Anachemia

255 Norman.
Lachine (Montreal), Que
H8R 1A3

Material Safety Data Sheet

EMERGENCY NUMBERS:

(USA) CHEMTREC : 1(800) 424-9300 (24hrs)
(CAN) CANUTEC : 1(613) 996-6666 (24hrs)
(USA) Anachemia : 1(518) 297-4444
(CAN) Anachemia : 1(514) 489-5711

WHMIS	Protective Clothing	TDG Road/Rail
WHMIS CLASS: B-2 D-1B D-2A		TDG CLASS: 3 PIN: UN2842 PG: III
		

Section I. Product Identification and Uses

Product name	**NITROETHANE**
Chemical formula	C2H5NO2
Synonyms	AC-6650, 63573
Supplier	Anachemia Canada. 255 Norman. Lachine (Montreal), Que H8R 1A3
Material uses	For laboratory use only.

CI#	Not available.
CAS#	79-24-3
Code	AC-6650
Formula weight	75.07
Supersedes	

Section II. Ingredients

Name	CAS #	%	TLV
1) NITROETHANE	79-24-3	96	Exposure limits: ACGIH TWA 100 ppm (307 mg/m3)
2) 2-NITROPROPANE	79-46-9	0-4	Exposure limits: ACGIH TWA 10 ppm (36 mg/m3)

Toxicity values of the hazardous ingredients

NITROETHANE:
ORAL (LD50): Acute: 1100 mg/kg (Rat). 860 mg/kg (Mouse).
INTRAPERITONEAL (LD50): Acute: 310 mg/kg (Mouse).

Section III. Physical Data

Physical state and appearance / Odor	Colorless liquid. Agreeable odor.
pH (1% soln/water)	Not available.
Odor threshold	163 ppm
Percent volatile	100% (V/V)
Freezing point	-90°C
Boiling point	112 to 116°C
Specific gravity	1.045 (Water = 1)
Vapor density	2.58 (Air = 1)
Vapor pressure	15.6 mm of Hg (@ 20°C)
Water/oil dist. coeff.	0.661
Evaporation rate	1.2 (Butyl acetate = 1).
Solubility	Soluble in water.

Section IV. Fire and Explosion Data

Flash point	CLOSED CUP: 28°C
Flammable limits	LOWER: 3.4%
Auto-ignition temperature	414°C
Fire degradation products	Oxides of carbon and nitrogen.
Fire extinguishing procedures	Use carbon dioxide, alcohol-resistant foam or water spray. Do not use dry chemical powder. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containing vessels with flooding quantities of water.
Fire and Explosion Hazards	Flammable liquid. Vapor may travel considerable distance to source of ignition and flash back, eliminate all sources of ignition. Vapor forms explosive mixture with air. Container explosion may occur under fire conditions or when heated. Contact with oxidizers may cause fire and/or explosion. Heating may cause an explosion. May be shock sensitive. Avoid shock. Becomes more sensitive to detonation by contamination with certain chemicals such as amines and acids. Emits toxic fumes under fire conditions.

Section V. Toxicological Properties

Routes of entry	Inhalation and ingestion. Eye contact. Skin contact. Skin absorption.
Effects of Acute Exposure	Harmful by ingestion, inhalation or skin absorption. May be fatal. Irritant. May cause liver, kidney and brain damage. Acute effects may be delayed. Target organs: blood, skin, liver, kidneys, respiratory system, central nervous system. 100 ppm (2-NITROPROPANE) is immediately dangerous to life or health.
Eye	Causes irritation.
Skin	Causes skin irritation. Repeated or prolonged skin contact may cause dermatitis. Liquid can be absorbed in toxic amounts through intact skin. See inhalation.
Inhalation	Material is irritating to mucous membranes and upper respiratory tract. May cause coughing, dyspnea, central nervous system depression (headache, nausea, vomiting, abdominal pain, incoordination, etc...), methemoglobinemia with cyanosis, narcosis, and possibly death.
Ingestion	Causes gastrointestinal irritation. May cause liver, kidney, and lung damage. See inhalation. Estimated fatal dose is 500 mg/kg (NITROETHANE).

