- · CAS Number: 2108631-19-0
- · Application of the substance / the mixture This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- · Information department: Product safety department · Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- · Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS). · Label elements · GHS label elements None
- · Hazard pictograms None
- · Signal word None
- · Hazard statements None · Classification system:
- NFPA ratings (scale 0 4)

Health = 0Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 1)

Trade name: MS023 (hydrochloride)

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description
- 2108631-19-0 MS023 (hydrochloride)

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: MS023 (hydrochloride)

(Contd. from page 2)

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities Keep container tightly closed.

Store in accordance with information listed on the product insert.

- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:
- The usual precautionary measures for handling chemicals should be followed.
- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

.. .

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- · General Information
- · Appearance:

Form:	Solid	
Color:	Not determined.	
· Odor:	Characteristic	
 Structural Formula 	C17H25N3O • 3HCI	
· Molecular Weight	396.8 g/mol	

(Contd. on page 4)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: MS023 (hydrochloride)

	(Contd. from page 3)
· Odor threshold:	Not determined.
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/water)	: Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 30 mg/ml; DMSO: 30 mg/ml; Ethanol: 30 mg/ml; PBS (pH 7.2): 10 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

- · Reactivity No further relevant information available.
- · Chemical stability
- · Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: No further relevant information available.
- · Hazardous decomposition products: No dangerous decomposition products known.

(Contd. on page 5)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: MS023 (hydrochloride)

(Contd. from page 4)

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- · on the eye: No irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- · Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- · Recommendation: Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- · UN-Number
- · DOT, IMDG, IATA

not regulated

(Contd. on page 6)

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Printing date 07/14/2023

Revision date 07/14/2023

Trade name: MS023 (hydrochloride)

		(Contd. from page 5
 UN proper shipping name DOT, IMDG, IATA 	not regulated	
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA · Class	not regulated	
 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Anne MARPOL73/78 and the IBC Code 	x II of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- · TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 07/14/2023

(Contd. on page 7)

[–] US

US

Safety Data Sheet acc. to OSHA HCS

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: MS023 (hydrochloride)

 Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) 	(Contd. from page 6)
 Abbreviations and acronyms: 	
IMDG: International Maritime Code for Dangerous Goods	
DOT: US Department of Transportation	
IATA: International Air Transport Association	
CAS: Chemical Abstracts Service (division of the American Chemical Society)	
HMIS: Hazardous Materials Identification System (USA)	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
NIOSH: National Institute for Occupational Safety	
OSHA: Occupational Safety & Health	
TLV: Threshold Limit Value	
PEL: Permissible Exposure Limit	
REL: Recommended Exposure Limit	
* Data compared to the previous version altered.	



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- · Product identifier
- Trade name: <u>GSK864</u>
- · Article number: 18762
- CAS Number: 1816331-66-4
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier:
- Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
 GHS label elements None
 Hazard pictograms None
 Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

000 Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)



(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 1)

Trade name: GSK864

- · Other hazards
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1816331-66-4 GSK864

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 2)

Trade name: GSK864

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information

· Appearance:	
Form:	Crystalline
Color:	Not determined.
· Odor:	Characteristic
• Structural Formula	C30H31FN6O4
• Molecular Weight	558.6 g/mol
· Odor threshold:	Not determined.

(Contd. on page 4)

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Printing date 07/14/2023

Revision date 07/14/2023

Trade name: GSK864

	(Contd. from page 3
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/water): Not determined.	
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 20 mg/ml; DMSO: 20 mg/ml; Ethanol: 20 mg/ml Ethanol:PBS(pH 7.2) (1:1): 0.5 mg/ml
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- · Hazardous decomposition products: carbon oxides, hydrogen fluoride, nitrogen oxides

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.

(Contd. on page 5)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 4)

Trade name: GSK864

- · on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.

• Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

· UN-Number · DOT, IMDG, IATA	not regulated	
· ·	notrogalated	
 UN proper shipping name DOT, IMDG, IATA 	not regulated	
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA		
Class	not regulated	

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: GSK864

		(Contd. from page 5)
 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
 Special precautions for user 	Not applicable.	
 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable. 		
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 07/14/2023
- Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA) PBT: Persistent. Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

US

US

Safety Data Sheet acc. to OSHA HCS

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: GSK864

NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit • * Data compared to the previous version altered.

