



Material Safety Data Sheet

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RESIDUAL SOLVENT CLASS 2 - PYRIDINE

Catalog Number: 1601747

Package Size: See label

Revision Date:

October 27, 2003

This reference standard contains pyridine 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. Pyridine is an irritant.

SECTION 1 - IDENTIFICATION

Common Name: Pyridine

Formula: C₅H₅N (Pyridine); C₂H₆OS (DMSO)

Synonym: n/f

Chemical Name: Pyridine in dimethyl sulfoxide

CAS Number: 110-86-1 (Pyridine); 67-68-5 (DMSO)

RTECS Number: UR8400000 (Pyridine); PV6210000 (DMSO)

Chemical Family: Alkylpyridine (Pyridine)

Therapeutic Category: Residual solvent

SECTION 2 - INGREDIENT INFORMATION

<u>Principle Components</u>	<u>Percent</u>	<u>Exposure Limits</u>
Pyridine	0.1%	OSHA: TWA 5 ppm NIOSH: TWA 5 ppm; IDLH 1000 ppm ACGIH: TWA 5 ppm
Dimethyl sulfoxide	99.9%	n/f

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. Adverse effects of pyridine may include diarrhea; abdominal pain; nausea; vomiting; loss of appetite; weakness; headache; insomnia; nervousness; fatigue; depression; delirium; fever; lower back or side pain; frequent urination; dizziness; and loss of coordination or judgement. Possible allergic reaction to material if inhaled, ingested or in contact with skin.

Overdose Effects: Pyridine overdose may cause loss of consciousness, respiratory depression, coma, and death.

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

Chronic: Possible hypersensitization; liver or kidney damage; and central nervous system depression.

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; central nervous system, liver, or kidney damage.

Cross Sensitivity: n/f

Pregnancy Comments: Pyridine caused muscle and skeletal effects when injected into developing chickens. It did not cause birth defects in frogs at sublethal doses.

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 pyridine overdose should be symptomatic and supportive. Do not induce vomiting due to central nervous system and respiratory depression. Maintain liver, kidney, and respiratory function; monitor patient following significant exposure even if CNS symptoms are not evident. [Poisindex 2003]

SECTION 5 - TOXICOLOGICAL INFORMATION

Oral Rat: LD50: 891 mg/kg (Pyridine); 14500 mg/kg (DMSO)

Oral Mouse: LD50: 1500 mg/kg (Pyridine); 7920 mg/kg (DMSO)

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

Target Organ(s): Liver, kidneys, central and peripheral nervous systems (Pyridine)

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

Other: Pyridine: NTP Carcinogenesis studies: Male rats: some evidence; Female rats: equivocal evidence; Male and female mice: clear evidence. Pyridine is not classifiable as to its carcinogenicity in humans.

SECTION 6 - FIREFIGHTING MEASURES

Flash Point: n/f

Upper Flammable Limit: n/f

Auto-Ignition Temperature: n/f

Lower Flammable Limit: n/f

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- 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 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. Remove ignition sources. Ventilate enclosed spaces. Absorb with suitable material. Do not flush into a confined space such as a sewer. Avoid breathing vapors. Place spillage and all contaminated cleanup materials in an 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:** 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