

# 1,2,3-TRICHLOROBENZENE

TBZ

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Benzene, 1,2,3-trichloro- Pyranol 1478 V-Trichlorobenzene Vic-Trichlorobenzene			Solid	Colorless	Sharp chlorobenzene odor
Sinks in water. Freezing point is 45.1 - 51.8°F					
<p>Keep people away. Avoid contact with liquid. Wear self-contained positive pressure breathing apparatus and full protective clothing. Shut off ignition sources and call fire department. Notify local health and pollution control agencies. Protect water intakes.</p>					
<b>Fire</b>	<p>Combustible Poisonous gases are produced in fire. Wear self-contained positive pressure breathing apparatus and full protective clothing. Extinguish small fires: dry chemical, CO<sub>2</sub>, water spray, fog or foam; large fires: water spray, fog or foam.</p>				
<b>Exposure</b>	<p>CALL FOR MEDICAL AID.</p> <p>VAPOR May be irritating to eyes, skin and respiratory tract. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. Liquid May irritate skin and eyes. Poisonous if swallowed. IF IN EYES OR ON SKIN, flush with running water for at least 15 minutes; hold eyelids open if necessary. Remove and isolate contaminated clothing and shoes at the site. Wash skin with soap and water. If swallowed and victim is conscious, have victim drink water or milk and induce vomiting. If swallowed and victim is unconscious or having convulsions, do nothing except keep victim warm.</p>				
<b>Water Pollution</b>	<p>HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. 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  
Contain  
Collection Systems: Pump; Dredge

### 2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed.  
2.2 Formula: C<sub>6</sub>H<sub>3</sub>Cl<sub>3</sub>  
2.3 IMO/UN Designation: 6.1/2321  
2.4 DOT ID No.: 2321  
2.5 CAS Registry No.: 87-61-6  
2.6 NAERG Guide No.: 153  
2.7 Standard Industrial Trade Classification: 51139

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Wear self-contained positive pressure breathing apparatus and protective clothing.
- 3.2 **Symptoms Following Exposure:** Inhalation may cause irritation of respiratory tract. Irritating to the eyes. May redden skin on contact. Ingestion may cause liver damage.
- 3.3 **Treatment of Exposure:** INHALATION: Move to fresh air; call emergency medical care. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. EYES OR SKIN: Flush with running water for at least 15 minutes; hold eyelids open if necessary. Wash skin with soap and water. Remove and isolate contaminated clothing and shoes at the site. INGESTION: If swallowed and victim is conscious, have victim drink water or milk induce vomiting. If swallowed and victim is unconscious or having convulsions, 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 2; LD<sub>50</sub> = 756-766 mg/kg (rat,mouse)  
3.8 **Toxicity by Inhalation:** Currently not available.  
3.9 **Chronic Toxicity:** Has caused liver damage in animals; carcinogenic.  
3.10 **Vapor (Gas) Irritant Characteristics:** Vapors cause moderate irritation. Personnel will find high concentrations unpleasant. The affect is temporary.  
3.11 **Liquid or Solid Characteristics:** Minimum hazard. May cause irritation if spilled on clothing and allowed to remain.  
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:** 230°F O.C. 210°F C.C.  
4.2 **Flammable Limits in Air:** Currently not available  
4.3 **Fire Extinguishing Agents:** Small fires: dry chemical, carbon dioxide, water spray or foam; large fires: water spray, fog or foam.  
4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent  
4.5 **Special Hazards of Combustion Products:** May emit toxic hydrogen chloride and phosgene gases in fire.  
4.6 **Behavior in Fire:** Decomposes to form hydrogen chloride and phosgene gases 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:** 28.6 (calc.)  
4.12 **Flame Temperature:** Currently not available  
4.13 **Combustion Molar Ratio (Reactant to Product):** 9.0 (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:**  
100 ppm/micro life/98% kill/fresh water  
>10 ppm/48 hr/hard clam eggs/ LC<sub>50</sub>/salt water  
>10 ppm/288 hr/hard clam larvae/ LC<sub>50</sub>/salt water  
3.13 ppm/ 48 hr/ oyster eggs/ LC<sub>50</sub>/salt water  
6.2 **Waterfowl Toxicity:** Currently not available  
6.3 **Biological Oxygen Demand (BOD):** < 1 lb/lb, 8 days  
6.4 **Food Chain Concentration Potential:** Low potential  
6.5 **GESAMP Hazard Profile:** Not listed

### 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 99%  
7.2 **Storage Temperature:** Ambient  
7.3 **Inert Atmosphere:** Currently not available  
7.4 **Venting:** Currently not available  
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:** Keep Away From Food  
8.2 **49 CFR Class:** 6.1  
8.3 **49 CFR Package Group:** III  
8.4 **Marine Pollutant:** No  
8.5 **NFPA Hazard Classification:** Not listed  
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:** Solid  
9.2 **Molecular Weight:** 181.5  
9.3 **Boiling Point at 1 atm:** 425.3°F = 218.5°C = 491.7°K  
9.4 **Freezing Point:** 126.5°F = 52.5°C = 325.7°K  
9.5 **Critical Temperature:** Currently not available  
9.6 **Critical Pressure:** Currently not available  
9.7 **Specific Gravity:** 1.69 at 25°C (solid)  
9.8 **Liquid Surface Tension:** Not pertinent  
9.9 **Liquid Water Interfacial Tension:** Not pertinent  
9.10 **Vapor (Gas) Specific Gravity:** 6.26 (est.)  
9.11 **Ratio of Specific Heats of Vapor (Gas):** Currently not available  
9.12 **Latent Heat of Vaporization:** 113 btu/lb = 63 cal/g = 2.62 X 10<sup>5</sup> J/kg  
9.13 **Heat of Combustion:** Currently not available  
9.14 **Heat of Decomposition:** Not pertinent  
9.15 **Heat of Solution:** Not pertinent  
9.16 **Heat of Polymerization:** Not pertinent  
9.17 **Heat of Fusion:** Currently not available  
9.18 **Limiting Value:** Currently not available  
9.19 **Reid Vapor Pressure:** Not pertinent

### NOTES

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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
77	105.000		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
	I N S O L U B I L E	125 150 175 200 225 250 275 300 325 350 375 400	0.034 0.081 0.169 0.319 0.560 0.926 1.459 2.211 3.240 4.616 6.417 8.734	125 150 175 200 225 250 275 300 325 350 375 400	0.00099 0.00224 0.00445 0.00805 0.01359 0.02170 0.03315 0.04879 0.06963 0.09678 0.13150 0.17516		C U R R E N T L Y  N O T  A V A I L A B L E