

Material Safety Data Sheet

Identity: Tantalum selenide

Formula: TaSe₂

SECTION I - GENERAL INFORMATION

Manufacturer: [Stanford Advanced Materials](#) (SAM)

The information below is believed to be accurate and represents the best information available to SAM. However, SAM 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

Molecular weight: 338.87

CAS #	OSHA PEL	ACGIH TLV	Other	%
12039-55-3	.2mg(Se)/m ³	.2mg(Se)/m ³		100

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: N/A

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

Melting Point: N/A

Vapor Density: N/A

Evaporation Rate: N/A

Percent Volatile:

Solubility in water:

Specific Gravity:

Flash Point: N/A

Appearance and odor: Black powder and pieces, no odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Flash Point:

Method Used:

Explosive Limits: LEL:

UEL:

Extinguishing Media:

Use suitable extinguishing media for surrounding materials and type of fire.

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

Unusual Fire and Explosive Hazards:

When heated to decomposition, tantalum selenide may emit toxic fumes of selenium.

SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid (stability): None

Incompatibility: Strong Acids

Hazardous Decomposition or Byproducts: H₂Se, SeO₂

Hazardous Polymerization: Will not occur

Conditions to avoid (hazardous polymerization): None

SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? Skin? Eyes? Ingestion? Other?

Health Hazards (Acute and Chronic):

Inhalation: Acute selenium poisoning may cause nervousness, fever, vomiting, drop in blood pressure, laboured breathing, depression coated tongue, gastrointestinal disorder or garlic odor of breath.

Ingestion: Chronic selenium toxicity may cause alkali disease, loss of vitality, atrophy, or cirrhosis of the liver

Skin: May cause redness, itching, inflammation and burning.

Eye: May cause redness, itching, burning and watering.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: May cause irritation to the respiratory tract and acute selenium poisoning.

Chronic: May cause chronic selenium poisoning and may cause loss of nails and hair.

Ingestion:

Acute: May cause gastrointestinal disturbances

Chronic: May cause chronic selenium toxicity

Skin: May cause irritation and/or dermatitis

Eye: May cause irritation, visual disturbances, and blurred vision. *Target Organ:*

Upper respiratory system, eyes, skin, liver, kidneys, and blood *Carcinogenicity:* NTP? No

IARC Monographs? No

OSHA Regulated? No

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

Emergency and First Aid Procedures:

- Inhalation:* Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention
- Ingestion:* Give 1-2 glasses of milk or water and induce vomiting, seek medical attention.
- 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 specified in section VIII-Control Measures. Isolate spill area, 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, goggles or face shield.

Ventilation:

Local Exhaust: To maintain concentration at low exposure levels.
Mechanical (General): Recommended.

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