(Contd. from page 6)



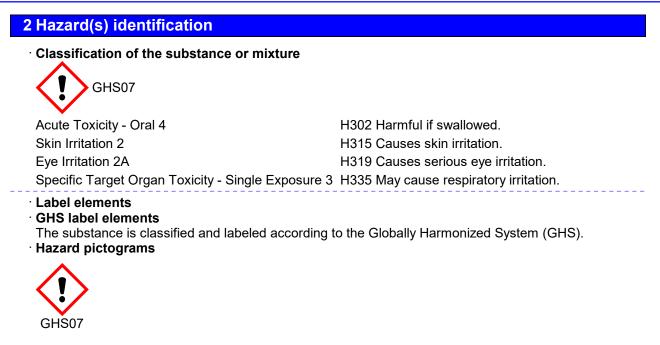
Printing date 04/26/2023

Revision date 04/26/2023

Page 1/8

1 Identification

- · Product identifier
- Trade name: <u>BAY-299</u>
- · Article number: 19777
- CAS Number: 2080306-23-4
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Cayman Chemical Co.
 1180 E. Ellsworth Rd.
 Ann Arbor, MI 48108
 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970



(Contd. on page 2)

⁻ US

Printing date 04/26/2023

Revision date 04/26/2023

Trade name: BAY-299

	(Contd. from page 1)
· Signal word W	/arning
· Hazard statem	
H302 Harmful i	f swallowed.
H315 Causes s	skin irritation.
H319 Causes s	serious eye irritation.
	se respiratory irritation.
· Precautionary	
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash thoroughly after handling.
	Do not eat, drink or smoke when using this product.
P270	
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection / face protection.
P301+P312	If swallowed: Call a poison center/doctor if you feel unwell.
P330	Rinse mouth.
P302+P352	If on skin: Wash with plenty of water.
P321	Specific treatment (see on this label).
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P3	338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if
	present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P337+P313	If eye irritation persists: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international
F301	
	regulations.
Classification	
NFPA ratings	(scale 0 - 4)
	ealth = 2
	re = 0
	eactivity = 0
HMIS-ratings ((scale v - 4)
HEALTH 2	
	Health = 2
	ire = 0
REACTIVITY 0 F	Reactivity = 0
Other hazards	
	T and vPvB assessment
PBT: Not applie	
vPvB: Not app	licable.
Compositio	n/information on ingredients
	racterization: Substances
CAS No. Desc	
2080306-23-4	BAY-299
	US

(Contd. on page 3)

Printing date 04/26/2023

Revision date 04/26/2023

Trade name: BAY-299

(Contd. from page 2)

4 First-aid measures

• Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- · After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- · After swallowing: Immediately call a doctor.
- · Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- · Suitable extinguishing agents:

Use fire fighting measures that suit the environment. A solid water stream may be inefficient.

- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Ensure adequate ventilation.
- · Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- PAC-2: Substance is not listed.
- · PAC-3: Substance is not listed.

7 Handling and storage

- · Handling:
- · Precautions for safe handling

No special precautions are necessary if used correctly.

Avoid breathing dust/fume/gas/mist/vapours/spray.

- Avoid prolonged or repeated exposure.
- Keep away from sources of ignition.

Take precautionary measures against static discharge.re.

(Contd. on page 4)

Printing date 04/26/2023

Revision date 04/26/2023

Trade name: BAY-299

(Contd. from page 3)

- · Information about protection against explosions and fires: No special measures required.
- Conditions for safe storage, including any incompatibilities Keep container tightly closed.
- Store in accordance with information listed on the product insert.
- Storage: Store in accordance with information listed on the product insert.
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep receptacle tightly sealed.
- · Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- · Control parameters
- Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
- · General protective and hygienic measures:
- Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.
- Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

• Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection:



Tightly sealed goggles

(Contd. on page 5)

[·] Additional information about design of technical systems: No further data; see section 7.

