

Safety Data Sheet
acc. to OSHA HCS

Date of issue: 07/28/2025

Revision date 07/28/2025

1 Identification

- **Product identifier**
- **Trade name: Off-Patent Drug Screening Library (96-Well)**
- **Other means of identification**
- **Article number:** 43505
- **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

Sensitization - respiratory 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Germ cell mutagenicity 1B	H340	May cause genetic defects.
Carcinogenicity 1B	H350	May cause cancer.
Reproductive toxicity 1B	H360-H362	May damage fertility or the unborn child. May cause harm to breast-fed children.



GHS07

Sensitization - skin 1	H317	May cause an allergic skin reaction.
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: 07/28/2025

Revision date 07/28/2025

Trade name: Off-Patent Drug Screening Library (96-Well)

(Contd. from page 1)

- **Hazard pictograms**



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Off-Patent Drug Screening Library (96-Well) Plate 1-8

- **Hazard statements**

H227 Combustible liquid.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H340 May cause genetic defects.

H350 May cause cancer.

H360-H362 May damage fertility or the unborn child. May cause harm to breast-fed children.

- **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.

P260 Do not breathe dusts or mists.

P263 Avoid contact during pregnancy and /while nursing.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P272 Contaminated work clothing must not be allowed out of the workplace.

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

P284 [In case of inadequate ventilation] wear respiratory 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.

P321 Specific treatment (see on this label).

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

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P342+P311 If experiencing respiratory symptoms: Call a poison center/doctor.

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 = 0

Fire = 2

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = *0

Fire = 2

Reactivity = 0

(Contd. on page 3)

-US

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 07/28/2025

Revision date 07/28/2025

Trade name: Off-Patent Drug Screening Library (96-Well)

(Contd. from page 2)

- **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.
- **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: 67-68-5 RTECS: PV6210000	Dimethyl sulfoxide	98.8%
	Off-Patent Drug Screening Library (96-Well) Plate 1-8	≥1–<1.2%

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
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.
- **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**
67-56-1 During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 07/28/2025

Revision date 07/28/2025

Trade name: Off-Patent Drug Screening Library (96-Well)

(Contd. from page 3)

- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **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:**

67-68-5	Dimethyl sulfoxide	150 ppm
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· **PAC-2:**

67-68-5	Dimethyl sulfoxide	290 ppm
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· **PAC-3:**

67-68-5	Dimethyl sulfoxide	1,800 ppm
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· **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:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

67-68-5 Dimethyl sulfoxide

WEEL	Long-term value: 250 ppm
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- **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.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 07/28/2025

Revision date 07/28/2025

Trade name: Off-Patent Drug Screening Library (96-Well)

(Contd. from page 4)

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· **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:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Physical state**

Liquid

· **Color:**

According to product specification

· **Odor:**

Odorless

· **Storage Buffer**

· **Odor threshold:**

Not determined.

· **Formulation**

A 10 mM solution in DMSO

· **Melting point/Melting range:**

18.5 °C (65.3 °F)

· **Boiling point/Boiling range:**

189 °C (372.2 °F)

· **Flammability:**

Not applicable.

· **Explosion limits:**

· **Lower:**

2.6 Vol %

· **Upper:**

42 Vol %

· **Flash point:**

87 °C (188.6 °F)

· **Auto igniting:**

270 °C (518 °F)

· **Decomposition temperature:**

Not determined.

· **pH-value:**

Not determined.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 07/28/2025

Revision date 07/28/2025

Trade name: Off-Patent Drug Screening Library (96-Well)

(Contd. from page 5)

- **Viscosity:**
- **Kinematic:** Not determined.
- **SOLUBILITY**
- **Dynamic at 20 °C (68 °F):** 198 mPas
- **Solubility in / Miscibility with**
- **Water at 25 °C (77 °F):** 1000 g/l
- **Partition coefficient (n-octanol/water):** Not determined.
- **Vapor pressure at 20 °C (68 °F):** 0.56 hPa (0.4 mm Hg)
- **Vapor pressure:**
- **Density at 20 °C (68 °F):** 1.1 g/cm³ (9.1795 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:** 98.8 %
- **VOC content:** 98.80 %
988.0 g/l / 8.25 lb/gal
- **Solids content:** 0.7–1.2 %
- **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.
- **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)

