



## **CHEMSYNTH CORPORATION**

(Exporter of chemical Raw materials)

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### **Material safety data sheet - Bromobenzene**

#### **Section 1 - Chemical Product**

Company Identification MSDS Name: Bromobenzene Catalog Numbers: 10668-0000, 10668-0010, 10668-2500, B/4300/07, B/4300/08 Synonyms: Monobromobenzene; Phenyl bromide; Bromobenzol.

#### **Section 2 - Composition,**

Information on Ingredients CAS#: 108-86-1 Chemical Name: Bromobenzene %: 99 EINECS#: 203-623-8 Hazard Symbols: XI N Risk Phrases: 10 38 51/53

#### **Section 3 - Hazards Identification**

EMERGENCY OVERVIEW Flammable. Irritating to skin. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Potential Health Effects Eye: Causes eye irritation. Skin: Causes skin irritation. May be absorbed through the skin in harmful amounts. If absorbed, may cause liver injury. Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression. Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentration. May cause liver abnormalities. Vapors may cause dizziness or suffocation. May cause blood changes. Chronic: Chronic exposure may cause liver damage.

#### **Section 4 - First Aid Measures**

Eyes: 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. Wash clothing before reuse. 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. 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:

### **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. Use water spray to keep fire-exposed containers cool. 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: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Water may be ineffective. Do NOT use straight streams of water.

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

### **Section 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.

### **Section 8 - Exposure Controls,**

Personal Protection 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 concentrations low. Ventilation fans and other electrical service must be non-sparking and have an explosion-proof design. Exposure Limits CAS# 108-86-1: Russia: 3 mg/m<sup>3</sup> 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 Color: colorless Odor: aromatic odor pH: Not available Vapor Pressure: 3.3 mm Hg @ 20 deg C Viscosity: 1.124 cP 20 deg C Boiling Point: 155 deg C ( 311.00F) Freezing/Melting Point: -31 deg C ( -23.80F) Autoignition Temperature: 565 deg C ( 1,049.00 deg F) Flash Point: 51 deg C ( 123.80 deg F) Explosion Limits: Lower: .5% Explosion Limits: Upper: 2.5% Decomposition Temperature: Not available Solubility in water: Insoluble Specific Gravity/Density: 1.49 Molecular Formula: C6H5Br Molecular Weight: 157.01

### **Section 10 - Stability and Reactivity**

Chemical Stability: Stable. Conditions to Avoid: Ignition sources, excess heat, confined spaces. 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# 108-86-1: CY9000000 LD50/LC50: CAS# 108-86-1: Inhalation, mouse: LC50 = 21 gm/m<sup>3</sup>/2H; Inhalation, rat: LC50 = 20411 mg/m<sup>3</sup>; Oral, mouse: LD50 = 2700 mg/kg; Oral, rabbit: LD50 = 3300 mg/kg; Oral, rat: LD50 = 2383 mg/kg;. Carcinogenicity: Bromobenzene - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. Other: See actual entry in RTECS for complete information.

### **Section 12 - Ecological Information**

Ecotoxicity: Bacteria: Phytobacterium phosphoreum: EC50 = 9.46 mg/L; 30 minutes; Microtox test; 15 degrees C

### **Section 13 - Disposal Considerations**

Dispose of in a manner consistent with federal, state, and local regulations.

### **Section 14 - Transport Information**

IATA Shipping Name: BROMOBENZENE Hazard Class: 3 UN Number: 2514 Packing Group: III IMO Shipping Name: BROMOBENZENE Hazard Class: 3.3 UN Number: 2514 Packing Group: III RID/ADR Shipping Name: BROMOBENZENE Hazard Class: 3 UN Number: 2514 Packing Group: III

### **Section 15 - Regulatory Information**

European/International Regulations European Labeling in Accordance with EC Directives Hazard Symbols: XI N Risk Phrases: R 10 Flammable. R 38 Irritating to skin. R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Safety Phrases: S 61 Avoid release to the environment. Refer to special instructions/safety data sheets. WGK (Water Danger/Protection) CAS# 108-86-1: 2 Canada CAS# 108-86-1 is listed on Canada's DSL List US Federal TSCA CAS# 108-86-1 is listed on the TSCA Inventory.

## **Section 16 - Other Information**

MSDS Creation Date: 5/20/1999 Revision #3 Date 5/06/2005 The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.