

# **Advanced Engineering Materials**

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### Material Safety Data Sheet

Identity: Tin Selenide Formula: SnSe2

### 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

<u>CAS # OSHA PEL ACGIH TLV %</u> 20770-09-6 .2mg (Se)/m³ .2mg (Se)/m³ 0.0-100.0%

### SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: N/A Vapor Pressure (vs. air or mmHg): N/A

Melting Point: N/A
Evaporation Rate: N/A

Density: N/A
Flash Point: N/A

Solubility in water: Insoluble

Appearance and odor: color: N/A, pieces, odor N/A.

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Flammable as powde Explosive Limits: LEL: N/A UEL: N/A

Extinguishing Media: Do not use water for metal fires – use CO2, sand, extinguishing powder.

### Special Fire Fighting Procedures:

Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.



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#### SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid (instability): React with Oxidizing agents.

Incompatibility: None

Hazardous Decomposition or Byproducts: Metal oxide fume

### 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.

Selenium may cause amyotropic lateral sclerosis, bronchial irritation, gastrointestinal distress, vasopharyngeal irritation, garlic odor on breath and sweat, metallic taste, pallor, irritability, excessive fatigue, loss of fingernails and hair, pulmonary edema, anemia and weight loss. Metallic tin and inorganic tin compounds may cause nausea, vomiting, diarrhea, irritation, and pneumoconiosis.

Selenium compounds are poison by inhalation and intravenous routes. Some selenium compounds are experimental carcinogens. Long-term exposure may be a cause of amyotrophic lateral sclerosis in humans, just as it may cause "blind staggers" in cattle. Elemental selenium has low acute systemic toxicity, but dust or fumes can cause serious irritation of the respiratory tract. Inorganic selenium compounds can cause dermatitis. Garlic odor of breath is a common symptom. Pallor, nervousness, depression, digestive disturbances and death have been reported in cases if chronic exposure. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Signs and Symptoms of Overexposure:

Inhalation: N/A

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Skin: N/A

Eye: N/A

Health Hazards (Acute and Chronic):

*Inhalation:* May cause irritation. *Ingestion:* May cause irritation.

Skin: Irritating to skin and mucous membranes.

*Eye:* Causes irritating effect.

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

*Medical Conditions Aggravated by Exposure:* N/A



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### 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

Protective Equipment Summary (Hazard Label Information):

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

Ventilation:

Provide sufficient ventilation to maintain concentration at or below threshold limit.

*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