

HEXACHLOROETHANE

HCE

CAUTIONARY RESPONSE INFORMATION

Common Synonyms	Solid Colorless to pale yellow Camphor-like odor
Avlothane Distokal Distopan Egitol Ethane hexachloride Falkitol Fasciolin Perchloroethane	Sinks in water.
<p style="color: red;">AVOID CONTACT WITH LIQUID AND VAPOR. KEEP PEOPLE AWAY. Wear rubber overclothing (including gloves). Notify local health and pollution control agencies.</p>	
Fire	Not flammable. Poisonous gases may be produced when heated.
Exposure	CALL FOR MEDICAL AID. VAPOR Irritating to eyes, nose and throat. Harmful if inhaled. If in eyes, hold eyelids open and flush with plenty of water. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. LIQUID POISONOUS IF SWALLOWED OR IF SKIN IS EXPOSED. Irritating to skin and eyes. If swallowed will cause nausea and vomiting. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of 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.
Water Pollution	Effect of low concentrations on aquatic life is unknown. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

1. CORRECTIVE RESPONSE ACTIONS

Stop discharge
Collection Systems: Dredge

2. CHEMICAL DESIGNATIONS

- 2.1 CG Compatibility Group: Not listed.
- 2.2 Formula: C₂Cl₆
- 2.3 IMO/UN Designation: NA/9037
- 2.4 DOT ID No.: 9037
- 2.5 CAS Registry No.: 62-72-1
- 2.6 NAERG Guide No.: 151
- 2.7 Standard Industrial Trade Classification: 51136

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Chemical safety goggles; plastic face shield; air- or oxygen-supplied mask; safety hat with brim; solvent-proof apron; synthetic rubber gloves
- 3.2 **Symptoms Following Exposure:** Compound is a powerful narcotic and liver poison; may also cause changes in blood composition and neurological disturbances. Repeated exposure by inhalation can be fatal. Ingestion causes vomiting, diarrhea, severe mucosal injury, liver necrosis, cyanosis, unconsciousness, loss of reflexes, and death. Contact with eyes causes irritation and lachrymation. Can be absorbed through the skin and may produce severe skin lesions.
- 3.3 **Treatment of Exposure:** INHALATION: Remove victim from exposure; begin artificial respiration if breathing has ceased. INGESTION: Induce vomiting; call physician. EYES: Irrigate with water for 15 min. SKIN: Remove clothing; wash skin thoroughly with warm water and soap.
- 3.4 **TLV-TWA:** 1 ppm
- 3.5 **TLV-STEL:** No data available
- 3.6 **TLV-Ceiling:** Not listed.
- 3.7 **Toxicity by Ingestion:** Grade 3; oral LD₅₀ = 4.46 g/kg (rat)
- 3.8 **Toxicity by Inhalation:** Currently not available.
- 3.9 **Chronic Toxicity:** Liver poisoning, nervous disorders, suspected carcinogen
- 3.10 **Vapor (Gas) Irritant Characteristics:** Vapor is moderately irritating such that personnel will not usually tolerate moderate or high vapor concentrations.
- 3.11 **Liquid or Solid Characteristics:** Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
- 3.12 **Odor Threshold:** Currently not available
- 3.13 **IDLH Value:** 300 ppm
- 3.14 **OSHA PEL-TWA:** 1 ppm
- 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:**
Not flammable
- 4.2 **Flammable Limits in Air:** Not flammable
- 4.3 **Fire Extinguishing Agents:** Not pertinent
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
- 4.5 **Special Hazards of Combustion Products:** Irritating hydrogen chloride vapor may form in fire.
- 4.6 **Behavior in Fire:** Currently not available
- 4.7 **Auto Ignition Temperature:** Not pertinent
- 4.8 **Electrical Hazards:** Not pertinent
- 4.9 **Burning Rate:** Not pertinent
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** Not pertinent
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** Not pertinent
- 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:** May attack some forms of plastics
- 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:** Not listed

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 98%, 99%
- 7.2 **Storage Temperature:** Ambient
- 7.3 **Inert Atmosphere:** No requirement
- 7.4 **Venting:** Open
- 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:** Not listed.
- 8.2 **49 CFR Class:** Not pertinent
- 8.3 **49 CFR Package Group:** Not listed.
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:** Not listed
- 8.6 **EPA Reportable Quantity:** 100 pounds
- 8.7 **EPA Pollution Category:** B
- 8.8 **RCRA Waste Number:** U131/D034
- 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:** 236.74
- 9.3 **Boiling Point at 1 atm:** Not Pertinent
- 9.4 **Freezing Point:** 368°F = 186°C = 459°K (sublimes)
- 9.5 **Critical Temperature:** Currently not available
- 9.6 **Critical Pressure:** Currently not available
- 9.7 **Specific Gravity:** 2.091 at 20°C (liquid)
- 9.8 **Liquid Surface Tension:** Not pertinent
- 9.9 **Liquid Water Interfacial Tension:** Currently not available
- 9.10 **Vapor (Gas) Specific Gravity:** 8.16
- 9.11 **Ratio of Specific Heats of Vapor (Gas):**
Currently not available
- 9.12 **Latent Heat of Vaporization:** 92.7 Btu/lb = 51.5 cal/g = 2.15 X 10⁵ J/kg
- 9.13 **Heat of Combustion:** -836.4 Btu/lb = -464.6 cal/g = -19.4 X 10⁵ J/kg
- 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:** 0.04 psia

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	130.540		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
71	0.005	100	0.024		C	0	0.119
		120	0.058		U	25	0.122
		140	0.123		R	50	0.124
		160	0.237		R	75	0.126
		180	0.422		E	100	0.129
		200	0.706		N	125	0.131
		220	1.125		T	150	0.133
		240	1.722		L	175	0.136
		260	2.548		Y	200	0.138
		280	3.660			225	0.140
		300	5.129		N	250	0.142
		320	7.033		O	275	0.145
		340	9.460		T	300	0.147
		360	12.511			325	0.149
					A	350	0.152
					V	375	0.154
					A	400	0.156
					I	425	0.158
					L	450	0.161
					A	475	0.163
					B	500	0.165
					L	525	0.168
					E	550	0.170
						575	0.172
						600	0.175