Material Safety Data Sheet

N Propyl Bromide NPB (RXSOL-18-1574-250)

1. Product and Company Identifaction

Product Name	: N Propyl Bromide (NPB)
Part Number	: RXSOL-18-1574-250

Company Details:
RX MARINE INTERNATIONAL
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2. Composition / informationon ingredients

Name of Substance	Cas Number	Wt.%
N-Propyl bromide	106-94-5	100 %

3. Hazards Identification

Signal Word	Danger
Hazard Statements	H225 Highly flammable liquid and vapour. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H360 May damage fertility or the unborn child .sively proven that no other routes of exposure cause the hazard>. H373 May cause damage to organs .ted exposure .
Precautionary statements - prevention	P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P260 Do not breathe dust/fume/gas/mist/vapours/spray. P264 Wash hands thoroughly after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary statements - response	Inhalation : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Skin : If skin irritation occurs: Get medical advice/attention IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse. Eyes : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Fire: In case of fire: Use CO2, dry chemical, or foam for extinction. Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed Disposal : Dispose of contents/container to an approved waste disposal plant

4. First Aid Measures

Skin Contact	Flush skin with water after contact. Wash contaminated clothing before reuse.
Eye Contact	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Inhalation:	If inhaled, If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.
Ingestion:	If swallowed, do not induce vomiting. Allow victim to rinse his mouth and then to drink 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Call a physician.

Most important symptoms/effects	Breathing difficulties. . Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

5. Fire-fighting Measures

Flammability	Flammable.
Flash Point	CLOSED CUP: 22°C
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water Spray, Foam, Dry Chemical, CO2. 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.
Protective Equipment	Use personal protective equipment.
Advice for firefighters	Wear self-contained breathing apparatus. Wear full protective equipment.

6. Accidental Release Measures

Small Spillage	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.
Personal Protection	Remove persons to safety. Wear breathing apparatus if exposed to vapours/dust/spray/gases.
Enviromental Precaution	Keep away from drains, surface and ground water. Retain contaminated washing water and dispose it.
Methods and materials for containment and cleaning	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.

7. Handling and Storage

Handling	Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Use explosion-proof equipment. Use only non-sparking tools. Keep away from open flames, hot surfaces and sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.
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
Advice on general occupational hygiene	Wash hands after use. Do not to eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas.

8. Exposure controls and personal protection

Enginering Control	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	Eye/Face Protection : Wear coverall chemical splash goggles or safety glasses. Respirators : Where there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection. Protective Clothing Where there is potential for skin contact have available and wear as appropriate Impervious gloves, apron, pants, hood and jacket.
Exposure Limits:	N Propyl Bromide TLV (ACGIH).....0.1 PPM AEL* (Innospec Fuel Specialties) .....None established
Other Protection Measure	Handle in accordance with good industrial hygiene and safety practice.



Gloves



Suit

9. Physical and chemical properties

Form	Liquid
Colour	Clear
Odour	Aromatic
Boiling point and boiling range	71°C / 159.8 °F @ 760 mmHg
Flash Point	22°C (Close Cup)
Melting Point	-110 °C
Specific Gravity (20 °C	1.353 (Water = 1)
pH	Not Applicable
Evaporation Rate	No information available
Solubility	No information available
Flammability (solid,gas)	Not Applicable
Flammability or explosive limits	Not Available
Vapor Pressure	146 mmHg @ 20 °C
Vapour density	4.34 (Air = 1.0)
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	490 °C / 914 °F
Viscosity	0.52 mPa.s at 20 °C
Molecular Formula	C3 H7 Br
Molecular Weight	122.99

10. Stability and reactivity

Recativity	None known, based on information available
Stability	Stable at normal temperatures and storage conditions.
Conditions to Avoid	Keep away from open flames, hot surfaces and sources of ignition. Incompatible products.
Incompatible materials	Strong oxidizing agents, Strong bases, Metals
Hazardous combustion products	Carbon monoxide (CO), Carbon dioxide (CO2), Hydrogen halides
Polymerization	Will not occur.

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 toxicity of the vapor
Chronic Effects on Humans:	May cause damage to the following organs: blood, liver, central nervous system (CNS).
Other Toxic Effects on Humans:	Hazardous in case of skin contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (permeator).
Special Remarks on Toxicity to Animals:	Lowest Published Lethal Dose/Conc: LDL [Rat] - Route: Oral; Dose: 4000 mg/kg
Special Remarks on Chronic Effects on Humans:	May cause adverse reproductive effects based on animal test data Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:	Skin: Causes eye irritation. Eyes: Causes eye irritation. Inhalation: It may cause respiratory tract and mucous membrane irritation and may affect respiration. Vapors may cause dizziness and suffocation. Inhalation of high concentrations may affect behavior/central nervous system (CNS depression) characterized by nausea, headache, dizziness, somnolence, unconsciousness and coma. It may also cause liver and kidney damage, lung injury, weight loss/ anorexia, bone marrow changes, and blood abnormalties

12. Ecological information

Ecotoxicity	Not Available
Bioaccumulation/ Accumulation	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.

13. Disposal considerations

Remarks	Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.
Waste Disposal	Waste should be disposed of in according to local rule and regulation.

14. Transport information

DOT

UN Number	2344
Proper shipping name	Bromopropanes
Hazard Class	3
DOT Labs	Flalmable Liquid
Packing group	II

TDG

UN Number	2344
Proper shipping name	Bromopropanes
Hazard Class	3
TDG Labs	Flalmable Liquid
Packing group	II

IATA

UN Number	2344
Proper shipping name	Bromopropanes
Hazard Class	3
IATA Labs	Flalmable Liquid
Packing group	II

IMDG

UN Number	2344
Proper shipping name	Bromopropanes
Hazard Class	3
IMDG Labs	Flalmable Liquid
Packing group	II

15. Regulatory information

Fedral and State Regulation	Pennsylvania RTK: 1-Bromopropane Florida: 1-Bromopropane Massachusetts RTK: 1-Bromopropane TSCA 8(b) inventory: 1- Bromopropane
Other Regulation	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.
WHMIS (Canada)	CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
DSCL (EEC)	R10- Flammable. R20- Harmful by inhalation. S9- Keep container in a well-ventilated place. S24- Avoid contact with skin.

HMIS

Health Hazard	: 2
Fire Hazard	: 3
Reactivity	: 0

Personal Protection	: H
Fire :	
Health Hazard	: 2
Fire Hazard	: 3
Reactivity	: 0
Specific Hazard	:

16. Other information

Other Information

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