

\*\*\*\*Section 1 - Chemical Product And Company Identification \*\*\*\*

MSDS Name: Methyl sulfoxide, anhydrous, SC, 99.7%, AcroSeal (TM)

Synonym: Methyl sulfoxide; DMSO; Sulfinylbis(methane); Dimethyl sulfoxide.

Company: AboutChem.com

\*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

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| CAS# | Chemical Name | % | EINECS# |

|-----|-----|-----|-----|

| 67-68-5 | Dimethyl sulfoxide | 99.7 | 200-664-3 |

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Hazard Symbols: Xi

Risk Phrases: 36/37/38

\*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*

EMERGENCY OVERVIEW

Irritating to eyes, respiratory system and skin. Hygroscopic.

Potential Health Effects

Eye:

Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. May cause

chemical conjunctivitis.

Skin:

May cause irritation with burning pain, itching and redness.

Substance is rapidly absorbed through the skin.

Ingestion:

May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause liver and kidney damage. May cause garlic smell on the breath and body.

Inhalation:

May cause respiratory tract irritation. Can produce delayed pulmonary edema.

Chronic:

Prolonged or repeated skin contact may cause dermatitis. May cause liver and kidney damage. Effects may be delayed.

#### \*\*\*\* SECTION 4 - FIRST AID MEASURES \*\*\*\*

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes,

occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Get medical aid. Flush skin with plenty of soap and water for at

least 15 minutes while removing contaminated clothing and shoes. Wash

clothing before reuse.

Ingestion:

Never give anything by mouth to an unconscious person. Get medical

aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and

drink 2-4 cupfuls of milk or water.

Inhalation:

Remove from exposure to fresh air immediately. If not breathing,

give artificial respiration. If breathing is difficult, give oxygen.

Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:

Treat symptomatically and supportively.

#### \*\*\*\* SECTION 5 - FIRE FIGHTING MEASURES \*\*\*\*

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air.

During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Containers may explode when heated.

Extinguishing Media:

Cool containers with flooding quantities of water until well after fire is out. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

#### \*\*\*\* SECTION 6 - ACCIDENTAL RELEASE MEASURES \*\*\*\*

General Information: Use proper personal protective equipment as indicated

in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Do not flush into a sewer. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

#### \*\*\*\* SECTION 7 - HANDLING and STORAGE \*\*\*\*

Handling:

Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Wash clothing before reuse.

Storage:

Keep away from heat, sparks, and flame. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances.

#### \*\*\*\* SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION \*\*\*\*

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Personal Protective Equipment

Eyes:

Wear chemical goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

\*\*\*\* SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\*

Physical State: Liquid

Appearance: clear

Odor: slight odor - sulfurous odor - garlic-like odor

pH: Not available.

Vapor Pressure: 0.4 mm Hg at 20

Viscosity: 1.1cp @ 27 deg C

Boiling Point: 189 deg C

Freezing/Melting Point: 18.4 deg C

Autoignition Temperature: 215 deg C ( 419.00 deg F)

Flash Point: 95 deg C ( 203.00 deg F)

Explosion Limits, lower: 2.6 vol %

Explosion Limits, upper: 42 vol %

Decomposition Temperature: > 200 deg C

Solubility in water: Soluble.

Specific Gravity/Density: 1.1010g/cm<sup>3</sup>

Molecular Formula: C<sub>2</sub>H<sub>6</sub>OS

Molecular Weight: 78.13

\*\*\*\* SECTION 10 - STABILITY AND REACTIVITY \*\*\*\*

Chemical Stability:

Stable at room temperature in closed containers under normal storage and handling conditions.

Conditions to Avoid:

Excess heat.

Incompatibilities with Other Materials:

Strong oxidizing agents, strong acids, strong bases.

Hazardous Decomposition Products:

Carbon monoxide, oxides of sulfur, carbon dioxide.

Hazardous Polymerization: Has not been reported.

\*\*\*\* SECTION 11 - TOXICOLOGICAL INFORMATION \*\*\*\*

RTECS#:

CAS# 67-68-5: PV6210000

LD50/LC50:

CAS# 67-68-5: Draize test, rabbit, eye: 500 mg/24H Mild; Draize test, rabbit, skin: 500 mg/24H Mild; Oral, mouse: LD50 = 7920 mg/kg;

Oral, rat: LD50 = 14500 mg/kg; Skin, rat: LD50 = 40 gm/kg.

Carcinogenicity:

Dimethyl sulfoxide -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

See actual entry in RTECS for complete information.

\*\*\*\* SECTION 12 - ECOLOGICAL INFORMATION \*\*\*\*

Other

For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

\*\*\*\* SECTION 13 - DISPOSAL CONSIDERATIONS \*\*\*\*

Dispose of in a manner consistent with federal, state, and local regulations.

\*\*\*\* SECTION 14 - TRANSPORT INFORMATION \*\*\*\*

IATA

Not regulated as a hazardous material.

IMO

Not regulated as a hazardous material.

RID/ADR

Not regulated as a hazardous material.

\*\*\*\* SECTION 15 - REGULATORY INFORMATION \*\*\*\*

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 36/37/38 Irritating to eyes, respiratory system  
and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately  
with plenty of water and seek medical advice.

S 37/39 Wear suitable gloves and eye/face  
protection.

WGK (Water Danger/Protection)

CAS# 67-68-5: 1

United Kingdom Occupational Exposure Limits

Canada

CAS# 67-68-5 is listed on Canada's DSL List.

CAS# 67-68-5 is listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 67-68-5: OEL-RUSSIA:STEL 20 mg/m<sup>3</sup>

OEL-SWITZERLAND:TWA 50 ppm (160 mg/m<sup>3</sup>);Skin

US FEDERAL

TSCA

CAS# 67-68-5 is listed on the TSCA inventory.

\*\*\*\* SECTION 16 - ADDITIONAL INFORMATION \*\*\*\*

MSDS Creation Date: 5/30/2000 Revision #4 Date: 2/05/2002

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

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