

Safety Data Sheet acc. to OSHA HCS

Date of issue: 09/24/2025

Revision date 09/24/2025

1 Identification

- **Product identifier**
- **Trade name: n-Propane Residual Solvent (CRM)**
- **Other means of identification**
- **Article number:** 38278
- **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**



GHS08 Health hazard

Reproductive toxicity 1B H360 May damage fertility or the unborn child.



GHS07

Acute toxicity - dermal 4 H312 Harmful in contact with skin.

Acute toxicity - inhalation 4 H332 Harmful if inhaled.

Flammable liquids 4 H227 Combustible liquid.

- **Label elements**
- **GHS label elements**

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

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/24/2025

Revision date 09/24/2025

Trade name: n-Propane Residual Solvent (CRM)

(Contd. from page 1)

· Hazard pictograms



GHS07 GHS08

· Signal word Danger

· Hazard-determining components of labeling:

N,N-dimethylacetamide

· Hazard statements

H227 Combustible liquid.

H312+H332 Harmful in contact with skin or if inhaled.

H360 May damage fertility or the unborn child.

· Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P302+P352 If on skin: Wash with plenty of water.

P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P312 Call a poison center/doctor if you feel unwell.

P321 Specific treatment (see on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P370+P378 In case of fire: Use CO₂, powder or water spray to extinguish.

P403 Store in a well-ventilated place.

P405 Store locked up.

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

· Information pertaining to particular dangers for man and environment:

· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 1

Fire = 2

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *1

Fire = 2

Reactivity = 0

· Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

· Classification according to (d)(1)(ii) of § 1910.1200

The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

(Contd. on page 3)

US

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/24/2025

Revision date 09/24/2025

Trade name: n-Propane Residual Solvent (CRM)

(Contd. from page 2)

- **Hazards not otherwise classified**

There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 127-19-5 RTECS: AB 7700000	N,N-dimethylacetamide	99.98%
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- **Other ingredients**

CAS: 74-98-6 RTECS: TX2275000	Propane	0.02%
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4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:** Immediately rinse with water.

- **After eye contact:** Rinse opened eye for several minutes under running water.

- **After swallowing:** If symptoms persist consult 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:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

- **Special hazards arising from the substance or mixture** No further relevant information available.

- **Advice for firefighters**

- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.

- **Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

(Contd. on page 4)

US

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/24/2025

Revision date 09/24/2025

Trade name: n-Propane Residual Solvent (CRM)

(Contd. from page 3)

- **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Dispose contaminated material as waste according to section 13.
 Ensure adequate ventilation.

- **Protective Action Criteria for Chemicals**

- **PAC-1:**

127-19-5	N,N-dimethylacetamide	30 ppm
74-98-6	Propane	5500 ppm

- **PAC-2:**

127-19-5	N,N-dimethylacetamide	67 ppm
74-98-6	Propane	17000 ppm

- **PAC-3:**

127-19-5	N,N-dimethylacetamide	400 ppm
74-98-6	Propane	33000 ppm

- **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.

7 Handling and storage

- **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.
 Open and handle receptacle with care.
 Prevent formation of aerosols.

- **Information about protection against explosions and fires:**

Keep respiratory protective device available.

- **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

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

127-19-5 N,N-dimethylacetamide

PEL	Long-term value: 35 mg/m ³ , 10 ppm Skin
REL	Long-term value: 35 mg/m ³ , 10 ppm Skin
TLV	Long-term value: 36 mg/m ³ , 10 ppm Skin; BEI, A3

(Contd. on page 5)

US

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/24/2025

Revision date 09/24/2025

Trade name: n-Propane Residual Solvent (CRM)

(Contd. from page 4)

· Ingredients with biological limit values:

127-19-5 N,N-dimethylacetamide

BEI 30 mg/g creatinine
 Medium: urine
 Time: end of shift at end of workweek
 Parameter: N-Methylacetamide

· **Additional information:** The lists that were valid during the creation were used as basis.

· Exposure controls

· **Appropriate engineering controls** No further data; see section 7.

· 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.
 Store protective clothing separately.
 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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· 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:** Goggles recommended during refilling.

