

ALDRIN

ALD

CAUTIONARY RESPONSE INFORMATION

Common Synonyms 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4-endo-exo-5,8-dimethanonaphthalene. HHDN		Solid crystals, or solution Light to dark brown Mild chemical odor
Solid sinks in water; solution floats on water.		
<p>AVOID CONTACT WITH LIQUID OR SOLID. KEEP PEOPLE AWAY. Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves). Stop discharge if possible. Call fire department if solution is discharged. Isolate and remove discharged material. Notify local health and pollution control agencies. Protect water intakes.</p>		
Fire	Solid is not flammable but usually is dissolved in a combustible liquid. POISONOUS GASES ARE PRODUCED WHEN HEATED. Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves). Extinguish with water, dry chemical, foam or carbon dioxide. Cool exposed containers with water.	
Exposure	CALL FOR MEDICAL AID. SOLID OR SOLUTION POISONOUS IF SWALLOWED OR IF SKIN IS EXPOSED. Irritating to skin, eyes. 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 Chemical and Physical Treatment: Absorb Clean shore line Salvage waterfowl Do not burn	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed 2.2 Formula: C ₁₂ H ₆ Cl ₆ 2.3 IMO/UN Designation: 6.1/1542 2.4 DOT ID No.: NA2761 2.5 CAS Registry No.: 309-00-2 2.6 NAERG Guide No.: 151 2.7 Standard Industrial Trade Classification: 59110
3. HEALTH HAZARDS 3.1 Personal Protective Equipment: During prolonged exposure to mixing and loading operations, wear clean synthetic rubber gloves and mask or respirator of the type passed by the U.S. Bureau of Mines for aldrin protection. 3.2 Symptoms Following Exposure: Ingestion, inhalation, or skin absorption of a toxic dose will induce nausea, vomiting, hyperexcitability, tremors, epileptiform convulsions, and ventricular fibrillation. Aldrin may cause temporary reversible kidney and liver injury. Symptoms may be seen after ingestion of less than 1 gram in an adult; ingestion of 25 mg has caused death in children. 3.3 Treatment of Exposure: SKIN CONTACT: wash with soap and running water. If material gets into eyes, wash immediately with running water for at least 15 minutes; get medical attention. INGESTION: call physician immediately; induce vomiting immediately. Repeat until vomit fluid is clear. Never give anything by mouth to an unconscious person. Keep patient prone and quiet. PHYSICIAN: administer barbiturates as anti-convulsant therapy. Observe patient carefully because repeated treatment may be necessary. 3.4 TLV-TWA: 0.25 mg/m ³ 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 3; LD ₅₀ to 500 mg/kg (rat) 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Chronic exposure produces benign tumors in mice. 3.10 Vapor (Gas) Irritant Characteristics: Vapors cause slight smarting of the eyes or respiratory system if present in high concentrations. Effect is temporary. 3.11 Liquid or Solid Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening if the skin. 3.12 Odor Threshold: Currently not available 3.13 IDLH Value: 25 mg/m ³ . 3.14 OSHA PEL-TWA: 0.25 mg/m ³ . 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 pertinent
- 4.3 Fire Extinguishing Agents: Water spray, dry chemical, foam or carbon dioxide for fires involving solutions of aldrin in hydrocarbon solvents.
- 4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent
- 4.5 Special Hazards of Combustion Products: Irritating fumes of hydrochloric acid and chlorinated decomposition products are given off
- 4.6 Behavior in Fire: Not pertinent
- 4.7 Auto Ignition Temperature: Not pertinent
- 4.8 Electrical Hazards: Not pertinent
- 4.9 Burning Rate: Not pertinent
- 4.10 Adiabatic Flame Temperature: Not pertinent
- 4.11 Stoichiometric Air to Fuel Ratio: Not pertinent
- 4.12 Flame Temperature: Not pertinent
- 4.13 Combustion Molar Ratio (Reactant to Product): Currently not available
- 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: 0.130 ppm/24 hr/bluegill/LC₅₀/fresh water
0.05 ppm/24 hr/goldfish/LC₅₀/fresh water
0.01 ppm/24 hr/oyster/sublethal effect/salt water
- 6.2 Waterfowl Toxicity: 520 mg/kg
- 6.3 Biological Oxygen Demand (BOD): Not pertinent
- 6.4 Food Chain Concentration Potential: High
- 6.5 GESAMP Hazard Profile: Not listed

7. SHIPPING INFORMATION

- 7.1 Grades of Purity: 20-95% aldrin, 5-80% inert ingredients. Several solutions in hydrocarbon solvents.
- 7.2 Storage Temperature: Currently not available
- 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: Poison
- 8.2 49 CFR Class: 6.1
- 8.3 49 CFR Package Group: II
- 8.4 Marine Pollutant: Yes
- 8.5 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue)	2
Flammability (Red)	0
Instability (Yellow)	0
- 8.6 EPA Reportable Quantity: 1
- 8.7 EPA Pollution Category: X
- 8.8 RCRA Waste Number: P004
- 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: 364.93
- 9.3 Boiling Point at 1 atm: Not pertinent
- 9.4 Freezing Point: 219°F = 104°C = 377°K
- 9.5 Critical Temperature: Not pertinent
- 9.6 Critical Pressure: Not pertinent
- 9.7 Specific Gravity: 1.6 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: Not pertinent
- 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
68	0.000		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