Printing date 04/26/2023

Revision date 04/26/2023

Trade name: BAY-299

(Contd. from page 4)

9 Physical and chemical propertie	Physical and chemical properties		
· Information on basic physical and che	emical properties		
General Information	• •		
· Appearance:			
Form:	Solid		
Color: · Odor:	Not determined. Characteristic		
· Structural Formula	C25H23N3O4		
· Molecular Weight	429.5 g/mol		
· Odor threshold:	Not determined.		
· pH-value:	Not applicable.		
· Change in condition			
Melting point/Melting range:	Undetermined.		
Boiling point/Boiling range:	Undetermined.		
· Flash point:	Not applicable.		
 Flammability (solid, gaseous): 	Product is not flammable.		
 Decomposition temperature: 	Not determined.		
· Ignition temperature:	Not determined.		
[·] Danger of explosion:	Product does not present an explosion hazard.		
· Explosion limits:			
Lower:	Not determined.		
Upper:	Not determined.		
· Vapor pressure:	Not applicable.		
· Density:	Not determined.		
· Relative density	Not determined.		
· Vapor density	Not applicable.		
· Evaporation rate	Not applicable.		
 Solubility in / Miscibility with 			
Water:	Not determined.		
· Partition coefficient (n-octanol/water):	Not determined.		
· Viscosity:			
Dynamic:	Not applicable.		
Kinematic:	Not applicable.		
SOLUBILITY	DMF: 30 mg/ml; DMSO: 20 mg/ml		
Other information	No further relevant information available.		

10 Stability and reactivity

· Reactivity No further relevant information available.

· Chemical stability

• Thermal decomposition / conditions to be avoided:

- No decomposition if used according to specifications. **Possibility of hazardous reactions** No dangerous reactions known.
- · Conditions to avoid No further relevant information available.

(Contd. on page 6)

Printing date 04/26/2023

Revision date 04/26/2023

Trade name: BAY-299

- · Incompatible materials: strong acids, strong oxidizing agents
- · Hazardous decomposition products: carbon oxides, nitrogen oxides

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- · on the eye: Irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

- Waste treatment methods
- · Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

(Contd. on page 7)

(Contd. from page 5)

Printing date 04/26/2023

Revision date 04/26/2023

Trade name: BAY-299

(Contd. from page 6)

UN-Number DOT, IMDG, IATA	not regulated
· · ·	
UN proper shipping name DOT, IMDG, IATA	not regulated
Transport hazard class(es)	
DOT, ADN, IMDG, IATA Class	not regulated
Packing group	
DOT, IMDG, IATA	not regulated
Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex MARPOL73/78 and the IBC Code	k II of Not applicable.
UN "Model Regulation":	not regulated

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

(Contd. on page 8)

US

Printing date 04/26/2023

Revision date 04/26/2023

Trade name: BAY-299

	Contd. from page 7
Department issuing SDS: Environment protection department.	
Contact: -	
Date of preparation / last revision 04/26/2023	
Abbreviations and acronyms:	
IMDG: International Maritime Code for Dangerous Goods	
DOT: US Department of Transportation	
IATA: International Air Transport Association	
CAS: Chemical Abstracts Service (division of the American Chemical Society)	
NFPA: National Fire Protection Association (USA)	
HMIS: Hazardous Materials Identification System (USA)	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
NIOSH: National Institute for Occupational Safety	
OSHA: Occupational Safety & Health	
TLV: Threshold Limit Value	
PEL: Permissible Exposure Limit	
REL: Recommended Exposure Limit	
Acute Toxicity - Oral 4: Acute toxicity – Category 4	
Skin Irritation 2: Skin corrosion/irritation – Category 2	
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A	0
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) - Category	3
* Data compared to the previous version altered.	



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- Product identifier
- Trade name: TP-472
- · Article number: 20030
- · CAS Number: 2079895-62-6
- · Application of the substance / the mixture This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- · Information department: Product safety department · Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- · Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS). · Label elements · GHS label elements None · Hazard pictograms None · Signal word None · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

Health = 0Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)

HEALTH 0 Health = 00 Fire = 0 FIRE Reactivity = 0 REACTIVITY 0

(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: TP-472

- · Other hazards
- · Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 2079895-62-6 TP-472

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.

(Contd. on page 3)

(Contd. from page 1)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 2)

Trade name: TP-472

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information

· Appearance:	
Form:	Solid
Color:	Not determined.
· Odor:	Characteristic
 Structural Formula 	C20H19N3O2
 Molecular Weight 	333.4 g/mol
· Odor threshold:	Not determined.

