



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name: Tantalum Powder

Use of the Substance/Preparation: Various, Industrial Products

Supplier: A&R Merchants Inc.

E-Mail Address: info@armerchants.com

US: A&R Merchants Inc. - +1.800.805.9150

2. HAZARDS IDENTIFICATION

Indication of danger: F - Highly flammable.

Principle Routes of Exposure: Inhalation, Eye contact, Skin contact

POTENTIAL HEALTH EFFECTS

Eye Contact: May cause mechanical irritation.

Skin Contact: May cause mechanical irritation.

Inhalation: Dust may be irritating to respiratory tract. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. See also Section 8.

Ingestion: Health injuries are not known or expected under normal use. Low hazard for usual industrial or commercial handling.

Carcinogenic Effects: Does not contain any substances listed by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program), OSHA (Occupational Safety and Health Administration), ACGIH (American Conference for Governmental Industrial Hygienists) or EU (European Union). See also Section 11.

Target Organ Effects: Lungs, Eyes, Skin

Medical Conditions Aggravated by Exposure: Asthma, Respiratory disorder

Potential Environmental Effects: No special environmental precautions required. See also Section 12.

A&R Merchants Inc.

2101 NW 93rd Avenue, Doral, Florida 33172, United States Of America

Tel: +1.800.805.9150 • Email: info@armerchants.com

Emergency Email: ronald.gilerman@armerchants.com

Emergency Email: nina.svakhina@armerchants.com

Website: www.armerchants.com



3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name CAS Number EINECS/ELINCS

Number Weight % EU Classification Tantalum 7440-25-7 231-135-5 100 F (powder form)

4. FIRST AID MEASURES

Skin Contact: Wash thoroughly with soap and water. Seek medical attention if redness, swelling, itching, or burning occurs.

Eye Contact: Flush eyes immediately with large amounts of water for 15 minutes. Seek medical attention if redness, swelling, itching, burning or visual disturbances occur.

Inhalation: If cough, shortness of breath or other breathing problems occur, move to fresh air. Seek medical attention if symptoms persist. If necessary, restore normal breathing through standard first aid measures.

Ingestion: Do not induce vomiting. If conscious, give several glasses of water. Never give anything by mouth to an unconscious person.

Notes to Physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special Protective Equipment for Firefighters: Wear suitable protective equipment. In the event of fire, wear self-contained breathing apparatus.

Specific Hazards: Dust/air mixture may ignite or explode. May ignite if exposed to shock, friction or heating. Avoid friction and static electricity.

Hazardous Decomposition and/or Combustion Products: Miscellaneous thermal decomposition products.

Risk of Dust Explosion: Dust/air mixtures may ignite or explode.



6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid dust formation. Ensure adequate ventilation. Use personal protective equipment. See also Section 8.

Methods for Cleaning Up: Clean up promptly by vacuum. Use of a vacuum with high efficiency particulate air (HEPA) filtration is recommended. Do not create a dust cloud by using a brush or compressed air. Pick up and transfer to properly labelled containers. See Section 13.

Environmental Precautions: No special environmental precautions required. Local authorities should be advised if significant spillages cannot be contained.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Do not breathe dust. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Do not create a dust cloud by using a brush or compressed air. Take precautionary measures against static discharge. All metal parts of the mixing and processing equipment must be earthed/grounded. Ensure all equipment is electrically earthed/grounded before beginning transfer operations. Fine dust is capable of penetrating electrical equipment and may cause electrical shorts.

Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Do not store together with strong oxidizing agents. Keep in properly labeled containers

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

Tantalum, CAS RN 7440-25-7: ACGIH: 5 mg/m³, TLV-TWA

OSHA: 5 mg/m³, TWA

Canada: 5 mg/m³, TWA

10 mg/m³, STEL

Austria: 5 mg/m³, TWA

10 mg/m³, STEL

Belgium: 5 mg/m³, TWA

Denmark: 5 mg/m³, TWA

Finland: 10 mg/m³, 8-hour limit

Germany TRGS 900: 10 mg/m³, inhalable

3 mg/m³, respirable

Ireland: 10 mg/m³, TWA, inhalable

4 mg/m³, TWA, respirable

Italy: 5 mg/m³, TWA



Netherlands: 10 mg/m³, TWA, inhalable

5 mg/m³, TWA, respirable

Norway 10 mg/m³, TWA, total dust

5 mg/m³, TWA, respirable

Spain: 5 mg/m³, VLA

Sweden: 10 mg/m³, TWA, total dust

5 mg/m³, TWA, respirable

UK WEL: 5 mg/m³ TWA (metal)

10 mg/m³ STEL (metal)

ACGIH: American Conference of Governmental Industrial Hygienists

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Health and Safety Administration

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

TLV: Threshold Limit Value

TWA: Time Weighted Average

MAK: Maximale Arbeitsplatzkonzentration

OES: Occupational Exposure Standard

TRGS: Technische Regeln für Gefahrstoffe

(Technical Rule for Hazardous Materials)

ENGINEERING CONTROLS Ensure adequate ventilation to maintain exposures below occupational limits.