Section V. Toxicological Properties

Effects of Chronic Overexposure	May cause dermatitis, liver, kidney, and brain damage. 2-Nitropropane is carcinogenic, fetotoxic/embryotoxic and mutagenic. To the best of our knowledge, the chemical, physical, and toxicity of this substance has not been fully investigated.

Section VI. First Aid Measures

Eye contact	Immediately flush eyes with copious quantities of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Call a physician.
Skin contact	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. Wash contaminated clothing before reusing. Discard contaminated leather articles such as shoes and belt.
Inhalation	Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Seek immediate medical attention.
Ingestion	If conscious, wash out mouth with water. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention.

Section VII. Reactivity Data

Stability	Unstable. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, contamination, shock.
Hazardous decomp. products	Not available.
Incompatibility	May react violently/explosively with bases, amines, alkalis, acids, oxidizing agents, reducing agents, mercury salts, silver salts, hydrocarbons, combustible materials, hydroxides (calcium hydroxide, sodium hydroxide, potassium hydroxide, etc...). Contact with amines, metal oxides, alkalis, and acids may form shock/heat sensitive materials. May attack some forms of plastics, rubbers and coatings.
Reaction Products	Heat sensitive! Alkali or amine salts of nitroethane are explosive when dry. This material can explode when exposed to extreme shock in confined areas at elevated temperatures. When heated rapidly to temperatures of 335 to 382°C it can undergo explosive thermal decomposition. Added sensitivity to heat may result from mixing nitroethane with: amines, strong alkalis, acids, and metal oxides, especially oxides of copper, cobalt, nickel, chromium, lead, and silver. Hazardous polymerization will not occur.

Section VIII. Preventive Measures

Protective Clothing in case of spill and leak
Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.

Spill and leak
Evacuate the area. Eliminate all sources of ignition. Cover with an activated carbon adsorbent. Place in a suitable container and mark for disposal. Use non-sparking tools. Transport outdoors. Ventilate area and wash spill site after material pick up is complete. DO NOT empty into drains. Runoff to sewer may create fire or explosion hazard. DO NOT touch spilled material.

Waste disposal
Burn in a chemical incinerator equipped with an after burner and scrubber. According to all applicable regulations. May be harmful to aquatic life. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.

Storage and Handling
Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible materials. Do not add any other material to the container. Do not wash down the drain. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. Keep container tightly closed and dry. Manipulate under an adequate fume hood. Watch for accumulation in low confined areas. Product is hygroscopic. Do not use pressure to dispense. Take precautionary measures against electrostatic discharges. Ground the container while dispensing. Ground all equipment containing material. Use explosion proof equipment. Use non-sparking tools. Empty containers may contain a hazardous residue. Handle and open container with care. Take off immediately all contaminated clothing. Avoid contact with a combustible material (wood, paper, oil, clothing...). This product must be manipulated by qualified personnel. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling. In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible.).

Section IX. Protective Measures

Protective clothing
Splash goggles. Impervious gloves, apron, coveralls, and/or other resistant protective clothing. Sufficient to protect skin. A OSHA/MSHA jointly approved respirator is advised in the absence of proper environmental controls. If more than TLV, do not breathe vapor. Wear self-contained breathing apparatus. Do not wear contact lenses. Make eye bath and emergency shower available. Ensure that eyewash station and safety shower is proximal to the work-station location.

Engineering controls
Use in a chemical fume hood to keep airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Do not use in unventilated spaces.

Section X. Other Information

Special Precautions or comments
Flammable liquid! Toxic! Carcinogen! Mutagen! Embryotoxic and/or foetotoxic! Irritant! Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use in a chemical fume hood. Keep away from heat, sparks and flame. Take precautionary measures against static discharges. Bond and ground transfer containers and equipment to avoid static accumulation. Use non-sparking tools. Contact with other material may cause fire and/or explosion. May explode by detonation, heat or shock. When contaminated, it is very sensitive. Handle and open container with care. Container should be opened only by a technically qualified person.
RTECS NO: KI5600000 (Nitroethane).
RTECS NO: TZ5250000 (2-Nitropropane).

NFPA

Prepared by MSDS Department/Département de F.S..

Validated 25-Feb-2010

Telephone# (514) 489-5711