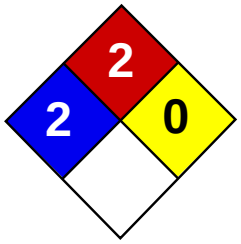

Health	2
Fire	2
Reactivity	0
Personal Protection	G

Material Safety Data Sheet
N,N-Dimethylacetamide MSDS

Section 1: Chemical Product and Company Identification

Product Name: N,N-Dimethylacetamide

Catalog Codes: SLD2272, SLD3637

CAS#: 127-19-5

RTECS: AB7700000

TSCA: TSCA 8(b) inventory: N,N-Dimethylacetamide

CI#: Not available.

Synonym: Acetimethylamide; Acetic acid, dimethylamide; Dimethyl acetamide; Dimethylacetone amide; Dimethylamide acetate; DMA; DMAc

Chemical Name: Acetamide, N,N-dimethyl-

Chemical Formula: C4-H9-N-O

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
{N,N-}Dimethylacetamide	127-19-5	100

Toxicological Data on Ingredients: N,N-Dimethylacetamide: ORAL (LD50): Acute: 4300 mg/kg [Rat]. 4620 mg/kg [Mouse]. DERMAL (LD50): Acute: 2240 mg/kg [Rabbit]. >20000 mg/kg [Rat]. 9600 mg/kg [Mouse]. VAPOR (LC50): Acute: 2475 ppm 1 hours [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of inhalation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to liver, central nervous system (CNS). The substance may be toxic to kidneys, skin. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

Skin Contact:
In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation: Not available.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms appear.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Combustible.

Auto-Ignition Temperature: 490°C (914°F)

Flash Points: CLOSED CUP: 66°C (150.8°F). OPEN CUP: 70°C (158°F).

Flammable Limits: LOWER: 1.8% UPPER: 11.5%

Products of Combustion: These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...).

Fire Hazards in Presence of Various Substances: Flammable in presence of open flames and sparks, of heat.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of heat.

Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards:
When heated to decomposition it emits toxic fumes of nitrogen oxides, carbon monoxide, ammonia, carbon dioxide.

Special Remarks on Explosion Hazards: Vapor-air mixtures are explosive within flammable limits noted above.

Section 6: Accidental Release Measures

Small Spill:
Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.

Large Spill:
Combustible material. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label.

Storage:
Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:
Safety glasses. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:
TWA: 10 (ppm) from ACGIH (TLV) [United States] SKIN TWA: 35 (mg/m3) from NIOSH [United States] SKIN TWA: 10 (ppm) from NIOSH [United States] SKIN TWA: 10 (ppm) from OSHA (PEL) [United States] SKIN TWA: 35 (mg/m3) from OSHA (PEL) [United States] SKIN TWA: 10 STEL: 20 (ppm) [United Kingdom (UK)] SKIN TWA: 36 STEL: 72 (mg/m3) [United Kingdom (UK)] SKINConsult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Amine like. Weak, ammonia or fish-like

Taste: Not available.

Molecular Weight: 87.12g/mole

Color: Colorless.

pH (1% soln/water): Not available.

Boiling Point: 163°C (325.4°F) - 165 C @ 760 mm Hg

Melting Point: -18.59°C (-1.5°F)

Critical Temperature: 385°C (725°F)

Specific Gravity: 0.9429 (Water = 1)

Vapor Pressure: 0.2 kPa (@ 20°C)

Vapor Density: 3 (Air = 1)

Volatility: 100% (v/v).

Odor Threshold: 21.4 ppm

Water/Oil Dist. Coeff.: The product is more soluble in water; log(oil/water) = -0.8

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, diethyl ether, acetone.

Solubility:
Soluble in cold water, diethyl ether, acetone. Soluble in Benzene, alcohol. Miscible in most organic solvents. Miscible with aromatic compounds, esters, ethers, ketones.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources, incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Incompatible with halogenated compounds, (e.g carbon tetrachloride, hexachlorocyclohexane) when heated above 90 C. Also incompatible with iron + halogenated compounds. Iron powder catalyzes the reaction so that it initiates at 71 deg. C. Also incompatbile with halogentated compounds when in contact with oxidizers.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 4300 mg/kg [Rat]. Acute dermal toxicity (LD50): 2240 mg/kg [Rabbit]. Acute toxicity of the vapor (LC50): 2475 1 hours [Rat].

Chronic Effects on Humans:
Causes damage to the following organs: liver, central nervous system (CNS). May cause damage to the following organs: kidneys, skin.

Other Toxic Effects on Humans:
Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant, permeator), of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May cause adverse reproductive effects and birth defects(teratogenic). May affect genetic material (mutagenic)

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation. It can be absorbed through the skin and cause systemic effects. Eyes: Causes eye irritation. Exposure to high concentrations of fumes can result in conjunctival irritation. It can cause mild, quickly reversible conjunctival irritation. Inhalation: May cause respiratory tract (nose, throat) irritation. symptoms may include coughing, shortness of breath. Inhalation of mist or vapor may affect behavior/central nervous system (ataxia, and other symptoms similar to ingestion), respiration (bronchitis, pulmonary edema), and liver. Symptoms may parallel those ingestion. Ingestion: Causes irritation of the gastrointestinal/digestive tract and may affect behavior/central nervous system. Symptoms may include abdominal spasm, throat pain, dysphagia, esophagitis with focal ulcerations, vomiting, sweating, weakness, dizziness, sleepiness, headache, depression, lethargy, confusion, disorientation, visual and auditory hallucinations, perceptual distortions, delusions, emotional detachment. It may also liver damage, and hypotension. Chronic Potential Health Effects: Inhalation: Prolonged or repeated inhalation may affect the blood (changes in serum composition, pigmented and nucleated red blood cells), metabolism (weight loss), and can cause liver damage. Ingestion: Prologned or repeated ingestion can affect the gastrointestinal tract, liver (hepatitis, jaundice), behavior/central nervous system (symptoms similar that that of acute ingestion). It may also affect the blood (changes in red and white blood cell count), kidneys (kidney damage).

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: Not a DOT controlled material (United States).

Identification: Not applicable.

Special Provisions for Transport: Not applicable.

Section 15: Other Regulatory Information

Federal and State Regulations:
Illinois toxic substances disclosure to employee act: N,N-Dimethylacetamide Rhode Island RTK hazardous substances: N,N-Dimethylacetamide Pennsylvania RTK: N,N-Dimethylacetamide Minnesota: N,N-Dimethylacetamide Massachusetts RTK: N,N-Dimethylacetamide Massachusetts spill list: N,N-Dimethylacetamide New Jersey: N,N-Dimethylacetamide TSCA 8(b) inventory: N,N-Dimethylacetamide TSCA 4(a) proposed test rules: N,N-Dimethylacetamide TSCA 8(a) PAIR: N,N-Dimethylacetamide TSCA 8(d) H and S data reporting: N,N-Dimethylacetamide: Effective date: 8/4/95; Sunset date: 6/30/98

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS B-3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F). CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 2

Reactivity: 0

Personal Protection: g

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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