(Contd. on page 4)

⁻ US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: TP-472

	(Contd. from page 3
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
 Explosion limits: Lower: Upper: 	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wat	ter): Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMSO: Soluble
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
- · Possibility of hazardous reactions No dangerous reactions known.
- · Conditions to avoid No further relevant information available.
- · Incompatible materials: strong acids, strong bases, strong oxidizing agents, strong reducing agents
- · Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- · Acute toxicity:
- · Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.

(Contd. on page 5)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: TP-472

• Sensitization: No sensitizing effects known.

(Contd. from page 4)

- Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- Recommendation: Smaller quantities can be disposed of with household waste.
- Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

· UN-Number		
· DOT, IMDG, IATA	not regulated	
· UN proper shipping name		
· DOT, IMDG, IATA	not regulated	
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA		
·Class	not regulated	
· Packing group		
· DOT, IMDG, IATA	not regulated	

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: TP-472

		(Contd. from page 5
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
• Transport in bulk according to Anney		
MARPOL73/78 and the IBC Code	Not applicable.	
• UN "Model Regulation":	not regulated	

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.
- · Sara
- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 07/14/2023
- Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) NFPA: National Fire Protection Association (USA) HMIS: Hazardous Materials Identification System (USA) PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value

(Contd. on page 7)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: TP-472

PEL: Permissible Exposure Limit REL: Recommended Exposure Limit

- * Data compared to the previous version altered.

(Contd. from page 6)

US



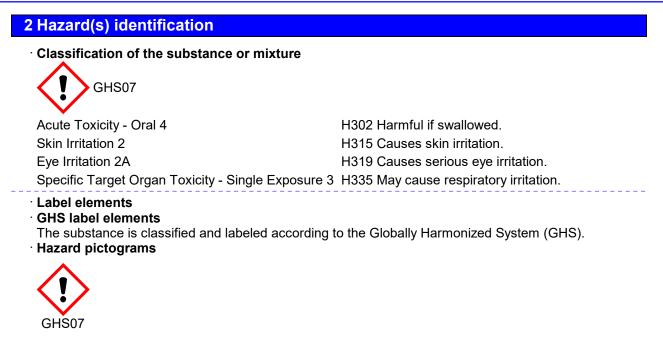
Printing date 07/14/2023

Revision date 07/14/2023

Page 1/8

1 Identification

- · Product identifier
- · Trade name: TP-064
- · Article number: 20256
- CAS Number: 2080306-20-1
- Application of the substance / the mixture This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Cayman Chemical Co. 1180 E. Ellsworth Rd.
- Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970



Printing date 07/14/2023

Revision date 07/14/2023

Trade name: TP-064

	(Contd. from page 1)
· Signal word V	Varning
 Hazard staten 	nents
H302 Harmful	if swallowed.
H315 Causes	skin irritation.
H319 Causes s	serious eye irritation.
	se respiratory irritation.
· Precautionary	
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear eye protection / face protection.
P301+P312	If swallowed: Call a poison center/doctor if you feel unwell.
P330	Rinse mouth.
P302+P352	If on skin: Wash with plenty of water.
P321	Specific treatment (see on this label).
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if
	present and easy to do. Continue rinsing.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P337+P313	If eye irritation persists: Get medical advice/attention.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international
	regulations.
Classification	•
• NFPA ratings	
н	ealth = 2
F	ire = 0
2 0 R	eactivity = 0
\checkmark	
• HMIS-ratings	(scale 0 - 4)
	Health = 2
	Fire = 0
	Reactivity = 0
• Other hazards	
	T and vPvB assessment
PBT: Not appli	
· vPvB: Not app	licable.
2 Compositio	n/information on ingradianta
	n/information on ingredients
· Chemical cha	racterization: Substances
· CAS No. Desc	
2080306-20-1	
2000300-20-1	US

(Contd. on page 3)

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: TP-064

(Contd. from page 2)

4 First-aid measures

· Description of first aid measures

· General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- · After swallowing: Immediately call a doctor.
- · Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- Indication of any immediate medical attention and special treatment needed No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- · Suitable extinguishing agents:

Use fire fighting measures that suit the environment.

