International Advanced Materials

2 North Cole Avenue, Spring Valley, NY 10977
Ph. (845) 352-5800 sales@iamaterials.com

Material Data Safety Sheet

Quick Identifier: Tantalum

I. PRODUCT IDENTIFICATION

Trade Name: Tantalum
Synonyms:
CAS #: 7440-25-7
Formula: Ta
Molecular Weight:

II. HAZARDOUS INGREDIENTS

Hazardous Components:	OSHA PEL:	ACGIH TLV:	Other Limits:
Tantalum	5 mg/m3	5 mg/m3 (10 OSTEL)	N/a

Sec. 302 (EHS): No **Sec. 304 RQ**: No **Sec. 313**: No
HMIS Ratings (0-4): **Health**: 1 **Flammability**: 0 **Reactivity**: 0
HMIS Protective Equipment: N/A

III. PHYSICAL DATA

Boiling Point: 5425 C
Specific Gravity (H_2O=1): 16.6
Vapor Pressure (mm Hg): 0 @ 20 C
% Volatiles by Volume: N/A
Melting Point: 2996 C
Vapor Density (Air=1): N/A
Evaporation Rate: N/A
Solubility in H_2O: Insoluble

Appearance and Odor: Powder or solid-Grey/Black Color

IV. FIRE AND EXPLOSION HAZARDS DATA

Flash Point/Method: Not applicable
Explosive Limits: **LEL**: N/A **UEL**: N/A

Extinguishing Media: N/A
Special Fire Fighting Procedures: Powder form: Caution must be used to prevent fire or explosion. To extinguish a metal powder fire, use dry sand, dry graphite or other class "D" fire extinguishing powder.
Unusual Fire and Explosion Hazards: No Unusual fire or explosion hazards are associated with this material.

V. HEALTH HAZARD INFORMATION

Routes of Entry: Inhalation, Skin and Eyes, Ingestion
Target Organs: N/A
Carcinogenicity: **NTP**: No **IARC Monographs**: No **OSHA Regulated**: No
LD50/LC50: No toxicity data recorded.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: Repeated or prolonged exposure to tantalum alloys may have caused a mild fibrosis and chronic rhinitis in exposed workers and may play a role in producing "hard metal pneumoconiosis" in workers exposed to tantalum as well as other metals.

Chronic: N/A

Ingestion:

Acute: Animal studies indicate absorption may occur.

Chronic: N/A

Skin:

Acute: Irritation to skin and mucous membranes.

Chronic: N/A

Eye:

Acute: Irritation to eyes.

Chronic: N/A

Signs and Symptoms of Exposures:

Inhalation:

Ingestion:

Skin:

Eye:

Medical Conditions Generally Aggravated by Exposure: Persons with impaired pulmonary function, airway diseases and conditions such as asthma, emphysema, chronic bronchitis, etc., may incur further disability if excessive concentrations of dust or fumes are inhaled.

EMERGENCY AND FIRST AID PROCEDURES:

INHALATION: Remove to fresh air. If breathing has stopped, perform artificial respiration & obtain medical assistance at once.

INGESTION: Have the affected person swallowed large quantities of water, & attempt to induce vomiting if conscious. Obtain medical assistance at once.

SKIN: Contamination with dust or powder can be removed by soap & water

EYE: Flush with copious amounts of clear water. If irritation persists, obtain medical assistance. Contact lenses should not be worn.

VI. REACTIVITY DATA

Stability: Stable

Incompatibility (Material to avoid): Tantalum powders react violently with fluorine, chlorine & bromine tri-fluoride. Contact of metallic dust with strong oxidizers may cause fire/explosion.

Hazardous Decomposition Products: Various elemental and metal oxides may be generated from melting or dross handling operations. Refer to Section II for permissible exposure limits.

Hazardous Polymerization: Will not occur

Conditions to Avoid: Not Applicable

VII. SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled: Solid form presents no special clean up problems. Powder or dust should be cleaned with a vacuum system utilizing a high efficiency particulate.

Waste Disposal Method: State or Federal regulations may require specific labeling, packing, storage, transportation and disposal procedures. Contact an Environmental Engineeer.

Hazard Label Information: N/A

Precautions to Be Taken in Handling and Storing: Powder should be moved or transported to minimize spill or release potential. Store metal and metal powder in dry area. Do not store

adjacent to mineral acids. Fine metal powder should be kept away from flames and sources of ignition.

VIII. SPECIAL PROTECTION INFORMATION

Respiratory Protection:	Use NIOSH approved respirators as specified by an industrial hygienist or qualified safety professional. Lung function tests are recommended for users of negative pressure devices.
Ventilation local exhaust	Should be used
Mechanical (General):	N/A
Protective Gloves:	Should be worn.
Eye Protection:	Wear safety glasses when risk of eye injury is present.
Other Protective Clothing or Equipment:	Protective clothing, such as uniforms, should be used if appropriate to handling operations.
Work/Hygienic/Maintenance Practices:	Usual hygiene practices should be followed.

IX. ADDITIONAL COMMENTS

Some of the chemicals listed herein are research or experimental substances which may be toxic, as defined by various governmental regulations. In accordance with Environmental Protection Agency regulations and the Toxic Substance Control Act (TSCA), these materials should only be handled by, or under the direct supervision of a "technically qualified individual", as defined in 40 CFR 710.2(aa).

The above information is accurate to the best of our knowledge. However, since data, safety standards, and government regulations are subject to change, and the conditions of handling and use or misuse are beyond our control, **International Advanced Materials** MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN, AND DISCLAIMS ALL LIABILITY FOR RELIANCE THEREON.

Users should satisfy themselves that they have all current data relevant to their particular use.