

ARSENIC PENTAOXIDE

APO

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Arsenic acid anhydride Arsenic oxide Arsenic pentoxide	Amorphous solid White Odorless
Sinks and mixes with water.	
<p>AVOID CONTACT WITH SOLID. Keep people away. Wear goggles, self-contained breathing apparatus and rubber overclothing (including gloves). Stop discharge if possible. Isolate and remove discharged material. Notify local health and pollution control agencies. Protect water intakes.</p>	
Fire	Not flammable.
Exposure	<p>CALL FOR MEDICAL AID. DUST POISONOUS IF INHALED OR IF SKIN IS EXPOSED. Move to fresh air. If breathing is difficult, give oxygen.</p> <p>SOLID POISONOUS IF SWALLOWED. 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.</p>
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 Collection Systems: Dredge	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed 2.2 Formula: As ₂ O ₅ 2.3 IMO/UN Designation: 6.1/1559 2.4 DOT ID No.: 1559 2.5 CAS Registry No.: 1303-28-2 2.6 NAERG Guide No.: 151 2.7 Standard Industrial Trade Classification: 52329
3. HEALTH HAZARDS	
<p>3.1 Personal Protective Equipment: Dust respirator, gloves, goggles or face shield, protective clothing.</p> <p>3.2 Symptoms Following Exposure: INHALATION: May cause acute pulmonary edema, with restlessness, dyspnea and coughing attacks. Chronic symptoms may include: numbness, burning, and tingling or itching followed by fasciculation or gross tremors with muscular atrophy and paralysis of lower limbs. EYES: Irritation of conjunctiva, edema of eyelids and corneal necrosis. SKIN: Pigmentation, inflammation, desquamative eczematoid dermatitis and hyperkeratosis. INGESTION: Irritation of stomach and intestines with nausea, vomiting and diarrhea. In severe cases vomitus and stools are bloody. Patient can go into collapse and shock with weak rapid pulse, cold sweats, coma and death. Chronic digestive disturbances. Liver damage with resulting jaundice. Disturbances of blood, kidneys and nervous system.</p> <p>3.3 Treatment of Exposure: Call a physician. INHALATION: Remove from exposure. EYES: Flush with plenty of water. SKIN: Wash thoroughly with plenty of water. INGESTION: Remove ingested arsenic by gastric lavage, emesis and catharsis.</p> <p>3.4 TLV-TWA: 0.01 mg/m³ as As. 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 4; LD₅₀ below 50 mg/kg. 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Exposure can be followed by tumor development. Cancers of the skin, lungs and ethmoids have been attributed to As exposure. 3.10 Vapor (Gas) Irritant Characteristics: Not pertinent 3.11 Liquid or Solid Characteristics: Minimum hazard. Can cause burning sensation and tenderness in affected areas of the skin. 3.12 Odor Threshold: Odorless. 3.13 IDLH Value: 5 mg/m³ as arsenic. 3.14 OSHA PEL-TWA: 0.01 mg/m³ as arsenic. 3.15 OSHA PEL-STEL: Not listed. 3.16 OSHA PEL-Ceiling: Not listed. 3.17 EPA AEGL: Not listed</p>	

4. FIRE HAZARDS

- 4.1 **Flash Point:**
Not flammable
- 4.2 **Flammable Limits in Air:** Not flammable
- 4.3 **Fire Extinguishing Agents:** Water
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
- 4.5 **Special Hazards of Combustion Products:** Toxic arsenic fumes may be produced
- 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 flammable
- 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:** Dissolves in water to give solutions of arsenic acid
- 5.2 **Reactivity with Common Materials:** Aluminum and galvanized metal, possibly
- 5.3 **Stability During Transport:** Stable
- 5.4 **Neutralizing Agents for Acids and Caustics:** Currently not available
- 5.5 **Polymerization:** Will not occur.
- 5.6 **Inhibitor of Polymerization:** Not pertinent

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**
TL₅₀ 96 (Fin fish) = 1 to 10 ppm
- 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:**
Bioaccumulation: 0
Damage to living resources: 3
Human Oral hazard: 3
Human Contact hazard: II
Reduction of amenities: XXX

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 56% As
- 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:** No
- 8.5 **NFPA Hazard Classification:**

Category	Classification
Health Hazard (Blue).....	3
Flammability (Red).....	0
Instability (Yellow).....	0
- 8.6 **EPA Reportable Quantity:** 1
- 8.7 **EPA Pollution Category:** X
- 8.8 **RCRA Waste Number:** P011
- 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:** 229.82
- 9.3 **Boiling Point at 1 atm:** Not pertinent (decomposes upon melting)
- 9.4 **Freezing Point:** 599°F = 315°C = 588.2°K
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 4.32 at 25°C
- 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:** 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
	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
60	15000.000		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