- A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Ensure adequate ventilation.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- · PAC-2: Substance is not listed.
- · PAC-3: Substance is not listed.

7 Handling and storage

- · Handling:
- · Precautions for safe handling

No special precautions are necessary if used correctly.

Avoid breathing dust/fume/gas/mist/vapours/spray.

- Avoid prolonged or repeated exposure.
- Keep away from sources of ignition.

Take precautionary measures against static discharge.re.

(Contd. on page 4)

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: TP-064

(Contd. from page 3)

- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- **Storage:** Store in accordance with information listed on the product insert.
- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- · Additional information about design of technical systems: No further data; see section 7.
- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- · Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· Breathing equipment:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:



Tightly sealed goggles

(Contd. on page 5)

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: TP-064

(Contd. from page 4)

9 Physical and chemical proper	9 Physical and chemical properties		
· Information on basic physical and chemical properties			
General Information			
· Appearance:			
Form:	Solid		
Color:	Not determined.		
· Odor:	Characteristic		
 Structural Formula Molecular Weight 	C28H34N4O2 458.6 g/mol		
Odor threshold:	Not determined.		
· pH-value:	Not applicable.		
•			
• Change in condition			
Melting point/Melting range:	Undetermined. Undetermined.		
Boiling point/Boiling range:			
· Flash point:	Not applicable.		
· Flammability (solid, gaseous):	Product is not flammable.		
 Decomposition temperature: 	Not determined.		
· Ignition temperature:	Not determined.		
 Danger of explosion: 	Product does not present an explosion hazard.		
· Explosion limits:			
Lower:	Not determined.		
Upper:	Not determined.		
· Vapor pressure:	Not applicable.		
· Density:	Not determined.		
Relative density	Not determined.		
· Vapor density	Not applicable.		
· Evaporation rate	Not applicable.		
 Solubility in / Miscibility with 			
Water:	Not determined.		
· Partition coefficient (n-octanol/water	r): Not determined.		
· Viscosity:			
Dynamic:	Not applicable.		
Kinematic:	Not applicable.		
SOLUBILITY	DMF: 30 mg/ml; DMSO: 30 mg/ml; Ethanol: 30 mg/ml		
· Other information	No further relevant information available.		

10 Stability and reactivity

· Reactivity No further relevant information available.

· Chemical stability

• Thermal decomposition / conditions to be avoided:

- No decomposition if used according to specifications. **Possibility of hazardous reactions** No dangerous reactions known.
- · Conditions to avoid No further relevant information available.

(Contd. on page 6)

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: TP-064

(Contd. from page 5)

Incompatible materials: strong acids, strong bases, strong oxidizing agents, strong reducing agents
 Hazardous decomposition products: No dangerous decomposition products known.

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- · on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- Toxicity
- · Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · vPvB: Not applicable.
- · Other adverse effects No further relevant information available.

13 Disposal considerations

Waste treatment methods

· Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- · Uncleaned packagings:
- · Recommendation: Disposal must be made according to official regulations.

(Contd. on page 7)

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: TP-064

(Contd. from page 6)

UN-Number	
DOT, IMDG, IATA	not regulated
UN proper shipping name	
DOT, IMDG, IATA	not regulated
Transport hazard class(es)	
DOT, ADN, IMDG, IATA	
Class	not regulated
Packing group	
DOT, IMDG, IATA	not regulated
Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Anne	ex II of
MARPOL73/78 and the IBC Code	Not applicable.

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

· Section 355 (extremely hazardous substances): Substance is not listed.

- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

(Contd. on page 8)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: TP-064

	contd. from page 7
Department issuing SDS: Environment protection department.	
Contact: -	
Date of preparation / last revision 07/14/2023	
Abbreviations and acronyms:	
IMDG: International Maritime Code for Dangerous Goods	
DOT: US Department of Transportation	
IATA: International Air Transport Association	
CAS: Chemical Abstracts Service (division of the American Chemical Society)	
NFPA: National Fire Protection Association (USA)	
HMIS: Hazardous Materials Identification System (USA)	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
NIOSH: National Institute for Occupational Safety	
OSHA: Occupational Safety & Health	
TLV: Threshold Limit Value	
PEL: Permissible Exposure Limit	
REL: Recommended Exposure Limit	
Acute Toxicity - Oral 4: Acute toxicity – Category 4	
Skin Irritation 2: Skin corrosion/irritation – Category 2	
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A	0
Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category	3
* Data compared to the previous version altered.	



