Advanced Engineering Materials

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Material Safety Data Sheet

Identity: Antimony sulfide Formula: Sb_2S_3

SECTION I - GENERAL INFORMATION

Manufacturer: Advanced Engineering Materials Limited (AEM)

The information below is believed to be accurate and represents the best information available to AEM. However, AEM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

CAS #	OSHA PEL	ACGIH TLV	%
1345-04-6	0.5 mg/m3	0.5 mg/m3	0.0-100.0%

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 1150.00 °C
Melting Point: 550.00 °C
Evaporation Rate: N/A
Solubility in water: Reacts

Vapor Pressure (vs. air or mmHg): N/A
Density: 4.12 g/cm^3
Flash Point: N/A

Appearance and odor: Light brown pieces, strong garlic or fishy odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Unknown *Explosive Limits*: LEL: N/A UEL: N/A
Extinguishing Media: Use suitable extinguishing agent for surrounding material and type of fire

Special Fire Fighting Procedures:

Firefighters must wear full face, self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

Unusual Fire and Explosion Hazards:

−Flammable when exposed to heat or flame.
−When heated to decomposition or on contact with acid or acid fumes, antimony sulfide may emit highly

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toxic fumes of oxides of sulfur and antimony.

−Reacts with water or stream to produce toxic and flammable vapors.
−Moderately explosive by spontaneous reaction with chlorates, perchlorates, ClO and thallic oxide.
−Spontaneously flammable when exposed to heat or flame.

SECTION V - REACTIVITY DATA

Stability: Stable under recommended storage conditions
Conditions to Avoid (instability): None
Incompatibility: Water, moisture, steam, acids, strong oxidizers, chlorates, perchlorates, ClO and thallic oxide.
Hazardous Decomposition or Byproducts: Oxides of sulfur and antimony.
Hazardous Polymerization: Will not occur.
Conditions to avoid (hazardous polymerization): None.

SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Eyes? Yes
Ingestion? Yes Other? No

To the best of our knowledge the chemical, physical and toxicological properties of antimony sulfide have not been thoroughly investigated and recorded.

Most antimony compounds are poison by ingestion, inhalation, and intraperitoneal routes. Locally antimony compounds irritate the skin and mucous membranes. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Sulfides of the heavy metals are generally insoluble and hence have little toxic action except through the liberation of hydrogen sulfide. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Signs and Symptoms of Overexposure:

Inhalation: May cause throat dryness, coughing and burning sensation.
Ingestion: May cause nausea and vomiting.
Skin: May cause redness, itching, inflammation and burning.
Eye: May cause redness, itching, inflammation, watering and burning.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: Human blood and gastrointestinal system effects by inhalation. May cause irritation to the nose, throat and mucous membranes.
Chronic: Prolonged or repeated exposure may cause pneumoconiosis, coma and pulmonary edema.

Ingestion:

Acute: May cause gastrointestinal irritation.

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Chronic: No chronic health effects recorded.

Skin:

Acute: May cause irritation.

Chronic: May cause dermatitis.

Eye:

Acute: May cause severe irritation.

Chronic: No chronic health effects recorded.

Target Organs: May affect the eyes, skin, blood, gastrointestinal and respiratory system.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Medical Conditions Aggravated by Exposure: Pre-existing respiratory, gastric and skin disorders.

Emergency and First Aid Procedures:

Inhalation: Remove victim to fresh air; keep warm and quiet; give oxygen if breathing is difficult and seek medical attention.

Ingestion: Give 1-2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.

Skin: Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist.

Eye: Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Wear appropriate respiratory and protective equipment. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

Waste disposal method:

Dispose of in accordance with state, local, and federal regulations.

Hazard Label Information:

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

SECTION VIII - CONTROL MEASURES

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Protective Equipment Summary (Hazard Label Information):

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

Ventilation:

Local Exhaust: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.
Special: Handle in an enclosed, controlled environment.
Mechanical (General): Not recommended.
Other: Handle in an inert gas such as argon.

Work/Hygienic/Maintenance Practices:

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established