



Material Safety Data Sheet

12601 Twinbrook Parkway
Rockville, MD 20852 USA

Telephone calls: (301) 881-0666
8:00am - 5:00pm EST Mon. - Fri.

Responsible Party: Reference Standards Technical Services

ATTENTION !

USP Reference Standards are sold for chemical test and assay purposes only, and NOT for human consumption. The information contained herein is applicable solely to the chemical substance when used as a USP Reference Standard and does not necessarily relate to any other use of the substance described, (i.e. at different concentrations, in drug dosage forms, or in bulk quantities). USP Reference Standards are intended for use by persons having technical skill and at their own discretion and risk. This information has been developed by USP staff from sources considered reliable but has not been independently verified by the USP. Therefore, the USP Convention cannot guarantee the accuracy of the information in these sources nor should the statements contained herein be considered an official expression. NO REPRESENTATION OR WARRANTY, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE is made with respect to the information contained herein.

RESIDUAL SOLVENT CLASS 2 - NITROMETHANE

Catalog Number: 1601725

Package Size: See label

Revision Date:

October 13, 2003

This reference standard contains nitromethane 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. Nitromethane is an irritant and possible carcinogen.

SECTION 1 - IDENTIFICATION

Common Name: Nitromethane

Formula: CH₃NO₂ (Nitromethane); C₂H₆OS (DMSO)

Synonym: n/f

Chemical Name: Methane, nitro- in dimethyl sulfoxide

CAS Number: 75-52-5 (Nitromethane); 67-68-5 (DMSO)

RTECS Number: PA9800000 (Nitromethane); PV6210000 (DMSO)

Chemical Family: Nitroparaffin (Nitromethane)

Therapeutic Category: Residual solvent

SECTION 2 - INGREDIENT INFORMATION

<u>Principle Components</u>	<u>Percent</u>	<u>Exposure Limits</u>
Nitromethane	0.025%	OSHA: TWA 100 ppm NIOSH: IDLH 750 ppm ACGIH: TWA 20 ppm
Dimethyl sulfoxide	99.975%	n/f

SECTION 3 - HEALTH HAZARD INFORMATION

Usual Adult Dose: n/f

RESIDUAL SOLVENT CLASS 2 - NITROMETHANE

Catalog Number: 1601725

Package Size: See label

Revision Date:

October 13, 2003

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. Possible allergic reaction to material if inhaled, ingested or in contact with skin.
Overdose Effects:	Overdose effects of nitromethane may include loss of appetite, nausea, vomiting, diarrhea, cough, dizziness, headache, and central nervous system depression. Some nitro compounds may induce methemoglobinemia. Nitromethane has caused liver and kidney damage in animals.
Acute:	Eye, skin, gastrointestinal and/or respiratory tract irritation.
Chronic:	Possible hypersensitization,
Inhalation:	Causes irritation. 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; skin, respiratory, liver, kidney, blood, thyroid, or neurological conditions.
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 nitromethane overdose should be symptomatic and supportive and may include the following: <ol style="list-style-type: none">1. Do not induce vomiting.2. Monitor urinalysis and liver and renal function tests. Nitromethane may falsely elevate serum creatine.3. Patients with significant inhalation or respiratory tract irritation should have arterial blood gasses and chest x-ray monitored.4. Obtain methemoglobinemia levels in cyanotic patients. Administer methylene blue in symptomatic patients. [Poisindex 2003]

SECTION 5 - TOXICOLOGICAL INFORMATION

Oral Rat:	LD50: 940 mg/kg (Nitromethane); 14500 mg/kg (DM
Oral Mouse:	LD50: 950 mg/kg (Nitromethane); 7920 mg/kg (DMS
Irritancy Data:	RTECS - Rabbit/skin,eye: mild (DMSO)
Target Organ(s):	Central nervous system, liver (Nitromethane)
Listed as a Carcinogen?	NTP: No IARC: Yes OSHA: No
Other:	Nitromethane is listed by IARC as possibly carcinogenic to humans.

SECTION 6 - FIREFIGHTING MEASURES

Flash Point:	n/f	Upper Flammable Limit:	n/f
Auto-Ignition Temperature:	n/f	Lower Flammable Limit:	n/f

RESIDUAL SOLVENT CLASS 2 - NITROMETHANE

Catalog Number: 1601725

Package Size: See label

Revision Date:

October 13, 2003

- 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.

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 spill site. Wipe up spillage. Avoid breathing vapors. Place spillage in appropriately labelled container for disposal. Wash spill site. Place spillage and all contaminated cleanup materials in a thick plastic hazardous waste disposal bag or leakproof container and label it CAUTION: HAZARDOUS CHEMICAL WASTE.
- Disposal:** Place material in a thick plastic hazardous waste disposal bag or leakproof container and label it CAUTION: HAZARDOUS CHEMICAL WASTE. 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:** Clear liquid.
- Melting Point:** n/f
- Solubility in Water:** n/f **Vapor Density:** n/f
- Boiling Point:** n/f **Evaporation Rate:** n/f
- Specific Gravity:** n/f **Reactivity in Water:** n/f
- Vapor Pressure:** n/f **% Volatile by Volume:** n/f