

**MATERIAL SAFETY DATA SHEET**  
**DIMETHYL SULFONE (DMSO<sub>2</sub>)**

**1. MATERIAL IDENTIFICATION**

Specification number: 34

Manufacturer: Arichem, LLC  
187 Sloss Industries Road  
Ariton, Alabama 36311

Phone numbers: Product information: 334-762-2314  
8:00 AM to 4:30 PM, Monday thru Friday  
24Hr Contact: 334-762-2314  
Transport Emergencies;  
Call CHEMTREC: 1/800/424-9300

Product name: Dimethyl Sulfone; DMSO<sub>2</sub>

Shipping name: Dimethyl Sulfone; DMSO<sub>2</sub>

DOT number: Not assigned

CAS name: Methyl Sulfone

CAS number: 67-71-0

Formula: C<sub>2</sub>H<sub>6</sub>O<sub>2</sub>S

NFPA rating: Health 1; Fire 1; Reactivity 0

**2. COMPONENTS**

<u>Material</u>	<u>CAS#</u>	<u>% by wt.</u>
Methyl Sulfone	67-71-0	99% minimum

This component is listed on the TSCA Inventory. See Sections 3, 8, and 11 for exposure information

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**3. HAZARD IDENTIFICATION****EMERGENCY OVERVIEW**

Colorless to white (crystals)

**Health:** No significant target effects reported.

Effects of Contact

**Eyes:** Short term exposure: Irritation  
Long term exposure: No information is available.  
Acute exposure: May cause irritation.

**Skin:** Short term exposure: Irritation  
Long term exposure: No information is available.  
Acute exposure: May cause irritation. Skin absorption may occur.  
Chronic exposure: No information is available.

**Ingestion:** Short term exposure: Same as acute.  
Long term exposure: Same as chronic.  
Acute exposure: Undetermined in humans, but generally considered to be of low toxicity  
(oral rat LD50: 17000ng/kg).  
Chronic exposure: None identified

**Inhalation:** Short term exposure: No information is available.  
Long term exposure: No information is available.

**Carcinogenicity:** OSHA: N  
NTP: N  
IARC: N

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#### 4. FIRST AID

- Eyes Contact: Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.
- Skin Contact: Remove contaminated clothing, jewelry, and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention, if needed.
- Ingestion: If vomiting occurs, keep head lower than hips to help prevent aspiration. Get medical attention, if needed.
- Inhalation: Remove from exposure immediately. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Get medical attention.

#### NOTE TO PHYSICIAN

#### 5. FIRE AND EXPLOSION DATA

Slight fire hazard. Dust/air mixtures may ignite or explode.

- Flash point: 289 F (143 C)
- Flammability Class (OSHA): III B
- Extinguishing media: Carbon dioxide, regular dry chemical, regular foam, water.
- Fire and Explosion: Slight fire hazard. Dust/air mixtures may ignite or explode.
- Fire Fighting Instructions: Move container from fire area if it can be done without risk. Do not scatter spilled material with high-pressure water streams. Dike for later disposal. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products. Stay upwind and keep out of low areas.
- Fire Fighting Protective Equipment: Full firefighting turn-out gear (bunker gear). Any supplied-air respirator with full face piece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full face piece.

#### 6. ACCIDENTAL RELEASE MEASURES

- Occupational Release: Collect spilled material in appropriate container for disposal. Keep out of water supplies and sewers. Keep unnecessary people away, isolate hazard area and deny entry.

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**7. HANDLING AND STORAGE**

Store and handle in accordance with all current regulations and standards. Store in a cool, dry place. Store in a tightly closed container. Keep separated from incompatible substances.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Exposure Limits:	Methyl Sulfone: No occupational exposure limits established by OSHA, ACGIH, or NIOSH.
Ventilation:	Provide local exhaust ventilation system. Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Ensure compliance with applicable exposure limits.
Eye Protection:	Wear splash resistant safety goggles. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.
Clothing:	Wear appropriate chemical resistant clothing.
Gloves:	Wear appropriate chemical resistant gloves.
Respirator:	Under conditions of frequent use or heavy exposure, respiratory protection may be needed. Respiratory protection is ranked in order from minimum to maximum. Any dust, mist, and fume respirator. Any air-purifying respirator with a high-efficiency particulate filter. Any powered, air-purifying respirator with a dust, mist, and fume filter. Any powered, air purifying respirator with a high-efficiency particulate filter. For Unknown Concentrations or Immediately Dangerous to Life or Health: Any supplied-air respirator with full face piece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full face piece.

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#### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless to white
Physical state:	Crystals
Boiling point:	460 F (238 C)
Melting point:	226 - 234 F (108 - 112 C)
Molecular weight:	94.13
Molecular formula:	CH <sub>3</sub> -S <sub>O</sub> 2-CH <sub>3</sub>
Vapor pressure:	Not applicable
Vapor density:	Not applicable
Specific gravity (water=1):	1.1707 @ 110 C
Water solubility:	Soluble
PH:	Not applicable
Volatility:	Not applicable
Odor:	No data available.
Evaporation rate:	Not applicable
Solvent solubility:	Soluble: alcohol, acetone, benzene Slightly Soluble: ether

#### 10. STABILITY AND REACTIVITY

Reactivity:	Stable to normal temperatures and pressure.
Conditions to Avoid:	Avoid heat, flames, sparks, and other sources of ignition. Avoid contact with incompatible materials.
Incompatibilities:	Oxidizing materials.
Methyl Sulfone:	Oxidizers (Strong): Fire and explosion hazard.
Hazardous Decomposition:	Thermal decomposition products: Oxides of sulfur, carbon.
Polymerization:	Will not polymerize.

#### 11. TOXICOLOGICAL INFORMATION

Methyl Sulfone:	
Carcinogen Status:	None
Acute Toxicity Level:	No data available.
Target Organs:	No data available.

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**12. ECOLOGICAL INFORMATION**

No data available.

**13. DISPOSAL INFORMATION**

Dispose in accordance with all applicable regulations.

**14. TRANSPORTATION INFORMATION**

No classification currently assigned.

**15. REGULATORY INFORMATION**

TSCA STATUS:	On TSCA Inventory
TSCA 12 (b) Export Notification:	Not Listed
CERCLA Section 103 (40CFR302.4):	N
SARA Section 302 (40CFR355.30):	N
SARA Section 304 (40CFR355.40):	N
SARA Section 313 (40CFR372.65):	N
SARA Hazard Categories, SARA Sections 311/312 (40CFR370.21):	
Acute:	N
Chronic:	N
Fire:	N
Reactive:	N
Sudden Release:	N
OSHA Process Safety (20CFR1910.119):	N

**16. OTHER INFORMATION**

Section(s) revised: All sections are NEW.  
MSDS date: 06/04/97  
Supersedes date: New

The data of this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material. While the data contained herein is based on technical data that Arichem, LLC believes to be reliable, it is intended for use by persons having technical skill and at their own discretion and risk.