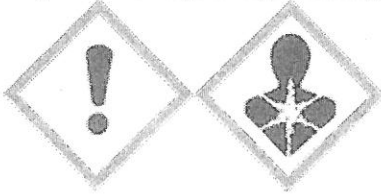


Hazard Statements

Harmful in contact with skin
 Causes skin irritation
 Causes serious eye irritation
 May damage fertility or the unborn child
 May cause respiratory irritation. May cause drowsiness or dizziness
 May cause damage to organs through prolonged or repeated exposure

**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Wear eye/face protection
 Do not breathe dust/fume/gas/mist/vapors/spray
 Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention
 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
 IF ON SKIN: Wash with plenty of soap and water
 If skin irritation occurs: Get medical advice/attention
 Take off contaminated clothing and wash it before reuse
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
 Immediately call a POISON CENTER or doctor/physician

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Harmful to aquatic life with long lasting effects
 Harmful to aquatic life

3. COMPOSITION/INFORMATION ON INGREDIENTS
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Synonyms

(NCF & NCFM) 2, 5 and 18.

Chemical Name	CAS No	Weight-%
n-Propyl bromide	106-94-5	98-99

4. FIRST-AID MEASURES

First Aid Measures

General Advice	If exposed or concerned: Get medical advice/attention.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If eye irritation persists: Get medical advice/attention.
Skin Contact	Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. If breathing is difficult, give oxygen. Immediately call a POISON CENTER or doctor/physician.
Ingestion	IF SWALLOWED: call a poison control center or physician immediately. Do not induce vomiting. If conscious give large amounts of water. Never give anything by mouth to an unconscious person.

Most important symptoms and effects

Symptoms	Causes skin irritation. May cause respiratory irritation. If inhaled, ingested or absorbed; this material may cause CNS effects: including nausea, dizziness and drowsiness. Causes serious eye irritation. May cause conjunctivitis.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool fire-exposed containers.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Product is not flammable.

Hazardous Combustion Products Carbon monoxide. Carbon dioxide (CO₂). Hydrogen bromide. Bromine. Toxic fumes of chlorine and chlorides may be emitted. Fluorides.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions	Use personal protective equipment as required.
For Emergency Responders	As with all chemical spills, evacuate the area promptly and keep upwind of the spilled material.

Environmental Precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. See Section 13, Disposal Considerations, for additional information. For spills in excess of allowable limits (RQ) notify the National Response Center (800) 424-8802; refer to SARA Title III, Section 313 40 CFR 372, and CERCLA 40 CFR 302 for detailed instructions concerning reporting requirements.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up For spills less than 1 pint: Allow spilled liquid to evaporate. Maintain adequate ventilation. For large spills: Immediately evacuate the area and provide maximum ventilation. Only personnel equipped with proper respiratory and eye/skin protection should be permitted in the area. Dike to contain spill.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin, eyes or clothing. Wash face, hands, and any exposed skin thoroughly after handling. Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up. Store at room temperature. Keep separate from food items. Keep out of the reach of children.

Incompatible Materials Finely divided reactive metals. May attack some plastics. Strong oxidizers. Strong acids.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
n-Propyl bromide 106-94-5	TWA: 10 ppm	-	-

Appropriate engineering controls

Engineering Controls Apply technical measures to comply with the occupational exposure limits. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Chemical safety goggles/faceshield. Contact lenses should not be worn.

Skin and Body Protection Viton or other impervious gloves are required. Do not use natural rubber gloves. Use protective clothing chemically resistant to this material.

Respiratory Protection Ensure adequate ventilation, especially in confined areas. Local exhaust acceptable. Mechanical recommended. In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment. For emergencies, a NIOSH/MSHA approved positive pressure breathing apparatus should be readily available.

General Hygiene Considerations Wash contaminated clothing before reuse. Wash face, hands and any exposed skin thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Mild
Appearance	Clear liquid	Odor Threshold	Not determined
Color	Clear		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Does not apply	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	32 °C / 89.6 °F	
Flash Point	None	
Evaporation Rate	> 1	(Ether = 1)
Flammability (Solid, Gas)	Liquid-not applicable	
Upper Flammability Limits	Not applicable	
Lower Flammability Limit	Not applicable	
Vapor Pressure	1143mmHg	
Vapor Density	4.3	(Air=1)
Specific Gravity	1.33	@ 70° F
Water Solubility	1.32	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Autoignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Keep out of reach of children.

Incompatible Materials

Finely divided reactive metals. May attack some plastics. Strong oxidizers. Strong acids.

Hazardous Decomposition Products

Product will decompose at temperatures above 400°C. Decomposition products include hydrochloric acid, hydrofluoric acid, and carbonyl halides such as phosgene.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Product Information**

Eye Contact	Causes serious eye irritation.
Skin Contact	Causes skin irritation. Harmful in contact with skin.
Inhalation	May be harmful if inhaled.
Ingestion	May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
n-Propyl bromide 106-94-5	= 3600 mg/kg (Rat)	-	= 253 g/m ³ (Rat) 30 min
Water 7732-18-5	> 90 mL/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms	Please see section 4 of this SDS for symptoms.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity	May damage fertility or the unborn child.
STOT - single exposure	May cause respiratory irritation. May cause drowsiness or dizziness.
STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
n-Propyl bromide 106-94-5		67.3: 96 h Pimephales promelas mg/L LC50 flow-through		

Persistence/Degradability

Not determined

Bioaccumulation

Not determined

Mobility

Chemical Name	Partition Coefficient
n-Propyl bromide 106-94-5	2.1

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

- Disposal of Wastes** Disposal should be in accordance with applicable regional, national and local laws and regulations.

- Contaminated Packaging** Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

- DOT** Not regulated

- IATA** Not regulated
 Proper Shipping Name: n/a
 Class or Division: n/a
 UN or ID Number: n/a

- IMDG**
Marine Pollutant Not regulated

15. REGULATORY INFORMATION

International Inventories

Not determined

Legend:

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*
- DSL/INDSL - Canadian Domestic Substances List/Non-Domestic Substances List*
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*
- ENCS - Japan Existing and New Chemical Substances*
- IECSC - China Inventory of Existing Chemical Substances*
- KECL - Korean Existing and Evaluated Chemical Substances*
- PICCS - Philippines Inventory of Chemicals and Chemical Substances*

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	California Proposition 65
n-Propyl bromide - 106-94-5	Developmental Female Reproductive Male Reproductive

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
n-Propyl bromide 106-94-5	X	X	X

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards	Flammability	Instability	Special Hazards Not determined
	2	0	0	Personal Protection Not determined
<u>HMS</u>	Health Hazards	Flammability	Physical Hazards	
	1	0	0	

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Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet