

Safety Data Sheet

Product No. 8075, 83, 88, 9555, Tantalum Products

Issue Date (08-07-13)

Review Date (08-31-17)

Section 1: Product and Company Identification

Product Name: 8075, 83, 88, 9555, Tantalum Products

Synonym: Ta

Company Name

Ted Pella, Inc., P.O. Box 492477, Redding, CA 96049-2477

Inside USA and Canada 1-800-237-3526 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

Outside USA and Canada 1-530-243-2200 (Mon-Thu. 6:00AM to 4:30PM PST; Fri 6:00AM to 4:00PM PST)

CHEMTREC USA and Canada Emergency Contact Number 1-800-424-9300 24 hours a day

CHEMTREC Outside USA and Canada Emergency Contact Number +1-703-741-5970 24 hours a day

Section 2: Hazard Identification

2.1 Classification of the substance or mixture

Tantalum - pieces, pellets, shot, sheet, foil, rod, wire, target: Not classified as hazard.

GHS Pictograms: NA

GHS Categories: NA

2.2 Label elements

Void on solid forms

Hazard Pictograms: NA

Signal Word: NA

Hazard Statements: NA

Precautionary Statements: NA

2.3 Other hazards

Tantalum powder is flammable.

Health Effects:

NFPA Hazard Rating: Health: 0; Fire: 0; Reactivity: 0

HMIS® Hazard Rating: Health: 0; Fire: 0; Reactivity: 0

(0=least, 1=Slight, 2=Moderate, 3=High, 4=Extreme)

Results of PBT and vPvB assessment:

PBT: ND

vPvB: ND

Emergency overview

Appearance: Gray to bluish, hard, malleable, ductile solid foil or disc.

Immediate effects: ND

Potential health effects

Primary Routes of entry (powders or dust): Inhalation and ingestion.

Signs and Symptoms of Overexposure: ND

Eyes: May cause mild irritation. No chronic effects are reported.

Skin: May cause irritation.

Ingestion: Evidence suggests low toxicity potential due to poor absorption by the oral route. Animal studies indicate absorption may occur.

Inhalation: Repeated or prolonged exposure to tantalum allows may have caused a 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.

Other: Has anticoagulant effect when given intravenously.

Chronic Exposure: See inhalation.

Chemical Listed as Carcinogen or Potential Carcinogen: None listed.

See Toxicological Information (Section 11)

Potential environmental effects

See Ecological Information (Section 12)

Section 3: Composition / Information on Ingredients

Principle Hazardous Component(s) (chemical and common name(s)) (Cas. No)	%	OSHA PEL mg/m3	ACGIH TLV mg/m3	NTP Carcinogen	IARC Carcinogen	OSHA regulated Carcinogen
Tantalum (7440-25-7)	≤ 100	5 (dust)	5	No	No	No

Section 4: First Aid Measures

If accidental overexposure is suspected

Eye(s) Contact:

Solid metal:

Get medical attention if any damage to the eye is caused by the metal.

Dust:

Dust or powder should be flushed from the eyes with copious amounts of clean water. If irritations persist obtain medical assistance. Contact lenses should not be worn if working with metal dust and powders.

Skin Contact:

Solid metal:

Flush contaminated skin with plenty of water. Cuts should be treated promptly and covered.

Dust:

Skin contamination with dust or powder can be removed by washing with soap and water. If irritation persists obtain medical assistance.

Inhalation:

Solid metal:

Not applicable for solid metal.

Dust:

Breathing difficulty caused by inhalation of dust or fume requires removal to fresh air. If breathing has stopped, perform artificial respiration and obtain medical assistance at once.

Ingestion:

Solid metal:

Not applicable for solid metal.

Dust:

Swallowing metal powder or dust can be treated by having the affected person swallow large quantities of water and attempting to induce vomiting if conscious. Obtain medical assistance at once.

Note to physician

Treatment: Treat symptomatically.

Medical Conditions generally Aggravated by Exposure: ND

Section 5: Fire Fighting Measures

Flash Point: ND

Flammable Limits (Powder/dust): Upper: ND, Lower: <0.2 oz/ft³

Auto-ignition point: ND

Fire Extinguishing Media (Powder/dust): To extinguish metal powder fire use dry sand, dry graphite or other class "D" fire extinguishing powder. For fires involving bulk forms, use extinguishing media suitable for surrounding materials and type of fire.

Special Fire Fighting Procedures (Powder/dust): 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 run off to prevent environmental pollution.

Unusual Fire and Explosion Hazards: When heated, all forms of the metal (ingot, foil, powder) will react with water or steam to produce flammable/explosive hydrogen gas. Avoid creating fine dusts, because as a powder, this product is capable of creating a dust explosion.

Hazardous combustion products: Various elemental metals and oxides may be generated from the melting or dross handling operations.

DOT Class: Flammable (Powder or Dust)

Section 6: Accidental Release Measures

Steps to be Taken in Case Material is Released or Spilled: In solid form this material poses no special clean-up problems. If this material is in powder or dust form, clean up should be conducted with vacuum system utilizing a high efficiency particulate air filtration system. Caution should be taken to minimize airborne generation of powder or dust and avoid contamination of air and water. Properly label all materials collected in waste container. Recycle material.

Waste Disposal Methods: Dispose of waste according to Federal, State and Local Regulations.

Section 7: Handling and Storage

Precautions to be Taken in Handling and Storage:

Storage: Store and handle in accordance with all current regulations and standards. Store finely-divided material in original shipping container or in metal containers. Store finely-divided material away from oxidizers and mineral acids.

Handling: Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking.

Storage temperature: Ambient.

Storage Pressure: NA

Section 8: Exposure Controls / Personal Protection

Engineering Controls

Ventilation required (Dust): Implement engineering and work practice controls to reduce exposure.

Personal Protection Equipment

Respiratory protection: Use protection when working with powders and dust.

Protective gloves: Wear protective gloves.

Skin protection: Wear protective clothing and do not blow dust off clothing or skin with compressed air.

Eye protection: Wear protective goggles, face shield, or safety glasses.

Additional equipment: Maintain eyewash capable of sustained flushing, safety drench shower and facilities for washing.

Hygiene: Wash thoroughly after handling.

Exposure Guidelines

See Composition/Information on Ingredients (Section 3)

Section 9 Physical and Chemical Properties

Appearance and Physical State: Gray solid in various solid forms.

Odor (threshold): Odorless (NA)

Specific Gravity (H₂O=1): 16.6
Vapor Pressure (mm Hg): NA
Vapor Density (air=1): NA
Percent Volatile by volume: NA

Evaporation Rate (butyl acetate=1): NA
Boiling Point: 5425 °C
Melting point: 2996 °C
pH: NA
Solubility in Water: Insoluble
Molecular Weight: ND

Section 10: Stability and Reactivity

Stability: Stable.

Conditions to Avoid:

Materials to Avoid (Incompatibility):

Solid: None

Dust: Tantalum powders react violently with fluorine, chlorine and bromine trifluoride. Contact of metallic dust with strong oxidizers may cause fire/explosions.

Hazardous Decomposition Products: Various elemental metals and oxides may be generated from melting and dross handling operations.

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Results of component toxicity test performed:

Human experience:

This product **does or does** not contain any compounds listed by NTP or IARC or regulated by OSHA as a carcinogen.

Section 12: Ecological Information

Ecological Information: ND

Chemical Fate Information: ND

Section 13 Disposal Considerations

RCRA 40 CFR 261 Classification: ND

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues.

Federal, State and local laws governing disposal of materials can differ. Ensure proper disposal compliance with proper authorities before disposal.

Section 14: Transportation Information

Solid forms are not regulated.

Transportation information for powder/dust:

US DOT Information: Proper shipping name: Metal powders, flammable, n.o.s.

(Tantalum powder)

Hazard Class: 4.1

Packaging group: II

UN Number: UN3089

Limitations: Powder forms

IATA: Proper shipping name: Metal powders, flammable, n.o.s. (Tantalum powder)

Hazard Class: 4.1

Packing group: II

UN Number: UN3089

Limitations: Powder forms

IMO: Proper shipping name: Metal powders, flammable, n.o.s. (Tantalum powder)

Class: 4.1

UN Number: UN3089

Packing group: II

Marine Pollutant: No

Canadian TDG: Metal powders, flammable, n.o.s. (Tantalum powder)

Section 15: Regulatory Information**United States Federal Regulations**

SDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200.

SARA: Not listed/NA

SARA Title III: NA

RCRA: ND

TSCA: ND

CERCLA: ND

State Regulations

California Proposition 65: Not listed.

International Regulations

Canada WHMIS: ND

Europe EINECS Numbers: ND

Section 16: Other Information

Label Information: ND

European Risk and Safety Phrases: ND

European symbols needed: ND

Canadian WHMIS Symbols: ND

Abbreviations used in this document

NE= Not established

NA= Not applicable

NIF= No Information Found

ND= No Data

Disclaimer

Ted Pella, Inc. makes no warranty of any kind regarding the information furnished herein. Users should independently determine the suitability and completeness of information from all sources. While this data is presented in good faith and believed to be accurate, it should be considered only as a supplement to other

information gathered by the user. It is the User's responsibility to assure the proper use and disposal of these materials as well as the safety and health of all personnel who may work with or otherwise come in contact with these materials.

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