

**BROMOBENZENE**  
**SAFETY DATA SHEET**

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING**

**1.1. GHS product identifier**

Product Name - Bromobenzene

CAS-No.: 108-86-1

**1.2. Other means of identification**

Synonyms – None

**1.3. Recommended use of the chemical and restrictions on use**

Recommended Use - Laboratory chemicals, Intermediate & Manufacture of substances.

**1.4. Supplier's detail**

Supplier Address

Intech Organics Limited

Plot No - 27, Sector – 34

Gurgaon | Haryana - 122004

Email: [info@intech.in](mailto:info@intech.in)

Web: [www.intech.in](http://www.intech.in)

**1.5. Emergency telephone number**

Emergency Telephone Number - +91-124-4407000

**2. HAZARDS IDENTIFICATION**

**2.1 Flammable liquid and vapor:**

May be absorbed through intact skin. Causes skin irritation. May cause eye and respiratory tract irritation. May cause liver damage. Marine pollutant.

Target Organs: Liver, respiratory system, skin.

**2.2 Potential Health Effects Eye:**

May cause eye irritation.

**2.3 Skin:**

It causes skin irritation. May be absorbed through the skin in harmful amounts. If absorbed, may cause liver injury.

**2.4 Ingestion:**

Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.

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**2.5 Inhalation:**

Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause respiratory tract irritation. May cause narcotic effects in high concentration. May cause liver abnormalities. Vapors may cause dizziness or suffocation.

**2.6 Chronic:**

Chronic exposure may cause liver damage.

**NFPA Ratings (Scale 0-4)**

Health = 1, Fire = 2, Reactivity = 0.

0= No Hazard,

1=Slightly Hazard,

2=Moderate Hazard,

3=Serious Hazard,

4= Severe Hazard

Signal Word Warning

**Hazard Statements**

**H226:** Flammable liquid and vapor.

**H315:** Causes skin irritation

**H411:** Toxic to aquatic life with long lasting effects

**Precautionary Statements**

**P210** Keep away from heat, hot surfaces, sparks, open flames and other ignition sources

**P233** No smoking. Keep the container tightly closed.

**P240** Ground and bond container and receiving equipment.

**P241** Use explosion-proof electrical/ ventilating/ lighting/ equipment

**P273** Avoid release to the environment

**P303 + P361 + P353** IF ON SKIN (or hair): Take off immediately all contaminated clothing.  
Rinse skin with water.

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#### 3. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENTS	CAS	WEIGHT %	Formula	. EEC NO	. EU CLASSIFICATION
Bromobenzene	108-86-1	99.99	C <sub>6</sub> H <sub>5</sub> Br	203-623-8	Index-No. 602-060-00-9

#### 4. FIRST AID MEASURES

##### 4.1. Description of necessary 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.

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

**Ingestion:** Do not induce vomiting. If the victim is conscious and alert, give 2-4 cupful of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

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

**Notes to Physician:** Treat symptomatically and supportively.

#### 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. This chemical poses an explosion hazard. Flammable liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

**Extinguishing Media:** In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use water spray to cool fire-exposed containers.

**Flash Point:** 51 deg C ( 123.80 deg F)

**Autoignition Temperature:** 566 deg C ( 1,050.80 deg F)

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**Explosion Limits,**

**Lower:** .5%

**Upper:** 2.5%

**NFPA Rating:** (estimated) Health: 2; Flammability: 2; Instability:  
0 The material in an appropriate waste disposal.

## 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. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

## 7. HANDLING AND STORAGE

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Ground and bond containers when transferring material. Use spark- proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Avoid breathing vapor or mist.

