



Material Safety Data Sheet

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RESIDUAL SOLVENT CLASS 2 - N,N-DIMETHYLACETAMIDE

Catalog Number: 1601485

Package Size: See label

Revision Date:

October 7, 2003

This reference standard contains N,N-dimethylacetamide 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. N,N-Dimethylacetamide is an irritant.

SECTION 1 - IDENTIFICATION

Common Name: N,N-Dimethylacetamide

Formula: C₄H₉NO (N,N-Dimethylacetamide);
C₂H₆OS (DMSO)

Synonym: Dimethylacetamide, DMAC

Chemical Name: Acetamide, N,N-dimethyl in dimethyl sulfoxide

CAS Number: 127-19-5 (N,N-Dimethylacetamide); 67-68-5 (DMSO) **RTECS Number:** AB7700000 (N,N-Dimethylacetamide);
PV6210000 (DMSO)

Chemical Family: Amide (N,N-Dimethylacetamide)

Therapeutic Category: Residual solvent

SECTION 2 - INGREDIENT INFORMATION

<u>Principle Components</u>	<u>Percent</u>	<u>Exposure Limits</u>
N,N-Dimethylacetamide	0.5450%	OSHA: TWA 10 ppm (skin) NIOSH: TWA 10 ppm (skin); IDLH 300 ppm ACGIH: TWA 10 ppm (skin)
Dimethyl sulfoxide	99.455%	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. Effects from exposure to dimethylacetamide may include vomiting, nausea, and central nervous system depression followed by agitation, delusions, and hallucinations. Possible allergic reaction to material if inhaled, ingested or in contact with skin.

Overdose Effects: Toxic effects from dimethylacetamide exposure include low blood pressure, fever, liver toxicity, kidney damage, and blood disorders.

Acute: Eye, skin, gastrointestinal and/or respiratory tract irritation.

Chronic: Possible hypersensitization and liver or kidney damage.

Inhalation: Causes irritation. Avoid inhalation. Remove to fresh air. N,N-Dimethylacetamide is readily absorbed through the lungs.

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. N,N-Dimethylacetamide is readily absorbed from the gastrointestinal tract.

Medical Conditions Aggravated by Exposure: Hypersensitivity to material.

Cross Sensitivity: n/f

Pregnancy Comments: Some studies in animals exposed to high levels of dimethylacetamide showed toxic effects on the fetus (resorptions, growth retardation, fetal death). Other studies showed no adverse effects on fertility, mating, or reproductive outcome.

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 dimethylacetamide overdose should be symptomatic and supportive and may include the following:

1. Do not induce vomiting. When ingested it can cause esophageal or gastric burns or erosions. Consider insertion of a small, flexible nasogastric or orogastric tube to suction gastric contents after recent large ingestions; the risk of further mucosal injury must be weighed against potential benefits.
2. For hypotension, infuse patient with isotonic fluid and place in Trendelenburg position. If hypotension persists, administer dopamine or norepinephrine.
3. Maintain ventilation and oxygenation and evaluate with frequent arterial blood gas or pulse oximetry monitoring. Early use of PEEP and mechanical ventilation may be needed.
4. Control severe agitation or hallucinations with intravenous benzodiazepines.
5. Monitor for CNS depression, liver toxicity and rhabdomyolysis following an acute exposure.
6. Monitor CPK, especially in cases of extreme agitation.
7. Monitor serum and electrolyte levels in patients with excessive vomiting and/or diarrhea. Replace fluids as needed. [Poisindex 2003]

SECTION 5 - TOXICOLOGICAL INFORMATION

Oral Rat: LD50: 4300 mg/kg (N,N-Dimethylacetamide); 14500

Oral Mouse: LD50: 4620 mg/kg (N,N-Dimethylacetamide); 7920

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

Target Organ(s): Central nervous system, liver, kidneys (N,N-Dimethylacetamide)

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.

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. Remove sources of ignition. Ventilate spill site. 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!

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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