1. PRODUCT AND COMPANY IDENTIFICATION

Product name: Dimethyl sulfoxide
Product Number: 276835
Brand: Sigma-Aldrich
Company: Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone: +16362332532
Fax: +163623325552
Emergency Phone #: (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: DMSO, Methyl sulfoxide
Formula: C₇H₆O₇
Molecular Weight: 78.13 g/mol
CAS-No.: 67-56-5
EC-No.: 200-664-3
Index-No.: -
Concentration: -

3. HAZARDS IDENTIFICATION

Emergency Overview
OSHA Hazards: Combustible Liquid, Target Organ Effect
Target Organ: Eyes, Skin

HMIS Classification:
Health Hazard: 1
Chronic Health Hazard: 2
Flammability: 2
Physical Hazards: 0

NFPA Rating:
Health Hazard: 2
Fire: 2
Reactivity Hazard: 0

Potential Health Effects
Inhalation: May be harmful if inhaled. May cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin. May cause skin irritation.
Eye: May cause eye irritation.
Ingestion: May be harmful if swallowed.

4. FIRST AID MEASURES

General advice
Move out of dangerous area.

If Inhaled
If breathed in, move person into fresh air. If not breathing give artificial respiration.

In case of skin contact
Wash off with soap and plenty of water.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water.

5. FIRE-FIGHTING MEASURES

Flammable properties
Flash point: 87 °C (198 °F) - closed cup
Ignition temperature: 301 °C (574 °F)

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

Special protective equipment for fire-fighters
Wear self-contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Avoid breathing vapors, mist or gas.

Environmental precautions
Do not let product enter drains.

Methods for cleaning up
Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage
Keep container tightly closed in a dry and well-ventilated place.
Store under inert gas, hygroscopic.
### 11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>ID</th>
<th>LD50 Oral (rat)</th>
<th>1,500 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID 3D oral</td>
<td>1,500 mg/kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50 Inhalation</td>
<td>1,500 mg/L</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 9. PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance**: Liquid, clear
- **Odour**: No data available
- **Colour**: No data available
- **pH**: No data available
- **Melting point**: 18 - 19 °C (64.4 - 66 °F)
- **Boiling point**: 199 °C (390.2 °F)
- **Flash point**: 107 ± 2 °F
- **Ignition temperature**: 301 °C (575 °F)
- **Lower explosive limit**: 42% (V/V)
- **Upper explosive limit**: 4.1% (V/V)
- **Vapour pressure**: 0.5 ± 0.1 mmHg at 20 °C (68 °F)
- **Density**: 2.0 ± 0.1
- **Reactivity**: No data available

### 10. STABILITY AND REACTIVITY

- **Stability**: Stable under recommended storage conditions.
- **Materials to avoid**: Strong oxidizing agents, strong reducing agents.
- **Hazardous decomposition products**: Carbon dioxide, sulphur oxides.
12. ECOLOGICAL INFORMATION

Elimination Information (persistance and degradability)
no data available

Ecotoxicity effects
Toxicity to fish
LC50 - Pimephales promelas (fathead minnow) - 54,000 mg/l - 96 h

LC50 - Oncorhynchus mykiss (rainbow trout) - 35,000 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates.
EC50 - Daphnia pulex (Wale fish) - 27,500 mg/l

Toxicity to algae
EC50 - Lemnis macrochirus (Bluegill) - > 400,000 mg/l - 96 h

Further Information on ecology
no data available

13. DISPOSAL CONSIDERATIONS

Product
Contact a licensed professional waste disposal service to dispose of this material. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN-Number: 1993  Class: CBL  Packing group: III
Proper shipping name: Combustible liquid, n.o.s. (Dimethyl sulfide)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
Not dangerous goods

IATA
Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards
Combustible Liquid, Target Organ Effect

DSL Status
All components of this product are on the Canadian DSL list.

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

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

SARA 311/312 Hazards
Fire Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right To Know Act.

Pennsylvania Right To Know Components
CAS-No.  Dimethyl sulfoxide  67-68-5
Revision Date  67-68-5

New Jersey Right To Know Components
CAS-No.  Dimethyl sulfoxide  67-68-5
Revision Date  67-68-5

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION

Further Information
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