

# 2-BROMOPENTANE

BPE

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> 2-Pentylbromide		Liquid	Colorless
		Sinks in water.	
<p style="color: red;">Avoid contact with liquid and vapor. Keep people away. Wear self-contained breathing apparatus and full protective clothing. Shut off sources of ignition. Call fire department. Notify local health and pollution control agencies. Protect water intakes.</p>			
<b>Fire</b>	<p><b>FLAMMABLE.</b> Flashback may occur along vapor trail. Containers may explode in fire. Emits toxic fumes in fire. Forms explosive mixtures in air in fire. Water may be ineffective against fire. Wear self-contained breathing apparatus and full protective clothing. Extinguish with CO<sub>2</sub>, dry chemicals, or foam.</p>		
<b>Exposure</b>	<p>CALL FOR MEDICAL AID.</p> <p><b>VAPOR</b> May be harmful if inhaled or absorbed through the skin. Irritating to the eyes, nose and throat. Move victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.</p> <p><b>LIQUID</b> May be harmful if swallowed or absorbed through the skin. Irritating to the eyes and skin. IF IN EYES: flush with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF SWALLOWED: do nothing except keep victim warm.</p>		
<b>Water Pollution</b>	<p>Effects of low concentrations on aquatic life are not known. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.</p>		

### 1. CORRECTIVE RESPONSE ACTIONS

Stop discharge  
Collection Systems: Pump; Dredge  
Do not burn

### 2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** Not listed.  
2.2 **Formula:** CH<sub>2</sub>CHBr(C<sub>2</sub>H<sub>5</sub>)CH<sub>3</sub>  
2.3 **IMO/UN Designation:** 3.2/2343  
2.4 **DOT ID No.:** 2343  
2.5 **CAS Registry No.:** 107-81-3  
2.6 **NAERG Guide No.:** 130  
2.7 **Standard Industrial Trade Classification:** 51139

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Approved respirator, safety goggles, chemical-resistant gloves, other protective clothing.
- 3.2 **Symptoms Following Exposure:** Irritating to eyes, nose, throat, and upper respiratory tract. Causes skin irritation.
- 3.3 **Treatment of Exposure:** Call a physician. **EYES:** Flush with plenty of water for at least 15 minutes. **SKIN:** Remove contaminated clothing and shoes, flush affected areas with water for at least 15 minutes. **INHALATION:** Move victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. **INGESTION:** Do nothing except keep victim warm.
- 3.4 **TLV-TWA:** Not listed.  
3.5 **TLV-STEL:** Not listed.  
3.6 **TLV-Ceiling:** Not listed.  
3.7 **Toxicity by Ingestion:** Grade 3; LD<sub>50</sub> = 150 mg/kg (mouse, ipr)  
3.8 **Toxicity by Inhalation:** Currently not available.  
3.9 **Chronic Toxicity:** Liver damage  
3.10 **Vapor (Gas) Irritant Characteristics:** Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.  
3.11 **Liquid or Solid Characteristics:** Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of skin.  
3.12 **Odor Threshold:** Currently not available  
3.13 **IDLH Value:** Not listed.  
3.14 **OSHA PEL-TWA:** Not listed.  
3.15 **OSHA PEL-STEL:** Not listed.  
3.16 **OSHA PEL-Ceiling:** Not listed.  
3.17 **EPA AEGL:** Not listed

### 4. FIRE HAZARDS

- 4.1 **Flash Point:** 69°F C.C.  
4.2 **Flammable Limits in Air:** Currently not available  
4.3 **Fire Extinguishing Agents:** CO<sub>2</sub>, dry chemicals, foam.  
4.4 **Fire Extinguishing Agents Not to Be Used:** Water may be ineffective against fire.  
4.5 **Special Hazards of Combustion Products:** Toxic fumes of Br  
4.6 **Behavior in Fire:** May form explosive mixtures with air in fire.  
4.7 **Auto Ignition Temperature:** Currently not available  
4.8 **Electrical Hazards:** Currently not available  
4.9 **Burning Rate:** Currently not available  
4.10 **Adiabatic Flame Temperature:** Currently not available  
4.11 **Stoichiometric Air to Fuel Ratio:** 35.7 (calc.)  
4.12 **Flame Temperature:** Currently not available  
4.13 **Combustion Molar Ratio (Reactant to Product):** 11.0 (calc.)  
4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

### 5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction  
5.2 **Reactivity with Common Materials:** No reaction  
5.3 **Stability During Transport:** Stable  
5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent  
5.5 **Polymerization:** Not pertinent  
5.6 **Inhibitor of Polymerization:** Not pertinent

### 6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:** Currently not available  
6.2 **Waterfowl Toxicity:** Currently not available  
6.3 **Biological Oxygen Demand (BOD):** Currently not available  
6.4 **Food Chain Concentration Potential:** Currently not available  
6.5 **GESAMP Hazard Profile:**  
Bioaccumulation: 0  
Damage to living resources: (2)  
Human Oral hazard: (2)  
Human Contact hazard: -  
Reduction of amenities: -

### 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 95%  
7.2 **Storage Temperature:** Currently not available  
7.3 **Inert Atmosphere:** None  
7.4 **Venting:** None  
7.5 **IMO Pollution Category:** Currently not available  
7.6 **Ship Type:** Currently not available  
7.7 **Barge Hull Type:** Currently not available

### 8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Flammable liquid  
8.2 **49 CFR Class:** 3  
8.3 **49 CFR Package Group:** II  
8.4 **Marine Pollutant:** No  
8.5 **NFPA Hazard Classification:**
- | Category                  | Classification |
|---------------------------|----------------|
| Health Hazard (Blue)..... | 1              |
| Flammability (Red).....   | 3              |
| Instability (Yellow)..... | 0              |
- 8.6 **EPA Reportable Quantity:** Not listed.  
8.7 **EPA Pollution Category:** Not listed.  
8.8 **RCRA Waste Number:** Not listed  
8.9 **EPA FWPCA List:** Not listed

### 9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Liquid  
9.2 **Molecular Weight:** 151.07  
9.3 **Boiling Point at 1 atm:** 243°F = 117°C = 390°K  
9.4 **Freezing Point:** -140°F = -95.5°C = 177.7°K  
9.5 **Critical Temperature:** Currently not available  
9.6 **Critical Pressure:** Currently not available  
9.7 **Specific Gravity:** 1.208 at 20°C  
9.8 **Liquid Surface Tension:** Currently not available  
9.9 **Liquid Water Interfacial Tension:** Currently not available  
9.10 **Vapor (Gas) Specific Gravity:** Currently not available  
9.11 **Ratio of Specific Heats of Vapor (Gas):** Currently not available  
9.12 **Latent Heat of Vaporization:** Currently not available  
9.13 **Heat of Combustion:** Currently not available  
9.14 **Heat of Decomposition:** Currently not available  
9.15 **Heat of Solution:** Currently not available  
9.16 **Heat of Polymerization:** Currently not available  
9.17 **Heat of Fusion:** Currently not available  
9.18 **Limiting Value:** Currently not available  
9.19 **Reid Vapor Pressure:** Currently not available

NOTES

# 2-BROMOPENTANE

BPE

9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
68	75.380		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E	0 25 50 75 100 125 150 175 200 225 250 275 300 325 350 375 400 425 450 475 500 525 550 575 600	0.195 0.202 0.208 0.215 0.221 0.228 0.235 0.241 0.248 0.254 0.261 0.268 0.274 0.281 0.287 0.294 0.300 0.307 0.314 0.320 0.327 0.333 0.340 0.347 0.353