**Storage:** Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

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**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**EXPOSURE LIMITS:**

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Bromobenzene	none listed	none listed	none listed

VENTILATION REQUIREMENTS

PERSONAL PROTECTIVE EQUIPMENT:

**RESPIRATORY PROTECTION:** Wear

**HAND PROTECTION:** Wear Acid duty, neoprene gloves while handling

**EYE PROTECTION** : Wear appropriate protective eyeglasses or chemical safety goggles

**SKIN** : Wear appropriate protective gloves to prevent skin exposure.

**BODY PROTECTION:** Wear appropriate protective clothing to prevent skin exposure

**ENGINEERING CONTROLS:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentration low. Ventilation fans and other electrical services must be non-sparking and have an explosion-proof design.

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#### 9. PHYSICAL AND CHEMICAL PROPERTIES

##### 9.1. Information on basic physical and chemical properties

**Physical State:** Liquid  
**Appearance:** colorless  
**Odor:** aromatic odor  
**pH:** Not available.  
**Vapor Pressure:** 3.3 mm Hg @ 20 deg C  
**Vapor Density:** 5.41 (air=1)  
**Evaporation Rate:** Not available.  
**Viscosity:** 1.124 cP 20 deg C  
**Boiling Point:** 155 deg C  
**Freezing/Melting Point:** -31 deg C  
**Decomposition Temperature:** Not available.  
**Solubility:** Insoluble.  
**Specific Gravity/Density:** 1.49  
**Molecular Formula:** C<sub>6</sub>H<sub>5</sub>Br  
**Molecular Weight:** 157.01

#### 10. STABILITY AND REACTIVITY

- **STABILITY** : Stable.
- **MATERIALS TO AVOID:** Strong oxidizing agents.
- **CONDITIONS TO AVOID:** Ignition sources, excess heat, confined spaces
- **HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, carbon dioxide, hydrogen bromide.
- **HAZARDOUS POLYMERIZATION:** Not Reported

#### 11. TOXICOLOGICAL INFORMATION

##### 11.1 Acute toxicity: LD<sub>50</sub> Oral - Rat - male - 2.383 mg/kg

**Symptoms:** Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Aspiration may cause pulmonary edema and pneumonitis.

- **LC<sub>50</sub> Inhalation - Rat - 20,4 mg/l - vapor**

**Symptoms:** Inhalation may lead to the formation of oedemas in the respiratory tract.

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- **Dermal:** No data available
- **Skin corrosion/irritation Skin – :** Irritating to skin. - 4 h
- **Serious eye damage/eye irritation Eyes - Rabbit Result:** No eye irritation - 24 h
- **Respiratory or skin sensitization** No data available
- **Carcinogenicity** No data available Not listed by ACGIH, IARC, NTP,
- **Reproductive toxicity** No data available
- **Specific target organ toxicity - single exposure** No data available
- **Mutagenicity:** DNA repair (Escherichia coli) 250 mg/L

## 12. ECOLOGICAL INFORMATION

### INFORMATION ON ECOLOGICAL EFFECTS

#### AQUATIC TOXICITY :

**TOXICITY TO FISH: LC50** - Pimephales promelas (fathead minnow) - 5,6 mg/l - 96 h

**TOXICITY TO DAPHNIA AND OTHER AQUATIC INVERTEBRATES: EC50** –  
Daphnia magna (Water flea) - 15,7 mg/l - 48 h

**TOXICITY TO ALGAE: STATIC TEST ERC50** – Pseudokirchneriella subcapitata - 12,3 mg/l - 72 h

**BIODEGRADABILITY AEROBIC** - Exposure time 28 d Result: 0 % - Not readily biodegradable.

#### AVIAN TOXICITY:

**Toxicity to Birds: Specific avian toxicity data for bromobenzene is limited.**

- However, given its moderate to high toxicity in mammals (e.g., liver and kidney toxicity, CNS effects), and persistence in the environment, it may pose risks to birds primarily through:  
Inhalation (if in vapor form near industrial sites) & Ingestion (e.g., contaminated water or food)
- Bioaccumulation (limited data, but aromatic halogenated compounds often bioaccumulate)

### PERSISTENCE AND DEGRADABILITY

Aerobic - Exposure time 28 d

Result: 0% - Not readily biodegradable

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### 13. DISPOSAL CONSIDERATIONS

Proper disposal of bromobenzene ( $C_6H_5Br$ ), a hazardous organic compound, must follow local, regional, national, and international regulations due to its flammability, toxicity, and potential environmental impact.