Provide appropriate exhaust ventilation at machinery and at places where dust can be generated.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Approved respirator may be necessary if local exhaust ventilation is not adequate.

Hand Protection: Wear appropriate chemical resistant gloves.

Eye Protection: Wear eye/face protection. Safety glasses with side-shields. Goggles.

Skin and Body Protection: Wear suitable protective clothing.

Other: Handle in accordance with good industrial hygiene and safety practice. Emergency eyewash and safety shower should be located nearby.



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Black Powder

Odor: None

pH: Not applicable

Density: Not determined

Specific Gravity: 14.49 (water=1)

Boiling Point/Range: 5429°C

Melting Point/Range: 2996°C

Vapor Pressure: 1 kpa @ 3024°C

Water Solubility: Insoluble

Solvent Solubility: Soluble In: hydrofluoric acid, fused alkali, fuming sulfuric acid, nitric acid/
hydrofluoric acid mixtures Insoluble In: acids, alkali

Evaporation Rate: Not determined

Viscosity: Not determined

Partition Coefficient (n-octanol/water): Not determined

Flash Point: Not determined

Method: Not applicable

Explosion Limits in Air - Upper (%): Not determined

Explosion Limits in Air - Lower (%): < 200 g/m³ (powder)

Minimum Ignition Temperature: 630°C (dust cloud); 300°C (dust layer)

10. STABILITY AND REACTIVITY

Stability: Finely divided material may ignite spontaneously.

Hazardous Polymerization: Hazardous polymerization does not occur.

Mechanical Sensitivity (shock): Not sensitive to mechanical impact.

Conditions to Avoid: Keep away from heat and sources of ignition. Avoid dust formation.
Incompatible Halogens, oxidizing materials, acids.

TANTALUM Incompatibilities:

Bromine Trifluoride: Incandescent reaction.

Fluorine: Ignites on contact.

Lead Chromate: May react explosively.

Mineral Acids: Incompatible.

Oxidizers (Strong): Fire and explosion hazard.

Sulfur Trioxide: Incompatible.

Hazardous Decomposition and/or Combustion Products:

Miscellaneous thermal decomposition products.

Static Discharge Effects: Take precautionary measures against static discharges.



11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY

Oral LD50: Not determined.

Inhalation LC50: Not determined.

Dermal LD50: Not determined.

Eye Irritation: Not determined.

Skin Irritation: Not determined.

SUBCHRONIC TOXICITY

Not determined.

CHRONIC TOXICITY

Carcinogenic Effects: Does not contain any substances listed by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program), OSHA (Occupational Safety and Health Administration), ACGIH (American Conference for Governmental Industrial Hygienists) or EU (European Union).

Mutagenic Effects: Not determined.

Reproductive Toxicity: Not determined.

Sensitizing Effects: Contains no known sensitizers.

Synergistic Materials: None reasonably foreseeable.

12. ECOLOGICAL INFORMATION

Aquatic Toxicity: Not determined

ENVIRONMENTAL FATE

Mobility: Not expected to migrate. Insoluble.

Bioaccumulation: Not determined.

Persistence / Degradability: Not determined.

13. DISPOSAL CONSIDERATIONS

Product, as supplied, should be disposed of in accordance with the regulations issued by the appropriate federal, state and local authorities. Same consideration should be given to containers and packaging.



14. TRANSPORT INFORMATION

UN Number: 3089

UN Proper Shipping Name: Metal powders, flammable, n.o.s. (tantalum)

UN Shipping Class: 4.1

UN Packing Group: II

IMDG (International Maritime Organization's Dangerous Goods Code):

Use UN classification listed above.

IATA (International Air Transport Association): Use UN classification listed above.

15. REGULATORY INFORMATION

Indication of danger:

F - Highly flammable.

Risk Phrases: R11 - Highly flammable.

International Inventories

All components of this product are listed on or exempt from the following inventories:

YES - Australian Inventory of Chemical Substances (AICS)

YES - Canadian Domestic Substances List (DSL)

YES - Chinese Inventory

YES - European Inventory of Existing Commercial Chemical Substances (EINECS)

YES - Japanese Existing and New Chemical Substances (ENCS)

YES - Korean Existing Chemicals List (KECL)

NO - New Zealand Hazardous Substances and New Organisms Act (HSNO)

YES - Philippine Inventory of Chemicals and Chemical Substances (PICCS)

YES - United States Toxic Substances Control Act (TSCA) Inventory

Product Name: Tantalum Powder

Chemical Name

Tantalum -- (Tested and Found to be Not Toxic): Listed

16. OTHER INFORMATION

Prepared by: AR Merchants Inc – Ronald Gilerman