

Material Safety Data Sheet

Version GHS 2.1
Revision date : 1/22/2018

1 . PRODUCT & COMPANY IDENTIFICATION

Product Name : Dimethyl Sulfoxide, Cell culture tested
Product Cat No : D2680
CAS No : 67-68-5
Manufacturer/Supplier : GenDEPOT LLC
PO Box 454
Barker, Tx 77413
Emergency Phone : 866.417.0078

2 . HAZARD IDENTIFICATION

GHS Classification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) Flammable liquids (Category 4), H227

GHS Label elements, including precautionary statements

Pictogram : None

Signal word : Warning

Hazard statement(s) :
H227 Combustible liquid.

Precautionary statement(s) :
P210 Keep away from heat/sparks/open flames/hot surfaces.
No smoking.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.
P403 + P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC) or not covered by GHS

Rapidly absorbed through skin.

3 . COMPOSITION/INFORMATION ON INGREDIENT

Synonyms : DMSO
Methyl Sulfoxide

Hazardous Components

Component	Classification	Concentration
Dimethyl sulfoxide , Formular—C ₂ H ₆ OS , MW- 78.13 g/mol		
CAS No	67-68-5	90-100%
EC No	200-664-3	

4 . FIRST AID MEASURES

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: If breathed in, move person into fresh air.
If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water.
Consult a physician.

In case of eye contact : Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed : Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

5 . FIREFIGHTING MEASURES

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters: Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products: No data available

Further information: Use water spray to cool unopened containers.

6 . ACCIDENTAL RELEASE MEASURES

Personal precaution: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precaution: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for contaminant and cleaning up: Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

7 . HANDLING AND STORAGE

Precaution for safe handling: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Condition for safe storage: Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature:
Store between the following temperatures: 20 to 25°C (68 to 77°F).

8 . EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components with workplace and control parameter

Dimethyl sulfoxide, 250.000000 ppm
USA. Workplace Environmental exposure level (WEEL)

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Personal protective equipment: .

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection: Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Complete suit protecting against chemicals.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9 . PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Form	liquid
Color	Clear, colorless

Safety data:

pH	9.1 at 10g/L
Melting point	16-19 °C (61-68)°F
Freezing point	no data available
Boiling point	189°C (372°F)
Flash point	87°C (189°F)
Ignition temperature	no data available
Auto-ignition temperature	no data available
Lower explosion limit	42%(v)
Upper explosion limit	3.5%(v)
Vapor pressure	0.55 hPa(0.41 mmHg) at 20°C(68°F)
Density	1.1 g/cm ³
Water solubility	completely miscible
Partition coefficient: n-octanol/water	log Pow: -2.03
Relative vapor density	2.7- (Air = 1..0)
Odor	Odorless
Odor threshold	no data available
Evaporation rate	no data available

10 . STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

no data available.

Condition to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight

Materials to avoid

Oxidizing agents

Hazardous decomposition products

No data available

11 . TOXICOLOGICAL INFORMATON

Acute Toxicity

Oral LD50

LD50 Oral - rat - 14.500 mg/kg

Inhalation

LC50-Rat - 4 hour—> 40250 ppm

Dermal LD50

LC50– dermal—Rabbit > 5,000 mg/kg

Other information on acute toxicity

no data available

Skin corrosion/irritation

Skin - Mild skin irritation

Serious eye damage/eye irritation

Eyes - no data available

Respiratory or skin sensitization

No data available

Mutagenicity (Germ cell mutagenicity)

DNA damage, Lymphocyte, cytogenetic analysis

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity

No data available

Teratogenicity

No data available

Specific target organ toxicity— single exposure (GHS)

no data available

Specific target organ toxicity— repeated exposure (GHS)

no data available

Aspiration hazard

no data available

Potential health effects

- Inhalation** May be harmful if inhaled. Causes respiratory tract irritation.
- Ingestion** May be harmful if swallowed.
- Skin** May be harmful if absorbed through skin. Causes skin irritation.
- Eyes** Causes eye irritation

Aggravated Medical Condition

Avoid contact with sodium dodecyl sulfate solutions containing toxic materials or materials with unknown toxicological properties. Sodium dodecyl sulfate is readily absorbed through skin and may carry such materials into the body.

Additional information

RTECS : PV6210000 ,

Exposure to large amounts can cause: redness of skin, Itching, burning, sedation, Headache, Nausea, Dizziness Eyes - Eye disease - Based on Human Evidence Eyes - Eye disease - Based on Human Evidence

12 . ECOLOGICAL INFORMATION

Toxicity

Toxicity to fish : LD50-Pimehales(fathead minnow)- 34,000 mg/ml, 96h
LC50– Oncorhynchus(rainbow trout)-35,000 mg/ml, 96h

Toxicity to daphnia and other aquatic invertebrates EC50-Daphniamana(Water flea)-24,600 mg/l—48h

Toxicity to algae EC50-Pseudokirchneriella subcapitata (green algae) -17,000 mg/ml– 72h

Persistence and degradability

Biodegradability - 31%

Result: 31 % - This product is not rapidly biodegradable. (OECD Test Guideline 301D)

Bioaccumulative potential

No data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effect

No data available

13 . DISPOSAL CONSIDERATIONS

Disposal methods

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contact a licensed professional waste disposal service to dispose of this material.

14 . TRANSPORT INFORMATION**DOT(US)**

NA-Number -1993
 Proper shipping name Combustible liquid , n.o.s (Dimethyl sulfoxide)
 Class None , Packing group : III

IMDG

Not dangerous goods

IATA

Not dangerous goods

15 . REGULATORY INFORMATION**United States**

HCS Classification : not listed

United States Inventory (TSCA 8b) : not determined

SARA 302 Components : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 : Fire Hazard, Acute Health Hazard

States Regulation

Massachusetts : None of the components are listed

New York : None of the components are listed

New Jersey : Dimethyl sulfoxide, CAS No 67-68-5

Pennsylvania : Dimethyl sulfoxide, CAS No 67-68-5

California Prop. 65 Components :

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

International Regulation

Australia (AICS) : This material is listed or exempted.

China Inventory (IECSC) : This material is listed or exempted.

Japan Inventory : This material is listed or exempted.

Korea Inventory : This material is listed or exempted.

New Zealand Inventory of Chemicals (NZIoC):

This material is listed or exempted.

Philippines Inventory (PICCS) : This material is listed or exempted.

Malaysia Inventory (EHS Register): Not determined.

Taiwan inventory (CSNN): Not determined.

16 . OTHER INFORMATION**HIMS Rating:**

Health hazard : 0

Chronic Health Hazard : *

Flammability : 2

Physical hazards: 0

NFPA Rating:

Health Hazard: 0

Fire: 2

Reactivity Hazard: 0

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When the revision of this MSDS is received, please dispose of the old one.

Department issuing MSDS:
 GenDEPOT LLC
 Safety Department