

DIELDRIN

DED

CAUTIONARY RESPONSE INFORMATION

Common Synonyms	Solid	Light brown	Mild chemical odor
Heod endo,exo-1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4:5,8-dimethanonaphthalene	Sinks in water.		
KEEP PEOPLE AWAY. AVOID CONTACT WITH SOLID AND DUST. Wear goggles, dust respirator and rubber overclothing (including gloves). Notify local health and pollution control agencies. Protect water intakes.			
Fire	Not flammable. POISONOUS GASES MAY BE PRODUCED WHEN HEATED.		
Exposure	CALL FOR MEDICAL AID. DUST POISONOUS IF INHALED OR IF SKIN IS EXPOSED. If inhaled will cause headache, dizziness, or loss of consciousness. 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. SOLID POISONOUS IF SWALLOWED OR IF SKIN IS EXPOSED. If swallowed will cause headache, nausea, dizziness, vomiting, or loss of consciousness. 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 have victim induce vomiting. 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

Stop discharge
Contain
Collection Systems: Skim; Dredge
Clean shore line

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed.
2.2 Formula: C₁₂H₆Cl₆O
2.3 IMO/UN Designation: Not listed
2.4 DOT ID No.: 2761
2.5 CAS Registry No.: 60-57-1
2.6 NAERG Guide No.: 151
2.7 Standard Industrial Trade Classification: 59110

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** U. S. Bu. Mines approved respirator; clean rubber gloves; goggles or face shield
- 3.2 **Symptoms Following Exposure:** Inhalation, ingestion, or skin contact causes irritability, convulsions and/or coma, nausea, vomiting, headache, fainting, tremors. Contact with eyes causes irritation.
- 3.3 **Treatment of Exposure:** INHALATION: move to fresh air; give oxygen and artificial respiration as required. INGESTION: induce vomiting and get medical attention. EYES: flush with plenty of water; get medical attention. SKIN: flush with plenty of water.
- 3.4 **TLV-TWA:** 0.25 mg/m³
- 3.5 **TLV-STEL:** Not listed.
- 3.6 **TLV-Ceiling:** Not listed.
- 3.7 **Toxicity by Ingestion:** Grade 4; oral LD₅₀ = 46 mg/kg (rat), 65 mg/kg (dog)
- 3.8 **Toxicity by Inhalation:** Currently not available.
- 3.9 **Chronic Toxicity:** Banned by EPA in October 1974 because of alleged "imminent hazard to human health" as a potential carcinogen in man.
- 3.10 **Vapor (Gas) Irritant Characteristics:** Currently not available
- 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:** 0.041 ppm
- 3.13 **IDLH Value:** 50 mg/m³
- 3.14 **OSHA PEL-TWA:** 0.25 mg/m³
- 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:** Currently not available
- 4.5 **Special Hazards of Combustion Products:** Toxic and irritating hydrogen chloride fumes 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:**
Currently not available
- 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:**
0.0079 mg/l/96 hr/bluegill/TL₅₀/fresh water
.037 ppm/96 hr/goldfish/TL₅₀/fresh water
0.050 ppm/5 hr/mullet/100% kill/salt water
0.025-.050 ppm/48 hr/brown shrimp/TL₅₀/salt water
- 6.2 **Waterfowl Toxicity:** LD₅₀ 381.0 mg/kg
- 6.3 **Biological Oxygen Demand (BOD):**
Currently not available
- 6.4 **Food Chain Concentration Potential:**
High
- 6.5 **GESAMP Hazard Profile:**
Bioaccumulation: +
Damage to living resources: 4
Human Oral hazard: 3
Human Contact hazard: II
Reduction of amenities: XXX

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Technical, 85+% HEOD; 18% emulsifiable concentrates in petroleum hydrocarbons, which are combustible.
- 7.2 **Storage Temperature:** Ambient
- 7.3 **Inert Atmosphere:** No requirement
- 7.4 **Venting:** Open (flame arrester) (for liquid form)
- 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:** Poison
- 8.2 **49 CFR Class:** 6.1
- 8.3 **49 CFR Package Group:** II
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:** Not listed
- 8.6 **EPA Reportable Quantity:** 1 pound
- 8.7 **EPA Pollution Category:** X
- 8.8 **RCRA Waste Number:** P037
- 8.9 **EPA FWPCA List:** Yes

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Solid
- 9.2 **Molecular Weight:** 380.93
- 9.3 **Boiling Point at 1 atm:** Not pertinent (decomposes)
- 9.4 **Freezing Point:** 349°F = 176°C = 449°K
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 1.75 at 20°C (solid)
- 9.8 **Liquid Surface Tension:** Not pertinent
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 9.10 **Vapor (Gas) Specific Gravity:** Not pertinent
- 9.11 **Ratio of Specific Heats of Vapor (Gas):**
Not pertinent
- 9.12 **Latent Heat of Vaporization:** Not pertinent
- 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:** 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
	N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T

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		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T