



# Material Safety Data Sheet

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Responsible Party: Reference Standards Technical Services

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## RESIDUAL SOLVENT CLASS 2 - 1,2-DIMETHOXYETHANE

Catalog Number: 1601463

Package Size: See label

Revision Date:

October 7, 2003

This reference standard contains 1,2-dimethoxyethane in dimethyl sulfoxide (DMSO). The mixture has not been tested to determine specific physical hazards, but it is considered potentially combustible. DMSO is an irritant and is rapidly absorbed through the skin. It may carry dissolved chemicals into the body through this route.

### SECTION 1 - IDENTIFICATION

**Common Name:** 1,2-Dimethoxyethane

**Formula:** C<sub>4</sub>H<sub>10</sub>O<sub>2</sub> (1,2-Dimethoxyethane); C<sub>2</sub>H<sub>6</sub>OS (DMSO)

**Synonym:** Ethylene glycol dimethyl ether

**Chemical Name:** Ethane, 1,2-dimethoxy- in dimethyl sulfoxide

**CAS Number:** 110-71-4 (1,2-Dimethoxyethane); 67-68-5 (DMSO)

**RTECS Number:** KI1451000 (1,2-Dimethoxyethane); PV6210000 (DMSO)

**Chemical Family:** Glycol ether (1,2-Dimethoxyethane)

**Therapeutic Category:** Residual solvent

### SECTION 2 - INGREDIENT INFORMATION

<u>Principle Components</u>	<u>Percent</u>	<u>Exposure Limits</u>
1,2-Dimethoxyethane	0.05%	n/f
Dimethyl sulfoxide	99.95%	n/f

### SECTION 3 - HEALTH HAZARD INFORMATION

**Usual Adult Dose:** n/f

**Adverse Effects:** Adverse effects of DMSO may include redness, itching, or rash on skin; garlic-like taste or odor on breath and skin; swelling of face; troubled breathing; shortness of breath; and nasal congestion. Adverse effects of

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exposure to 1,2-dimethoxyethane may include dizziness, difficulty breathing, nausea, vomiting, and loss of consciousness. Possible allergic reaction to material if inhaled, ingested or in contact with skin.

**Overdose Effects:** n/f

**Acute:** Possible eye, skin, gastrointestinal and/or respiratory tract irritation.

**Chronic:** Possible hypersensitization.

**Inhalation:** May cause irritation and adverse effects. Avoid inhalation. Remove to fresh air.

**Eye:** May cause irritation. Avoid contact. Flush with copious quantities of water.

**Skin:** Causes irritation. Avoid contact. Flush with copious quantities of soap and water. DMSO readily penetrates the skin and can enhance absorption of other chemicals.

**Ingestion:** May cause irritation and adverse effects. Avoid ingestion. Flush out mouth with water.

**Medical Conditions Aggravated by Exposure:** Hypersensitivity to material.

**Cross Sensitivity:** n/f

**Pregnancy Comments:** n/f

**Pregnancy Category:** n/f

## SECTION 4 - FIRST AID MEASURES

**General:** Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If person is not breathing give artificial respiration. If breathing is difficult give oxygen. Obtain medical attention.

**Overdose Treatment:** Treatment of overdose should be symptomatic and supportive.

## SECTION 5 - TOXICOLOGICAL INFORMATION

**Oral Rat:** LD50: 14500 mg/kg (DMSO)

**Oral Mouse:** LD50: 3200 mg/kg (1,2-Dimethoxyethane); 7920 m

**Irritancy Data:** RTECS - Rabbit/skin,eye: mild (DMSO)

**Target Organ(s):** n/f

**Listed as a Carcinogen?** NTP: No IARC: No OSHA: No

**Other:** No

## SECTION 6 - FIREFIGHTING MEASURES

**Flash Point:** n/f

**Upper Flammable Limit:** n/f

**Auto-Ignition Temperature:** n/f

**Lower Flammable Limit:** n/f

**Extinguisher Media:** Water spray, dry chemical, carbon dioxide or foam as appropriate for surrounding fire and materials.

**Fire and Explosion Hazards:** This material is expected to be combustible. Vapors may form explosive mixtures with air. Vapors may travel to sources of ignition and flash back.

**Firefighting Procedures:** As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

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## SECTION 7 - PHYSICAL HAZARDS

**Conditions to Avoid:** Avoid exposure to light.

**Incompatibilities:** n/f

**Decomposition Products:** When heated to decomposition material emits toxic fumes. Emits toxic fumes under fire conditions.

**Stable?** Yes                      **Hazardous Polymerization?** No

## SECTION 8 - HANDLING / SPILL / DISPOSAL MEASURES

**Handling:** As a general rule, when handling USP Reference Standards avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Wash thoroughly after handling.

**Storage:** Store in tight, light-resistant container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity.

**Spill Response:** Wear approved respiratory protection, chemically compatible gloves and protective clothing. Ventilate area. Remove ignition sources. Wipe up spillage. Avoid breathing vapor. Place spillage in appropriately labelled container for disposal. Wash spill site.

**Disposal:** Dispose of waste in accordance with all applicable Federal, State and local laws.

## SECTION 9 - EXPOSURE CONTROLS / PERSONAL PROTECTION

**Respiratory Protection:** Use a NIOSH approved respirator, if it is determined to be necessary by an industrial hygiene survey involving air monitoring.

**Ventilation:** Recommended

**Gloves:** Chemically compatible

**Eye Protection:** Safety Goggles

**Protective Clothing:** Protect exposed skin.

## SECTION 10 - PHYSICAL AND CHEMICAL PROPERTIES

**NOTE:** The data reported below is general information, and is not specific to the USP Reference Standard Lot provided!

**Appearance and Odor:** Colorless liquid.

**Melting Point:** n/f

**Solubility in Water:** n/f

**Boiling Point:** n/f

**Specific Gravity:** n/f

**Vapor Pressure:** n/f

**Vapor Density:** n/f

**Evaporation Rate:** n/f

**Reactivity in Water:** n/f

**% Volatile by Volume:** n/f