

O-CHLOROPHENOL

CRH

CAUTIONARY RESPONSE INFORMATION

Common Synonyms 2-Chloro-1-hydroxybenzene 2-Hydroxychlorobenzene Phenol, 2-chloro- Phenol, o-chloro-	Liquid Colorless to amber Unpleasant, penetrating Sinks and slowly mixes.
<p>KEEP PEOPLE AWAY. AVOID CONTACT WITH LIQUID AND VAPOR. Wear positive pressure breathing apparatus and special chemical protective clothing. Shut off ignition sources and call fire department. Stay upwind and use water spray to knock down vapor. Notify local health and pollution control agencies. Protect water intakes.</p>	
Fire	COMBUSTIBLE. POISONOUS GASES ARE PRODUCED IN FIRE. CONTAINERS MAY EXPLODE IN FIRE. Wear positive breathing apparatus and special chemical protective clothing. Combat fires from safe distance or protected location. Extinguish small fires with dry chemical, carbon dioxide, water spray or foam; large fires with water spray, fog or foam.
Exposure	CALL FOR MEDICAL AID. VAPOR POISONOUS. MAY BE FATAL IF INHALED OR ABSORBED THROUGH SKIN. Inhalation can cause liver and kidney damage. Irritating to skin and eyes. Move victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. LIQUID POISONOUS. MAY BE FATAL IF SWALLOWED OR ABSORBED THROUGH SKIN. Can cause severe skin and eye irritation; may cause burns. IF IN EYES OR ON SKIN, flush contaminated area with running water for at least 15 minutes; hold upper and lower eyelids open occasionally if appropriate. Speed in removing material from skin is extremely important. Remove and isolate contaminated clothing and shoes. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.
Water Pollution	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.

1. CORRECTIVE RESPONSE ACTIONS

Dilute and disperse
 Stop discharge
 Contain
 Collection Systems: Pump; Dredge
 Chemical and Physical Treatment:
 Neutralize

2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** Not listed.
 2.2 **Formula:** C₆H₅ClO
 2.3 **IMO/UN Designation:** 6.1/2021 2021
 2.4 **DOT ID No.:** 2021
 2.5 **CAS Registry No.:** 95-57-8
 2.6 **NAERG Guide No.:** 153
 2.7 **Standard Industrial Trade Classification:** 51244

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Wear positive pressure breathing apparatus and special chemical protective clothing.
- 3.2 **Symptoms Following Exposure:** Poisonous; may be fatal if inhaled, swallowed or absorbed through skin. Irritating to skin and eyes; direct contact may cause burns. Rats receiving lethal doses via oral, subcutaneous or intraperitoneal routes displayed similar symptoms: restlessness, increased breathing rate and motor weakness followed by tremors, chronic convulsions, dyspnea, coma and death.
- 3.3 **Treatment of Exposure:** INHALATION: Move victim to fresh air; call emergency medical care. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. EYES: Immediately flush with running water for at least 15 minutes; hold upper and lower eyelids open occasionally. SKIN: Immediately flush skin with running water for at least 15 minutes. Speed in removing material from skin is extremely important. Remove and isolate contaminated clothing and shoes at the site. Keep victim quiet and maintain normal body temperature. INGESTION: 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; LD₅₀ = 670 mg/kg (mouse; rat)
 3.8 **Toxicity by Inhalation:** Currently not available.
 3.9 **Chronic Toxicity:** It produced tumorigenic effects and reproductive effects. Rat toxicity studies showed marked injury to the kidneys, fatty infiltration of the liver, and hemorrhages in the intestines. Inhalation can cause liver and kidney damage.
 3.10 **Vapor (Gas) Irritant Characteristics:** The vapors are irritating and toxic.
 3.11 **Liquid or Solid Characteristics:** Strong irritant to tissue. Contact may cause burns to skin and eyes.
 3.12 **Odor Threshold:** 0.019 mg/m³
 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:** 147°F C.C.
 4.2 **Flammable Limits in Air:** 1.7 % (calculated)
 4.3 **Fire Extinguishing Agents:** Small fires: dry chemical, carbon dioxide, water spray or foam. Large Fires: Alcohol foam.
 4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
 4.5 **Special Hazards of Combustion Products:** Contain poisonous chloride fumes.
 4.6 **Behavior in Fire:** Burns and produces toxic and irritating gases.
 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:** 30.9 (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:** Sodium bicarbonate
 5.5 **Polymerization:** Not pertinent
 5.6 **Inhibitor of Polymerization:** Not pertinent

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**
 8.4 ppm/96hr/bluegill fingerlings/TL₅₀/ fresh water (cold water)
 8.2 ppm/24hr/bluegill sunfish/TL₅₀/fresh water (warm water)
 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:** Not listed

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Currently not available
 7.2 **Storage Temperature:** Currently not available
 7.3 **Inert Atmosphere:** Not listed
 7.4 **Venting:** Not listed
 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:** Yes
 8.5 **NFPA Hazard Classification:**
- | Category | Classification |
|---------------------------|----------------|
| Health Hazard (Blue)..... | 3 |
| Flammability (Red)..... | 2 |
| Instability (Yellow)..... | 0 |
- 8.6 **EPA Reportable Quantity:** 100 pounds
 8.7 **EPA Pollution Category:** B
 8.8 **RCRA Waste Number:** U048
 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:** 128.56
 9.3 **Boiling Point at 1 atm:** 346.1°F = 174.5°C = 447.7°K
 9.4 **Freezing Point:** 48.7°F = 9.3°C = 282.5°K
 9.5 **Critical Temperature:** Currently not available
 9.6 **Critical Pressure:** Currently not available
 9.7 **Specific Gravity:** 1.25 at 25°C
 9.8 **Liquid Surface Tension:** 40.3 dynes/cm = 0.040 N/m at 20°C
 9.9 **Liquid Water Interfacial Tension:** Currently not available
 9.10 **Vapor (Gas) Specific Gravity:** 4.5
 9.11 **Ratio of Specific Heats of Vapor (Gas):** Currently not available
 9.12 **Latent Heat of Vaporization:** 144.8 Btu/lb = 80.4 cal/g = 3.4 X 10⁸ J/kg
 9.13 **Heat of Combustion:** Currently not available
 9.14 **Heat of Decomposition:** Not pertinent
 9.15 **Heat of Solution:** Currently not available
 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:** Currently not available

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
68	78.860		C		C	70	3.806
70	78.780		U		U	75	3.625
72	78.700		R		R	80	3.444
74	78.620		R		R	85	3.263
76	78.540		E		E	90	3.082
78	78.460		N		N	95	2.901
80	78.380		T		T	100	2.720
82	78.300		L		L	105	2.539
84	78.220		Y		Y	110	2.359
86	78.140						
			N O T		N O T		
			A V A I L A B L E		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
68	2.850	75	0.042	20	0.00070		C
		100	0.115	40	0.00343		U
		125	0.252	60	0.00868		R
		150	0.478	80	0.01675		R
		175	0.821	100	0.02791		E
		200	1.312	120	0.04234		N
		225	1.984	140	0.06023		T
		250	2.871				L
		275	4.012				Y
		300	5.445				
							N O T
							A V A I L A B L E