Oral	LD50	8,333–14,286 mg/kg
Inhalative	LC50/4 h	41.7–71.4 mg/l

(Contd. on page 7)

-US

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 07/28/2025

Revision date 07/28/2025

Trade name: Off-Patent Drug Screening Library (96-Well)

(Contd. from page 6)

67-68-5 Dimethyl sulfoxide

Oral	LD50	28,300 mg/kg (rat) OECD Test Guideline 401
Dermal	LD50	40,000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant
The product can cause inheritable damage.
- **Interactive effects** No interactive effects between components are known.
- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)

None of the ingredients is listed.

· 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 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.

-US

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 07/28/2025

Revision date 07/28/2025


Trade name: Off-Patent Drug Screening Library (96-Well)

(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 	<p>NA1993 not regulated</p>
<ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG, IATA 	<p>COMBUSTIBLE LIQUID, N.O.S not regulated</p>
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	<div style="text-align: center; margin-bottom: 10px;">  <p>COMBUSTIBLE 3</p> </div> <ul style="list-style-type: none"> · Class · Label · ADN/R Class:
<ul style="list-style-type: none"> · Class · Label · ADN/R Class: 	<p>Comb liq - not regulated</p>
<ul style="list-style-type: none"> · Packing group · DOT · IMDG, IATA 	<p>III not regulated</p>
<ul style="list-style-type: none"> · Environmental hazards: 	<p>Not applicable.</p>
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	<p>Not applicable.</p>
<ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations 	<p>On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L</p>
<ul style="list-style-type: none"> · IATA · Remarks: 	<p>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.</p>
<ul style="list-style-type: none"> · Special precautions for user 	<p>Not applicable.</p>

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 07/28/2025

Revision date 07/28/2025

Trade name: Off-Patent Drug Screening Library (96-Well)

(Contd. from page 8)

UN "Model Regulation":	not regulated
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15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

Section 355 (extremely hazardous substances):	None of the ingredients is listed.
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Section 313 (Specific toxic chemical listings):	None of the ingredients is listed.
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TSCA (Toxic Substances Control Act):	67-68-5 Dimethyl sulfoxide	ACTIVE
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Hazardous Air Pollutants	None of the ingredients is listed.
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Chemicals known to cause cancer:	None of the ingredients is listed.
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Chemicals known to cause reproductive toxicity for females:	None of the ingredients is listed.
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Chemicals known to cause reproductive toxicity for males:	None of the ingredients is listed.
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Chemicals known to cause developmental toxicity:	None of the ingredients is listed.
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- Carcinogenic categories

EPA (Environmental Protection Agency)	None of the ingredients is listed.
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TLV (Threshold Limit Value)	None of the ingredients is listed.
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NIOSH-Ca (National Institute for Occupational Safety and Health)	None of the ingredients is listed.
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- National regulations:

- Information about limitation of use:

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

- 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 10)

Safety Data Sheet

acc. to OSHA HCS

Date of issue: 07/28/2025

Revision date 07/28/2025

Trade name: Off-Patent Drug Screening Library (96-Well)

(Contd. from page 9)

- **Department issuing SDS:** Environment protection department.
- **Contact:** -
- **Date of previous version** 07/28/2025
- **Date of preparation** 07/28/2025
- **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
 - Flammable liquids 4: Flammable liquids – Category 4
 - Sensitization - respiratory 1: Respiratory sensitisation – Category 1
 - Sensitization - skin 1: Skin sensitisation – Category 1
 - Germ cell mutagenicity 1B: Germ cell mutagenicity – Category 1B
 - Carcinogenicity 1B: Carcinogenicity – Category 1B
 - Reproductive toxicity 1B: Reproductive toxicity – Category 1B
- *** Data compared to the previous version altered.**

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