Printing date 07/14/2023

Revision date 07/14/2023

Page 1/7

1 Identification

- · Product identifier
- · Trade name: GSK6853
- · Article number: 20985
- CAS Number: 1910124-24-1
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier:
- Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

2 Hazard(s) identification

- Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS).
 Label elements
- · GHS label elements None
- · Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

0 0 0 Health = 0 Fire = 0 Reactivity = 0

· HMIS-ratings (scale 0 - 4)

HEALTH0Health = 0FIRE0Fire = 0REACTIVITY0Reactivity = 0

(Contd. on page 2)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 1)

Trade name: GSK6853

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

3 Composition/information on ingredients

- Chemical characterization: Substances
- · CAS No. Description
- 1910124-24-1 GSK6853

4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- PAC-2: Substance is not listed.
- PAC-3: Substance is not listed.

(Contd. on page 3)

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 2)

Trade name: GSK6853

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

• Additional information about design of technical systems: No further data; see section 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- · General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information

· Appearance:	
Form:	Solid
Color:	Not determined.
· Odor:	Characteristic
• Structural Formula	C22H27N5O3
· Molecular Weight	409.5 g/mol
· Odor threshold:	Not determined.

(Contd. on page 4)

⁻ US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: GSK6853

	(Contd. from page 3)
· pH-value:	Not applicable.
 Change in condition Melting point/Melting range: Boiling point/Boiling range: 	Undetermined. Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Product is not flammable.
· Decomposition temperature:	Not determined.
· Ignition temperature:	Not determined.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits: Lower: Upper:	Not determined. Not determined.
· Vapor pressure:	Not applicable.
 Density: Relative density Vapor density Evaporation rate 	Not determined. Not determined. Not applicable. Not applicable.
 Solubility in / Miscibility with Water: 	Not determined.
· Partition coefficient (n-octanol/wa	iter): Not determined.
 Viscosity: Dynamic: Kinematic: SOLUBILITY 	Not applicable. Not applicable. DMF: 30 mg/mL; DMSO: 25 mg/mL; Ethanol: 30 mg/mL; Ethanol:PBS(pH 7.2) (1:1): 0.5 mg/mL
· Other information	No further relevant information available.

10 Stability and reactivity

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: Strong oxidizing agents
- · Hazardous decomposition products: Carbon oxides, Nitrogen oxides (NOx), Sulphur oxides

11 Toxicological information

- · Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.

(Contd. on page 5)

US

Printing date 07/14/2023

Revision date 07/14/2023

(Contd. from page 4)

Trade name: GSK6853

- · on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.

• Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us. The substance is not subject to classification.

- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.

12 Ecological information

- · Toxicity
- Aquatic toxicity: No further relevant information available.
- Persistence and degradability No further relevant information available.
- · Behavior in environmental systems:
- · Bioaccumulative potential No further relevant information available.
- Mobility in soil No further relevant information available.
- · Additional ecological information:
- · General notes:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- vPvB: Not applicable.
- Other adverse effects No further relevant information available.

13 Disposal considerations

- · Waste treatment methods
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- · Uncleaned packagings:
- **Recommendation:** Disposal must be made according to official regulations.

· UN-Number · DOT, IMDG, IATA	not regulated	
· ·	notrogalated	
 UN proper shipping name DOT, IMDG, IATA 	not regulated	
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA		
Class	not regulated	

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: GSK6853

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	(nom page e
 Packing group DOT, IMDG, IATA 	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
 Transport in bulk according to Anno MARPOL73/78 and the IBC Code 	ex II of Not applicable.	
· UN "Model Regulation":	not regulated	

15 Regulatory information

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -
- · Date of preparation / last revision 07/14/2023
- Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods
- DOT: US Department of Transportation
- IATA: International Air Transport Association
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

(Contd. on page 7)

US

Printing date 07/14/2023

Revision date 07/14/2023

Trade name: GSK6853

NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit • * Data compared to the previous version altered.

(Contd. from page 6)

US