GARDENA, CA
NEW BRUNSWICK, NJ

Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment
	Health Hazard 2 Fire Hazard 3 Reactivity 2	 See Section 15.

Section 1. Chemical Product and Company Identification

Common Name/ Trade Name	**2-Nitropropane**
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248
Commercial Name(s)	Not available.
Synonym	beta-Nitropropane; 2-NP; Dimethylnitromethane; Isonitropropane; Nitroisopropane
Chemical Name	2-Nitropropane
Chemical Family	Not available.
Chemical Formula	C3-H7-N-O2
Supplier	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248

Catalog Number(s).	N2346
CAS#	79-46-9
RTECS	TZ5250000
TSCA	TSCA 8(b) inventory: 2-Nitropropane
CI#	Not available.

IN CASE OF EMERGENCY
CHEMTREC (24hr) 800-424-9300

CALL (310) 516-8000

Section 2.Composition and Information on Ingredients

		Exposure Limits			
Name	**CAS #**	**TWA (mg/m^3)**	**STEL (mg/m^3)**	**CEIL (mg/m^3)**	**% by Weight**
1) {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^3 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

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highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

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.

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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.
Molecular Weight	89.09 g/mole	**Taste**	Not available.
pH (1% soln/water)	Not available.	**Color**	Colorless.

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.

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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 alkalies/bases, amines, strong acids, oxidizers, metal oxides (mercury oxide or silver oxide), carbon + hopcalite (catalyst consisting of coprecipated 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, attaxia, 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 defficient 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

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	symptoms to acute inhalation and may cause liver damage or congestion, intestinal tract congestion, respiratory congestion, vascular damage, rapid heart rate, pulmonary edema, hemorrhage, brain 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	CLASS 3: Flammable liquid.
Identification	: Nitropropanes UNNA: 2608 PG: III
Special Provisions for Transport	Not available.
DOT (Pictograms)	

Section 15. Other Regulatory Information and Pictograms

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)

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California Proposition 65 Warnings

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

California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

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.

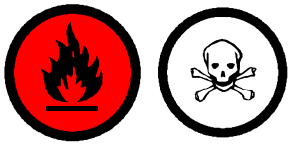
HMIS (U.S.A.)

Health Hazard	2
Fire Hazard	3
Reactivity	2
Personal Protection	g

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

Health
Flammability
Reactivity
Specific hazard

WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)

TDG (Canada) (Pictograms)

ADR (Europe) (Pictograms)

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.

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Section 16. Other Information

MSDS Code	**N3488**
References	Not available.
Other Special Considerations	Not available.

Validated by Sonia Owen on 8/11/2006.

Verified by Sonia Owen.

Printed 9/12/2006.

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.