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Material Safety Data Sheet 2-Nitropropane MSDS

Section 1: Chemical Product and Company Identification

Product Name: 2-Nitropropane

Catalog Codes: SLN2137

CAS#: 79-46-9

RTECS: TZ5250000

TSCA: TSCA 8(b) inventory: 2-Nitropropane

CI#: Not available.

Synonym: beta-Nitropropane; 2-NP;
Dimethylnitromethane; Isonitropropane; Nitroisopropane

Chemical Name: 2-Nitropropane

Chemical Formula: C3-H7-N-O2

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
{2-}Nitropropane	79-46-9	100

Toxicological Data on Ingredients: 2-Nitropropane: ORAL (LD50): Acute: 720 mg/kg [Rat]. VAPOR (LC50): Acute: 400 ppm 6 hours [Rat]. 10000 mg/m 2 hours [Mouse].

Section 3: Hazards Identification

Potential Acute Health Effects:

Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant). Severe over-exposure can result in death.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Classified + (Proven.) by OSHA. Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC. **MUTAGENIC EFFECTS:** Mutagenic for bacteria and/or yeast. **TERATOGENIC EFFECTS:** Not available. **DEVELOPMENTAL TOXICITY:** Not available. The substance is toxic to the nervous system, central nervous system (CNS). The substance may be toxic to liver. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a

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. WARM water MUST be used. Get medical attention if irritation occurs.

Skin Contact: Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops.

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 immediately.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:

Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 428°C (802.4°F)

Flash Points: CLOSED CUP: 27.778°C (82°F). OPEN CUP: 24°C (75.2°F).

Flammable Limits: LOWER: 2.6% UPPER: 11%

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

Fire Hazards in Presence of Various Substances:

Highly flammable in presence of open flames and sparks, of heat. Flammable in presence of oxidizing materials. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:

Risks of explosion of the product in presence of mechanical impact: Not available. Slightly explosive in presence of open flames and sparks, of heat.

Fire Fighting Media and Instructions:

Flammable liquid, soluble or dispersed in water. **SMALL FIRE:** Use DRY chemical powder. **LARGE FIRE:** Use alcohol foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards: May form explosive mixtures with air.

Special Remarks on Explosion Hazards:

May decompose or polymerize explosively under fire conditions. Vapors may form explosive mixtures with air. Containers may explode when heated.

Section 6: Accidental Release Measures

Small Spill: Absorb with an inert material and put the spilled material in an appropriate waste disposal.

Large Spill:

Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined

areas; dike if needed. 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. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents, combustible materials, acids, alkalis.

Storage:

Store in a segregated and approved area. 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] Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid.

Odor: Pleasant. Fruity.

Taste: Not available.

Molecular Weight: 89.09 g/mole

Color: Colorless.

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

Boiling Point: 120.3°C (248.5°F)

Melting Point: -93°C (-135.4°F)

Critical Temperature: Not available.

Specific Gravity:

0.992 @ 20 deg. C (Water = 1) 0.9821 @ 25 deg. C

Vapor Pressure: Not available.

Vapor Density: 3.07 (Air = 1)

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: Not available.

Solubility:

Very slightly soluble in cold water. Soluble in chloroform. Miscible with most aromatic hydrocarbons, ketones, esters. Miscible with most ethers, and lower carboxylic acids. Solubility in water: 1.7 ml/100 ml water.

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:

Highly reactive with oxidizing agents. Reactive with combustible materials, acids, alkalis.

Corrosivity: Not available.

Special Remarks on Reactivity:

Incompatible with oleum, chlorosulfonic acid, lead, strong alkalis/bases, amines, strong acids, oxidizers, metal oxides (mercury oxide or silver oxide), carbon + hopcalite (catalyst consisting of coprecipitated copper (II) oxide and manganese (IV) oxide), combustible materials, copper and copper alloys. May attack some forms of plastic.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

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

Toxicity to Animals:

WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 720 mg/kg [Rat]. Acute toxicity of the vapor (LC50): 400 6 hours [Rat].

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified + (Proven.) by OSHA. Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. Causes damage to the following organs: the nervous system, central nervous system (CNS). May cause damage to the following organs: liver.

Other Toxic Effects on Humans:

Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant, permeator).

Special Remarks on Toxicity to Animals:

Lowest Published Lethal Dose: LDL [Rabbit] - Route: Oral; Dose: 500 mg/kg LCL [Rabbit] - Route: Inhalation; Dose: 2381 ppm/5H

Special Remarks on Chronic Effects on Humans:

May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data. May affect genetic material (mutagenic). May cause cancer

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Causes eye irritation with lacrimation. May also cause mydriasis. Inhalation: Inhalation of mist or vapor causes respiratory tract (nose, throat, lung) irritation with coughing and/or shortness of breath (dyspnea). It may affect behavior/central nervous system and cause dizziness, ataxia, somnolence, convulsions, lethargy, weakness, nausea, vomiting, headache, and suffocation. Other symptoms may include loss of appetite (anorexia), hypermotility, diarrhea, shortness of breath. Inhalation of high doses may also produce pulmonary edema and

hemorrhage, and cause liver damage. High levels may also interfere with the ability of the blood to carry oxygen causing methemoglobinemia and cyanosis. Methemoglobinemia is characterized by chocolate-brown colored blood. Cyanosis is characterized by bluish skin and lips due deficient oxygenation of blood. Acute effects of exposure can occur at concentration of 25 to 45 ppm. Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting and diarrhea. May affect behavior/ central nervous system, respiratory system, and blood with symptoms similar to that of inhalation Chronic Potential Health Effects: Inhalation: Prolonged or repeated (occupational) exposure to concentrations above above 20 ppm may produce

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: CLASS 3: Flammable liquid.

Identification: : Nitropropanes UNNA: 2608 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: 2-Nitropropane California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: 2-Nitropropane Connecticut hazardous material survey.: 2-Nitropropane Illinois toxic substances disclosure to employee act: 2-Nitropropane Illinois chemical safety act: 2-Nitropropane New York release reporting list: 2-Nitropropane Rhode Island RTK hazardous substances: 2-Nitropropane Pennsylvania RTK: 2-Nitropropane Minnesota: 2-Nitropropane Massachusetts RTK: 2-Nitropropane Massachusetts spill list: 2-Nitropropane New Jersey: 2-Nitropropane New Jersey spill list: 2-Nitropropane Louisiana spill reporting: 2-Nitropropane California Director's List of Hazardous Substances: 2-Nitropropane TSCA 8(b) inventory: 2-Nitropropane TSCA 4(a) proposed test rules: 2-Nitropropane TSCA 8(a) PAIR: 2-Nitropropane TSCA 8(d) H and S data reporting: 2-Nitropropane: effective date: 3/11/94; sunset date: 6/30/98 SARA 313 toxic chemical notification and release reporting: 2-Nitropropane CERCLA: Hazardous substances.: 2-Nitropropane: 10 lbs. (4.536 kg)

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

DSCL (EEC):

R10- Flammable. R20/22- Harmful by inhalation and if swallowed. R45- May cause cancer. S16- Keep away from sources of ignition - No smoking. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S53- Avoid exposure - obtain special instructions before use.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 2

Personal Protection: g

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

Health: 2

Flammability: 3

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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