



INDENTA™
Chemicals (India) Pvt. Ltd.
(ISO 9001:2008 Certified Company)



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Material Safety Data Sheet Bromoethane

SECTION 1.1 – PRODUCT IDENTIFICATION

Product name : **Bromoethane**
Molecular formula : **C₂H₅Br**
Molecular weight : **108.939**
CAS no. : **74-96-4**

SECTION: 1.2 – COMPANY IDENTIFICATION

Company Name: Indenta Chemicals (India) Pvt. Ltd.
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SECTION 2: HAZARD IDENTIFICATION

Emergency Overview

Appearance: colorless liquid. **Flash Point:** 26 deg F.

Danger! Extremely flammable liquid. Causes respiratory tract irritation. Harmful if swallowed, inhaled, or absorbed through the skin. Causes eye and skin irritation. Inhalation of a mist of this material may cause irritation of the lungs. May cause cardiac disturbances. May cause liver and kidney damage

Target Organs: Kidneys, Heart, Liver, Lungs.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. Exposure may cause irritation characterized by redness, dryness, and inflammation.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause respiratory failure. May cause systemic toxic effects on the heart, liver, and kidneys.

Inhalation: Causes respiratory tract irritation. Irritation may lead to chemical pneumonitis and pulmonary edema. May cause effects similar to those described for ingestion. Causes narcotic effects including headache, dizziness, weakness, unconsciousness, and possible death

Chronic: Prolonged or repeated skin contact may cause irritation. Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. May cause cancer in humans.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No	Weight %
Bromoethane	74-96-4	>98

SECTION 4: FIRST AID MEASURES

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin: Get medical aid. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

SECTION 5: FIRE FIGHTING MEASURES

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Extremely flammable liquid and vapor. Vapor may cause flash fire.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Flash Point: 26e deg F (-3.33 deg C)

Autoignition Temperature: 511 deg C (951.80 deg F)

Explosion Limits: Lower: 6.7 **Upper:** 11.3

NFPA Rating: (estimated) Health: 2; Flammability: 3; Instability: 0

SECTION 6: ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Scoop up with a non sparking tool, then place into a suitable container for disposal.

SECTION 7: HANDLING AND STORAGE

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Keep away from heat, sparks and flame. Do not get on skin or in eyes. Do not ingest or inhale.

Storage: Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry place.

SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering Controls: Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Guidelines:

Component	ACGIH	NIOSH	OSHA – Final PELs
Bromoethane	5 ppm TWA; Skin - potential significant contribution to overall exposure by the cutaneous route	2000 ppm IDLH	200 ppm TWA; 890 mg/m ³ TWA

OSHA Vacated PELs: Bromoethane: 200 ppm TWA; 890 mg/m³ TWA

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Colorless
Odor	Perceptible odor @ 200 ppm
pH	Not available
Vapor Pressure	400 mm Hg @ 20 deg C
Vapor Density	3.76 (air=1)
Evaporation Rate	Not available
Viscosity	Not Available
Boiling Point	38.4 deg C
Freezing/Melting Point	-119 deg C
Decomposition Temperature	Not Available
Solubility	Slightly Soluble in water
Specific Gravity/Density	1.45
Molecular Formula	C ₂ H ₅ Br
Molecular Weight	108.939

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Ignition sources, excess heat.

Incompatibilities with Other Materials: Strong oxidizing agents

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, hydrogen bromide

Hazardous Polymerization: Has not been reported.

Section 11: TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 74-96-4: KH6475000

LD50/LC50:

CAS# 74-96-4:

Inhalation, mouse: LC50 = 16230 ppm/1H;
 Inhalation, mouse: LC50 = 36000 mg/m³/2H;
 Inhalation, rat: LC50 = 26980 ppm/1H;
 Inhalation, rat: LC50 = 534000 mg/m³/4H;
 Oral, rat: LD50 = 1350 mg/kg;

Carcinogenicity:

CAS# 74-96-4:

ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans**IARC:** Not Listed**NTP:** Not Listed**California:** carcinogen, initial date 12/22/00**Epidemiology:** No Information Found.**Teratogenicity:** No information found.**Reproductive Effects:** No information found**Mutagenicity:** No information found.**Neurotoxicity:** No information found**Other Studies:****Section 12: ECOLOGICAL INFORMATION**

No information Available.

Section 13: DISPOSAL CONSIDERATION

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.**RCRA U-Series:** None listed.**SECTION 14: TRANSPORT INFORMATION**

	US DOT	Canada TDG
Shipping Name	Ethyl Bromide	Ethyl Bromide
Hazard Class	6.1	6.1
UN Number	UN 1891	UN 1891
Packing Group	II	II

15: OTHER REGULATORY INFORMATION**US FEDERAL****TSCA**

CAS# 74-96-4 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 74-96-4: immediate, delayed, fire

Section 313:

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 74-96-4 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act:

WARNING: This product contains Bromoethane, a chemical known to the state of California to cause cancer.

California No Significant Risk Level: None of the chemicals in this product are listed.

European /International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XN F

Risk Phrases:

R 11 Highly flammable.

R 20/22 Harmful by inhalation and if swallowed.

R 40 Limited evidence of a carcinogenic effect.

Safety Phrases:

S 36/37 Wear suitable protective clothing and gloves.

WGK (Water Danger/Protection)

CAS# 74-96-4: 2

Canada - DSL/NDSL

CAS# 74-96-4 is listed on Canada's DSL List.

Canada - WHMIS

This product has a WHMIS classification of B2, D1A, D2B. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 74-96-4 is listed on the Canadian Ingredient Disclosure List

SECTION 16: ADDITIONAL INFORMATION

This information is provided for documentation purposes only.

The information contained in this Certificate of Analysis and Material Safety Data Sheet is obtained from current and reliable sources. The information contained herein is true and to the best of Indenta Chemicals (India) Pvt. Ltd. knowledge. Nothing herein should be interpreted as a recommendation to infringe existing patents or violate any Laws or Regulation. Final determination of the suitability of the material is the sole responsibility of the user. Customers should purchase products from Indenta Chemicals (India) Pvt. Ltd. with the clear understanding that all products must be used at the customers own discretion and only after referencing Material Safety Data Sheets (MSDS) and all other relevant technical information specific to the product. Indenta Chemicals (India) Pvt. Ltd. shall not be held responsible for any damages to property or for any adverse physical effects (including injury or bodily harm) caused by insufficient knowledge or the improper use of a product. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the products, including intellectual property rights of third parties. As with any manufacturing process, Indenta Chemicals (India) Pvt. Ltd. strongly recommends small lab scale testing for evaluation purposes prior to full commercial manufacturing. The information on the Indenta Chemicals (India) Pvt. Ltd. website is obtained from current and reliable sources but makes no representation as to its comprehensiveness or accuracy. Nothing contained herein should be considered as a recommendation by Indenta Chemicals (India) Pvt. Ltd. as to the fitness for any use. As the ordinary or otherwise use(s) of this product is outside the control of Indenta Chemicals (India) Pvt. Ltd., no representation or warranty, expressed or implied is made as to the effect(s) of such use(s) (including damage or injury), or the results obtained. The liability of Indenta Chemicals (India) Pvt. Ltd. is limited to the value of the goods and does not include any consequential loss. Indenta Chemicals (India) Pvt. Ltd. shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon.