

MATERIAL SAFETY DATA SHEET

PRODUCT NAME: 1-BROMOHEXANE (HEXYL BROMIDE)

CAS Number: 111-25-1

1. IDENTIFICATION:

Product Code : 91966

Company Name : ADVENT CHEMBIO PRIVATE LIMITED

Address : W-279, MIDC, TTC INDUSTRIAL AREA, THANE-BELAPUR ROAD, RABALE,
NAVI MUMBAI - 400 701.

E-mail : sales@adventchembio.com

WEBSITE : www.adventchembio.com

Company Phone Number : 022-27690837

2. HAZARDS IDENTIFICATION:**Hazard classification**

Flammable liquids : Category 3

Skin irritation : Category 2

Eye irritation : Category 2

**Specific target organ
toxicity - single exposure** : Category 3

Labels elements :

Hazard symbol :



Signal word : Danger

Hazard statement : Highly flammable liquid and vapor.
: Causes skin irritation.
: Causes serious eye irritation.
: May cause respiratory irritation.

Precautionary statement

Prevention : Obtain special instructions before use.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Do not handle until all safety precautions have been read and understood.
Wear protective gloves/ protective clothing/ eye protection/ face protection.
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
Keep container tightly closed. Ground/ bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting/ equipment.
Use only non-sparking tools. Take precautionary measures against static discharge.

Response : IF exposed or concerned: Get medical advice/ attention.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

- Storage** : Store at ambient temperature in a dry and well ventilated place. Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Disposal** : Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
- Other hazards which do not result in GHS classification** : Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. COMPOSITION/ INFORMATION ON INGREDIENTS:

Ingredient	CAS Number	Percent	Hazardous
1-Bromohexane (Hexyl Bromide)	111-25-1	NLT 98.0%	Yes

4. FIRST AID MEASURES:

- General information** : Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
- Ingestion** : Call a physician or poison control center immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
- Inhalation** : Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen.
- Skin contact** : Get medical attention if symptoms persist.
- Skin contact** : Immediately Wash off with soap and plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
- Eye contact** : Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
- Most important symptoms/effects, acute and delayed** : The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11
- Indication of immediate medical attention and special treatment needed** : No data available.

5. FIRE FIGHTING MEASURES:

- General information** : Flammable liquid and vapor.
- Suitable (and unsuitable) extinguishing media**
- Suitable extinguishing media** : Water spray, foam, dry powder or carbon dioxide.
- Unsuitable extinguishing media** : Avoid water in straight hose stream; will scatter and spread fire.

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Specific hazards arising from the chemical : Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. Vapor from the solvent may accumulate in container headspace resulting in flammability hazard. Heat may cause the containers to explode. Carbon oxides, Hydrogen bromide gas.

Special protective equipment and precautions for firefighters

Special firefighting procedures : Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

Special protective equipment for fire-fighters : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions, protective equipment and emergency procedures : ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid breathing mists or vapors. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up : Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

Notification Procedures : Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

Environmental precautions : Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE:

Precautions for safe handling : Do not handle until all safety precautions have been read and understood. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/ face protection. Avoid contact with eyes, skin, and clothing. Do not breathe mist or vapor. Use only with adequate ventilation. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities : Keep away from food, drink and animal feeding stuffs. Store at ambient temperature in a dry and well ventilated place. Keep the container tightly closed, away from heat. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

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8. EXPOSURE CONTROLS PERSONAL PROTECTION:**Control parameters****Occupational exposure limits** : No data available.**Appropriate engineering controls** : Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.**Individual protection measures, such as personal protective equipment****General information** : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.**Eye/face protection** : Wear safety glasses with side shields (or goggles).**Hand protection** : Chemical resistant gloves.**Other** : Wear suitable protective clothing.**Respiratory protection** : In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge.**Hygiene measures** : Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower. Avoid contact with eyes, skin, and clothing.**9. PHYSICAL AND CHEMICAL PROPERTIES:****Appearance** : Clear, colorless to pale yellow liquid.**Odor** : No data available.**Solubility** : No data available.**Formula** : C₆H₁₃Br**Molecular Weight** : 165.07 g/mol**Specific Gravity** : 1.176 - 1.177 g/cm³ at 25°C**pH** : No data available.**% Volatiles by volume @ 21C (70F)** : No data available.**Boiling Point** : 154 - 158 °C**Melting Point** : -85°C**Flash Point** : 57 °C

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Vapor Density (Air=1) : 5.7
Vapor Pressure (mm Hg) : No data available.
Evaporation Rate (BuAc=1) : No data available.

10. STABILITY AND REACTIVITY:

Reactivity : No data available.
Chemical stability : Stable under recommended storage conditions.
Possibility of hazardous reactions : No data available.
Conditions to avoid : Heat, sparks, flames. Sunlight.
Incompatible materials : Strong oxidizing agents, Strong Bases. Acetaldehyde. Acids. Chlorine. Ethylene Oxide
Hydrogen peroxide (H₂O₂) Sulfuric acid. Isocyanates. Aluminum.
Hazardous decomposition products : Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen bromide gas.

11. TOXICOLOGICAL INFORMATION:

Information on likely routes of exposure

Ingestion : No data available.
Inhalation : No data available
Skin contact : No data available
Eye contact : No data available

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product : No data available
Dermal Product : No data available
Inhalation Product : No data available.
Repeated dose toxicity Product : No data available.
Skin corrosion/irritation Product : No data available
Serious eye damage/eye irritation Product : No data available.
Respiratory or skin sensitization Product : No data available.

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Carcinogenicity Product	:	This substance has no evidence of carcinogenic properties
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans	:	No carcinogenic components identified.
US. National Toxicology Program (NTP) Report on Carcinogens	:	No carcinogenic components identified.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050 Germ cell mutagenicity	:	No carcinogenic components identified.
In vitro Product	:	No data available.
Reproductive toxicity Product	:	No data available
Specific target organ toxicity - single exposure Product	:	Not known.
Specific target organ toxicity - repeated exposure Product	:	None known.
Aspiration hazard Product	:	No data available.
Other effects	:	None known.

12. ECOLOGICAL INFORMATION:**Ecotoxicity****Acute hazards to the aquatic environment****Fish Product** : No data available.**Aquatic invertebrates Product** : No data available.**Chronic hazards to the aquatic environment****Fish Product** : No data available.**Aquatic invertebrates Product** : No data available.**Toxicity to Aquatic Plants Product:** : No data available.**Persistence and degradability****Biodegradation Product** : No data available.**BOD/COD ratio Product** : No data available.

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Bioaccumulative potential**Bioconcentration factor (BCF) Product** : No data available on bioaccumulation.**Partition coefficient n-octanol / water (log Kow) Product** : No data available.**Mobility in soil** : No data available.**Other adverse effects** : No data available.**13. DISPOSAL CONSIDERATION:****Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws. Disposal recommendations are based on uncontaminated material.**Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied.**14. TRANSPORT INFORMATION:**

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	UN 1993	1-Bromohexane (Hexyl Bromide)	3	III	No
IMDG	UN 1993	1-Bromohexane (Hexyl Bromide)	3	III	No
IATA	UN 1993	1-Bromohexane (Hexyl Bromide)	3	III	No

15. REGULATORY INFORMATION:

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

Safety, health and environmental regulations/legislation specific for the substance or mixture

No Data Available.

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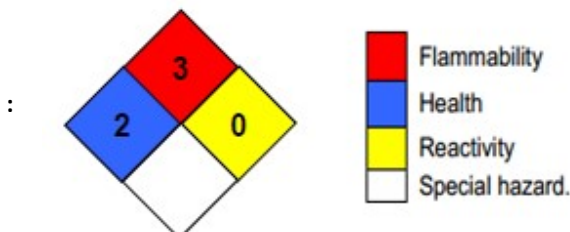
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16. OTHER INFORMATION:

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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