



CHEMICAL PRODUCT SAFETY DATA SHEET

Prepared in accordance with GB/T 16483 and GB/T 17519.

MATERION

Product name: Tantalum Powder

Issue date: 05-09-2022

Version #: 01

SDS No: H03

SECTION 1 Chemical product and company identification

Chinese name of chemical	钽粉
English name of chemical	Tantalum Powder
Synonyms	190D Pure Ta
Manufacturer/Supplier	Materion Newton Inc.
Address	6070 Parkland Boulevard Mayfield Heights, OH 44124 United States
Contact person	Theodore Knudson
Telephone	1+216.383.4019
e-mail	ehs@materion.com
Emergency telephone number	See Section 16.
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SECTION 2 Hazards identification

Emergency overview	Exposure to powder or dusts may be irritating to eyes, nose and throat. The material as sold in solid form is generally not considered hazardous. However, if the process involves grinding, melting, cutting or any other process that causes a release of dust or fumes, hazardous levels of airborne particulate could be generated.
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GHS hazard categories
Not classified.

Label elements

Pictograms	None.
Signal word	None.
Hazard statement	The substance does not meet the criteria for classification.

Precautionary statement

Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.

Physical and chemical hazards The product is stable and non-reactive under normal conditions of use, storage and transport. No unusual fire or explosion hazards noted.

Health hazards Dust may irritate respiratory system. Dust or powder may irritate the skin. Expected to be a low ingestion hazard. Dust may irritate the eyes.

Environmental hazards The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Supplemental information For further information, please contact the Product Stewardship Department at +1.216.383.4019.

SECTION 3 Composition/information on ingredients

Substance/mixture Substance

The components are not hazardous or are below required disclosure limits.

SECTION 4 First aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms and health effects	Dusts may irritate the respiratory tract, skin and eyes.
Personal protection for first-aid responders	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5 Fire-fighting measures

Extinguishing media	Dry sand, sodium chloride powder, graphite powder or Met-L-X powder.
Extinguishing media to avoid	Carbon dioxide (CO ₂). Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards	During fire, gases hazardous to health may be formed.
Special fire fighting procedures	Move containers from fire area if you can do so without risk.
Protection of fire-fighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
General fire hazards	No unusual fire or explosion hazards noted.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures	
For non-emergency personnel	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Clean-up methods and materials and containment measures	Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. The product is immiscible with water and will spread on the water surface. Stop the flow of material, if this is without risk. Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water. Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see section 13 of the SDS.
Prevention of secondary hazards	Not available.

SECTION 7 Handling and storage

Handling	Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Practice good housekeeping.
Storage	Store in tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

SECTION 8 Exposure controls/personal protection**Exposure limits**

China OELs. Occupational Exposure Limits for Hazardous Agents in the Workplace, Chemical Hazardous Agents (GBZ 2.1-2007)

Material	Type	Value
Tantalum Powder	PC-TWA	5 mg/m ³

Biological limit values	No biological exposure limits noted for the ingredient(s).
Monitoring methods	Follow standard monitoring procedures.

Engineering measures	If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.
Personal protective equipment	
Respiratory protection	Wear respirator with dust filter.
Hand protection	Wear gloves to prevent contact with particulate or solutions.
Eye protection	Wear approved safety glasses, goggles, face shield and/or welder's helmet when risk of eye injury is present, particularly during operations that generate dust, mist or fume.
Skin and body protection	Wear suitable protective clothing.
Hygiene measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9 Physical and chemical properties

Appearance

Physical state	Solid.
Form	Powder.
Color	Dark grey.
Odor	None.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	5424.8 °F (2996 °C) / Not applicable.
Boiling point, initial boiling point, and boiling range	Not applicable.
Flash point	Not applicable.
Flammability limit - lower (%)	Not applicable.
Flammability limit - lower (%) temperature	Not applicable.
Flammability limit - upper (%)	Not applicable.
Flammability limit - upper (%) temperature	Not applicable.
Explosive limit - lower (%)	Not applicable.
Explosive limit - lower (%) temperature	Not applicable.
Explosive limit - upper (%)	Not applicable.
Explosive limit - upper (%) temperature	Not applicable.
Vapor pressure	Not applicable.
Vapor pressure temp.	Not applicable.
Vapor density	Not applicable.
Relative density	Not applicable.
Density	14.49 g/cm ³ 16.60 g/cm ³
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Evaporation rate	Not applicable.
Other data	
Explosive properties	Not explosive.

Flash point class	Not applicable.
Molecular formula	Ta
Molecular weight	180.95 g/mol
Oxidizing properties	Not oxidizing.
Viscosity	Not applicable.

SECTION 10 Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Fluorine.
Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11 Toxicological information

Acute toxicity	None known.
Routes of exposure	Skin contact. Eye contact.
Symptoms	None known.
Skin corrosion/irritation	Not classified.
Serious eye damage/eye irritation	None known.
Respiratory or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitizer	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
Toxic to reproduction	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity following single exposure	Not classified.
Specific target organ toxicity following repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	None known.

SECTION 12 Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this substance.
Bioaccumulation	No data available.
Mobility in soil	The product is immiscible with water and will spread on the water surface.
Other hazardous effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13 Disposal considerations

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Local disposal regulations Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

SECTION 14 Transport information

CNDG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15 Regulatory information

Law of the People's Republic of China on Prevention and Control of Occupational Diseases

Not regulated.

Regulations on the Control over Safety of Dangerous Chemicals

Not regulated.

Provision on the Environmental Administration of New Chemical Substances

China Inventory of Existing Chemical Substances

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Other regulations

This safety data sheet conforms to the following laws, regulations and standards:
 Measures for the Safe Use of Chemicals in Workplaces
 General Rules for Preparation of Precautionary Labels for Chemicals (GB15258-2009)
 Regulations on Labor Protection in Workplaces Where Toxic Products Are Used
 Packing Symbol of Dangerous Goods(GB190-2009)
 Regulations on the Control over Safety of Dangerous Chemicals
 Safety Data Sheet for Chemical Products - Content and Order of Sections (GB/T 16483-2008)
 Packing - Pictorial Marking for Handling of Goods (GB/T191-2009)

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Montreal Protocol

Not applicable.

Kyoto protocol

Not applicable.

Basel Convention

Not applicable.

SECTION 16 Other information

References

EPA: AQUIRE database
 GB6944-2012: Classification and Code of Dangerous Goods.
 GB12268-2012: List of Dangerous Goods.
 NLM: Hazardous Substances Data Base
 US. IARC Monographs on Occupational Exposures to Chemical Agents

Further information

Transportation Emergency
Call Chemtrec at:
US: 800.424.9300
International: 703.741.5970
Spain: 900.868.538
Switzerland: 0800.564.402
Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059
South Korea Toll-free Number – 080-880-0468

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