

ANTIMONY TRIBROMIDE

ATB

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Antimonous bromide	Solid crystals Colorless to yellow Sinks and mixes with water.
<p>Avoid contact with solid. Keep people away. Wear goggles, respirator, dust proof clothing, and rubber gloves. Avoid inhalation. Stop leak if possible. Isolate and remove discharged material. Notify local health and pollution control agencies. Protect water intakes.</p>	
Fire	Data not available.
Exposure	CALL FOR MEDICAL AID. Irritating to skin, nose, and throat. Harmful, if swallowed. Move to fresh air. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. Flush affected areas with plenty of water.
Water Pollution	HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Notify local health and pollution control officials. Notify operators of nearby water intakes.

1. CORRECTIVE RESPONSE ACTIONS Dilute and disperse Stop discharge Collection Systems: Dredge	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed 2.2 Formula: SbBr ₃ 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: 1549 2.5 CAS Registry No.: 7789-61-9 2.6 NAERG Guide No.: 157 2.7 Standard Industrial Trade Classification: 52310
3. HEALTH HAZARDS	
<p>3.1 Personal Protective Equipment: Gloves, dustproof clothing, goggles, and, where atmospheric exposure is high, respirators should be used.</p> <p>3.2 Symptoms Following Exposure: INHALATION: Inflammation of mucous membranes of nose and throat. SKIN: Irritation and eczematous eruption. INGESTION: Gastro intestinal upset, vomiting, diarrhea. Nervous complaints such as irritability, sleeplessness, fatigue, muscular and neurologic pain.</p> <p>3.3 Treatment of Exposure: Call a physician. INHALATION: Remove from exposure. SKIN: Flush with copious amounts of water. INGESTION: Have victim drink water or milk. Induce vomiting. Perform gastric lavage.</p> <p>3.4 TLV-TWA: 0.5 mg/m³ as Sb.</p> <p>3.5 TLV-STEL: Not listed.</p> <p>3.6 TLV-Ceiling: Not listed.</p> <p>3.7 Toxicity by Ingestion: Currently not available</p> <p>3.8 Toxicity by Inhalation: Currently not available.</p> <p>3.9 Chronic Toxicity: Dryness of throat, pain on swallowing. Occasional vomiting and persistent nausea, loss of appetite, weight loss, dermatitis, dizziness, diarrhea, and bloody stools. Causes pathologic changes in cardiac muscle of experimental animals.</p> <p>3.10 Vapor (Gas) Irritant Characteristics: Currently not available</p> <p>3.11 Liquid or Solid Characteristics: Currently not available</p> <p>3.12 Odor Threshold: Currently not available</p> <p>3.13 IDLH Value: 50 mg/m³ as Sb</p> <p>3.14 OSHA PEL-TWA: Not listed.</p> <p>3.15 OSHA PEL-STEL: Not listed.</p> <p>3.16 OSHA PEL-Ceiling: Not listed.</p> <p>3.17 EPA AEGL: Not listed</p>	

4. FIRE HAZARDS

- 4.1 **Flash Point:** Currently not available
- 4.2 **Flammable Limits in Air:** Currently not available
- 4.3 **Fire Extinguishing Agents:** Currently not available
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Currently not available
- 4.5 **Special Hazards of Combustion Products:** Currently not available
- 4.6 **Behavior in Fire:** Currently not available
- 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:** Currently not available
- 4.12 **Flame Temperature:** Currently not available
- 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:** Decomposes in water forming SbOBr and HBr
- 5.2 **Reactivity with Common Materials:** Currently not available
- 5.3 **Stability During Transport:** Decomposes in water, light, or alcohol.
- 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:** 10 to 100 ppm/96 hr¹/TL_m^d
* (as HBr reaction product with water)
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):** 0.05 mg/l (Sb³⁺) - no effect 0.5 mg/l (Sb³⁺) - slight effect 5.0 mg/l (Sb³⁺) - distinct effect 10th to 15th day
- 6.4 **Food Chain Concentration Potential:** Antimony can be concentrated by a factor of 300 by marine life.
- 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:** 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:** Corrosive material
- 8.2 **49 CFR Class:** 8
- 8.3 **49 CFR Package Group:** II
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:** Not listed
- 8.6 **EPA Reportable Quantity:** 1000
- 8.7 **EPA Pollution Category:** C
- 8.8 **RCRA Waste Number:** Not listed
- 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:** 361.51
- 9.3 **Boiling Point at 1 atm:** 536°F = 280°C = 553.2°K
- 9.4 **Freezing Point:** 205.88°F = 96.6°C = 369.75°K
- 9.5 **Critical Temperature:** 1660.1°F = 904.5°C = 1177.7°K
- 9.6 **Critical Pressure:** 822.976 psia = .56 atm = 5.67 MN/m²
- 9.7 **Specific Gravity:** 4.148 at 23°C
- 9.8 **Liquid Surface Tension:** Currently not available
- 9.9 **Liquid Water Interfacial Tension:** Currently not available
- 9.10 **Vapor (Gas) Specific Gravity:** Not pertinent
- 9.11 **Ratio of Specific Heats of Vapor (Gas):** Currently not available
- 9.12 **Latent Heat of Vaporization:** Currently not available
- 9.13 **Heat of Combustion:** Currently not available
- 9.14 **Heat of Decomposition:** Currently not available
- 9.15 **Heat of Solution:** Not pertinent
- 9.16 **Heat of Polymerization:** Currently not available
- 9.17 **Heat of Fusion:** 9.7 cal/g
- 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
	N O T P E R T I N E N T	201	0.020		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