



Material Safety Data Sheet

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RESIDUAL SOLVENT CLASS 2 - 1,2-DICHLOROETHENE

Catalog Number: 1601420

Package Size: See label

Revision Date: September 29, 2003

This reference standard contains 1,2-dichloroethene (cis/trans) 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.
1,2-Dichloroethene (cis/trans) is an irritant.

SECTION 1 - IDENTIFICATION

Common Name: 1,2-Dichloroethene

Formula: C₂H₂Cl₂ (1,2-Dichloroethene); C₂H₆OS (DMSO)

Synonym: Acetylene dichloride; sym-dichloroethylene

Chemical Name: sym-1,2-dichloroethylene in dimethyl sulfoxide

CAS Number: 540-59-0 (1,2-Dichloroethene); 67-68-5 (DMSO) **RTECS Number:** KV9360000 (1,2-Dichloroethene); PV6210000 (DMSO)

Chemical Family: Halogenated hydrocarbon (1,2-Dichloroethene)

Therapeutic Category: Residual solvent

SECTION 2 - INGREDIENT INFORMATION

<u>Principle Components</u>	<u>Percent</u>	<u>Exposure Limits</u>
1,2-Dichloroethene	0.9350%	OSHA: TWA 200 ppm NIOSH: TWA 200 ppm; IDLH 1000 ppm ACGIH: TWA 200 ppm
Dimethyl sulfoxide	99.065%	

SECTION 3 - HEALTH HAZARD INFORMATION

Usual Adult Dose: n/f

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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. Effects of exposure to 1,2-dichloroethene may include nausea, vomiting, weakness, tremor, stomach cramps, corneal clouding, and central nervous system depression. Possible allergic reaction to material if inhaled, ingested or in contact with skin.

Overdose Effects: n/f

Acute: Eye, skin, gastrointestinal and/or respiratory tract irritation; central nervous system depression.

Chronic: Possible hypersensitization.

Inhalation: Causes irritation and toxicity. Avoid inhalation. Remove to fresh air.

Eye: Causes irritation. Avoid contact. Flush with copious quantities of water for at least 15 minutes.

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: Causes irritation. Avoid ingestion. Flush out mouth with water.

Medical Conditions Aggravated by Exposure: Hypersensitivity to material, liver conditions, and chronic respiratory disease.

Cross Sensitivity: n/f

Pregnancy Comments: In chick embryos, dichloroethylene congeners selectively increased the incidence of cardiac defects. Rat embryos exposed to dichloroethylene by continuous intrauterine perfusion also had an increased incidence of heart defects.

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: 770 mg/kg (1,2-Dichloroethene); 14500 mg/k

Oral Mouse: LD50: 7920 mg/kg (DMSO)

Irritancy Data: RTECS - Rabbit/skin: moderate (1,2-Dichloroethene); Rabbit/skin,eye: mild (DMSO)

Target Organ(s): Central nervous system; eyes (1,2-Dichloroethene)

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.

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

SECTION 7 - PHYSICAL HAZARDS

Conditions to Avoid: Avoid exposure to light.

Incompatibilities: Heat and sunlight may cause polymerization of 1,2-dichloroethene if material is not inhibited.

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 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. Wipe up spillage. Avoid breathing vapors. 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