9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Physical state

Liquid

· Color:

According to product specification

· Odor:

Characteristic

· Structural Formula

C3H8

· Molecular Weight

44.1 g/mol

· Storage Buffer

· Odor threshold:

Not determined.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/24/2025

Revision date 09/24/2025

Trade name: n-Propane Residual Solvent (CRM)

(Contd. from page 5)

· Formulation	A 200 µg/ml solution in N,N-dimethylacetamide
· Melting point/Melting range:	-20 °C (-4 °F)
· Boiling point/Boiling range:	165.5 °C (329.9 °F)
· Flammability:	Not applicable.
· Explosion limits:	
· Lower:	1.7 Vol %
· Upper:	11.5 Vol %
· Flash point:	66 °C (150.8 °F)
· Auto igniting:	390 °C (734 °F)
· Decomposition temperature:	Not determined.
· pH-value:	Not determined.
· Viscosity:	
· Kinematic:	Not determined.
· SOLUBILITY	
· Dynamic:	Not determined.
· Solubility in / Miscibility with	
· Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Vapor pressure at 20 °C (68 °F):	3.3 hPa (2.5 mm Hg)
· Vapor pressure:	
· Density at 20 °C (68 °F):	0.94321 g/cm ³ (7.87109 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Particle characteristics	Not applicable.

· Other information	
· Appearance:	
· Form:	Liquid
· Important information on protection of health and environment, and on safety.	
· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Not determined.
· Solvent content:	
· Organic solvents:	0.0 %
· VOC content:	0.02 %
	0.2 g/l / 0.00 lb/gal
· Solids content:	0.0 %
· Change in condition	
· Evaporation rate	Not determined.

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.

(Contd. on page 7)

US

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/24/2025

Revision date 09/24/2025

Trade name: n-Propane Residual Solvent (CRM)

(Contd. from page 6)

· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

Dermal	LD50	1,100 mg/kg
Inhalative	LC50/4 h	11 mg/l

127-19-5 N,N-dimethylacetamide

Oral	LD50	4,930 mg/kg (rat)
Dermal	LD50	2,240 mg/kg (rabbit)

· **Primary irritant effect:**· **on the skin:** No irritant effect.· **on the eye:** No irritating effect.· **Sensitization:** No sensitizing effects known.· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

· **Interactive effects** No interactive effects between components are known.· **Carcinogenic categories**· **IARC (International Agency for Research on Cancer)**

127-19-5	N,N-dimethylacetamide	2B
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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Alternative sources for toxicological information**

No non-standard sources for toxicological information where used.

12 Ecological information

· **Toxicity**· **Aquatic toxicity:** No further relevant information available.· **Persistence and degradability** No further relevant information available.· **Bioaccumulative potential** No further relevant information available.· **Mobility in soil** No further relevant information available.· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.· **Other adverse effects**· **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.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/24/2025

Revision date 09/24/2025

Trade name: n-Propane Residual Solvent (CRM)

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

(Contd. from page 7)

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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · UN-Number · DOT · IMDG, IATA | NA1993
not regulated |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG, IATA | COMBUSTIBLE LIQUID, N.O.S
not regulated |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT | |
|  | |
| <ul style="list-style-type: none"> · Class · Label · ADN/R Class: | Comb liq
-
not regulated |
| <ul style="list-style-type: none"> · Packing group · DOT · IMDG, IATA | III
not regulated |
| <ul style="list-style-type: none"> · Environmental hazards: | Not applicable. |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| <ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations | On passenger aircraft/rail: 60 L
On cargo aircraft only: 220 L |
| <ul style="list-style-type: none"> · IATA | |

(Contd. on page 9)

-US-

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/24/2025

Revision date 09/24/2025

Trade name: n-Propane Residual Solvent (CRM)

(Contd. from page 8)

· 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.
· Special precautions for user	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):**

None of the ingredients is listed.

- **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

- **Hazardous Air Pollutants**

None of the ingredients is listed.

- **Chemicals known to cause cancer:**

127-19-5 N,N-dimethylacetamide

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

- **Chemicals known to cause reproductive toxicity for males:**

127-19-5 N,N-dimethylacetamide

- **Chemicals known to cause developmental toxicity:**

127-19-5 N,N-dimethylacetamide

- **Carcinogenic categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value)**

127-19-5 N,N-dimethylacetamide

A4

- **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is 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 10)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 09/24/2025

Revision date 09/24/2025

Trade name: n-Propane Residual Solvent (CRM)

(Contd. from page 9)

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 previous version** 04/10/2023
- **Date of preparation** 09/24/2025
- **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
 - ELINCS: European List of Notified Chemical Substances
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - NFPA: National Fire Protection Association (USA)
 - HMIS: Hazardous Materials Identification System (USA)
 - VOC: Volatile Organic Compounds (USA, EU)
 - 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
 - TLV: Threshold Limit Value
 - PEL: Permissible Exposure Limit
 - REL: Recommended Exposure Limit
 - BEI: Biological Exposure Limit
 - Flammable liquids 4: Flammable liquids – Category 4
 - Acute toxicity - dermal 4: Acute toxicity – Category 4
 - Reproductive toxicity 1B: Reproductive toxicity – Category 1B
- *** Data compared to the previous version altered.**

US