

Material Safety Data Sheet

Identity: Tantalum

Formula: Ta

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: 180.479

CAS #	OSHA PEL	ACGIH TLV	%
7440-25-7	5mg/m ³	5mg/m ³	0-100%

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 5425 °C

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

Melting Point: 2996 °C

Density: 16.6g/cm³ at 20 °C Evaporation

Rate: N/A

Flash Point: N/A

Solubility in water: Insoluble

Ignition Temperature: 300 °C

Appearance and odor: grey powder and pieces

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Highly flammable

Explosive Limits: LEL: N/A UEL: N/A

Extinguishing Media:

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 Explosion Hazards: When heated to decomposition, aluminum fluoride may emit toxic fumes of fluorine. May react violently when impacted in contact with sodium and potassium. May explode when heated with reducing agents.

Unusual Fire and Explosion Hazards: N/A

SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid (stability): N/A

Incompatibility: Oxidizing agents, halogens, interhalogens, bases, hydrogen fluoride

Hazardous Decomposition or Byproducts: Metal oxide fumes

Hazardous Polymerization:

Conditions to avoid (hazardous polymerization):

SECTION VI - HEALTH HAZARD DATA

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

Health Hazards (Acute and Chronic):

Inhalation: May cause irritation to upper respiratory system

Ingestion: May cause nausea, vomiting, and metallic taste

Skin: May cause irritation, redness, and or burning

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

Target Organ : Lungs

Carcinogenicity: NTP?

IARC Monographs?

OSHA Regulated?

Medical Conditions Aggravated by Exposure:

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: Do not induce vomiting, seek medical attention immediately.

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

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

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. Store under inert gas such as Argon.

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