#### WASTE TREATMENT METHODS:

##### PRODUCT DISPOSAL:

Dispose of unused or waste bromobenzene as hazardous chemical waste.

Do not pour down the drain or dispose of in regular trash.

Collect in a properly labeled, sealed container designed for halogenated solvents.

Deliver to a certified hazardous waste disposal facility or follow institutional chemical waste protocols.

##### CONTAMINATED PACKAGING:

Empty containers may retain hazardous residues.

Do not reuse containers.

Rinse with an appropriate solvent and dispose of the rinse and container as hazardous waste.

##### RECOMMENDED DISPOSAL PRACTICES:

Incineration in a licensed chemical incinerator with afterburner and scrubber is typically preferred.

Avoid release to the environment. Prevent contamination of soil, water sources, and sewage systems.

### 14. TRANSPORT INFORMATION

	US DOT	IMDG	IMDG
<b>Shipping Name:</b>	BROMOBENZENE	BROMOBENZENE	BROMOBENZENE
<b>UN Number:</b>	UN2514	UN2514	UN2514
<b>Packing Group:</b>	III	III	III
<b>Hazard class</b>	3 (Flammable liquids)	3 (Flammable liquids)	3 (Flammable liquids)
<b>Storage hazard class</b>	3 (flammable liquids) Store below +30 °C	3 (flammable liquids). Store below +30 °C	3 (flammable liquids). Store below +30 °C



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### 15. REGULATORY INFORMATION

#### U.S. Regulations

- **OSHA:** Bromobenzene is listed as a hazardous chemical under the **Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200)**.
- **TSCA (Toxic Substances Control Act):** Bromobenzene is listed on the **TSCA Inventory**, meaning it is approved for commercial use in the U.S.
- **CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):**
  - **Reportable Quantity (RQ):** 100 lbs (45.4 kg)
  - Releases above this amount must be reported to the National Response Center.
- **SARA Title III (Superfund Amendments and Reauthorization Act):**
  - **Section 302:** Not listed as an extremely hazardous substance.
  - **Section 313:** Bromobenzene is **listed** – subject to reporting requirements.
- **RCRA (Resource Conservation and Recovery Act):** Bromobenzene may be classified as a **hazardous waste** if discarded, depending on concentration and mixture.

#### European Union Regulations

- **ECHA / REACH:**
  - Bromobenzene is registered under **REACH**.
  - It may be classified under **CLP Regulation (EC) No 1272/2008** as:
    - Flam. Liq. 3 – Flammable liquid
    - Acute Tox. 4 – Harmful if inhaled or ingested
    - STOT SE 3 – May cause respiratory irritation
- **SVHC (Substances of Very High Concern):** Not currently listed.
- :

#### Canada

- **DSL/NDSL:** Bromobenzene is listed on the **Domestic Substances List (DSL)**.
- **WHMIS Classification:** Class B2 (Flammable Liquids); Class D2B (Toxic Material)

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#### Other Information

- **IARC:** Not listed as a carcinogen.
- **NFPA Ratings:**
  - **Health:** 2
  - **Flammability:** 2
  - **Reactivity:** 0

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- **Inventory Listings:**
  - **Australia (AICS):** Listed
  - **China (IECSC):** Listed
  - **Japan (ENCS):** Listed
  - **Korea (KECI):** Listed
  - **Philippines (PICCS):** Listed

## 16. OTHER INFORMATION

**Material safety data sheet issued by:** INTECH ORGANICS LTD.

**Contact No.:** +91-124-4407000

**E-mail:** [info@intech.in](mailto:info@intech.in)

**Other Special Considerations:** Not available

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**END OF SAFETY DATA SHEET**