



# SAFETY DATA SHEET

**MATERION**

## 1. Identification

<b>Product identifier</b>	<b>Tantalum Product</b>
<b>Other means of identification</b>	
SDS number	31
<b>Recommended use</b>	Manufacture of computer, electronic and optical products, electrical equipment General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment Scientific research and development Other: Manufacture of medical and defense equipment
<b>Recommended restrictions</b>	Professional uses: Public domain (administration, education, entertainment, services, craftsmen) Consumer uses: Private households (= general public = consumers)

## Manufacturer/Importer/Supplier/Distributor information

### Manufacturer

<b>Company name</b>	Materion Electronic Materials
<b>Address</b>	6070 Parkland Boulevard Mayfield Heights, OH 44124 United States
<b>Telephone</b>	1.216.383.4019
<b>Website</b>	materion.com
<b>E-mail</b>	Theodore.Knudson@materion.com
<b>Contact person</b>	Theodore Knudson
<b>Emergency phone number</b>	See Section 16.
<b>Supplier</b>	See above.

## 2. Hazard identification

<b>Physical hazards</b>	Flammable solids	Category 2
<b>Health hazards</b>	Not classified.	
<b>Environmental hazards</b>	Not classified.	

### Label elements



<b>Signal word</b>	None.
<b>Hazard statement</b>	Not available.
<b>Precautionary statement</b>	
<b>Prevention</b>	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use explosion-proof electrical/ventilating/lighting equipment. Wear protective gloves/protective clothing/eye protection/face protection.
<b>Response</b>	In case of fire: Use appropriate media for extinction.
<b>Storage</b>	Store away from incompatible materials.
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Other hazards</b>	None known.
<b>Supplemental information</b>	For further information, please contact the Product Stewardship Department at +1.800.862.4118.

## 3. Composition/information on ingredients

### Substances

Chemical name	Common name and synonyms	CAS number	%
Tantalum		7440-25-7	99.9 - 100

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
<b>Most important symptoms/effects, acute and delayed</b>	Dusts may irritate the respiratory tract, skin and eyes.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Dry sand, sodium chloride powder, graphite powder or Met-L-X powder.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire. Carbon dioxide (CO <sub>2</sub> ).
<b>Specific hazards arising from the chemical</b>	Not applicable.
<b>Special protective equipment and precautions for firefighters</b>	Pressure-demand self-contained breathing apparatus must be worn by firefighters or any other persons potentially exposed to the particulate released during or after a fire.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up.
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<b>Methods and materials for containment and cleaning up</b>	<p>The product is immiscible with water and will spread on the water surface. Stop the flow of material, if this is without risk. Collect dust using a vacuum cleaner equipped with HEPA filter.</p> <p>Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Avoid the generation of dusts during clean-up. Following product recovery, flush area with water.</p> <p>Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.</p>
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

#### 7. Handling and storage

<b>Precautions for safe handling</b>	Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure. Practice good housekeeping.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in original tightly closed container. Store in a well-ventilated place.

#### 8. Exposure controls/personal protection

##### Occupational exposure limits

##### Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Material	Type	Value	Form
Tantalum Product	TWA	5 mg/m <sup>3</sup>	Dust.
Components	Type	Value	Form
Tantalum (CAS 7440-25-7)	TWA	5 mg/m <sup>3</sup>	Dust.

##### Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Material	Type	Value
Tantalum Product	TWA	5 mg/m <sup>3</sup>

**Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)**

<b>Components</b>	<b>Type</b>	<b>Value</b>
Tantalum (CAS 7440-25-7)	TWA	5 mg/m <sup>3</sup>

**Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)**

<b>Material</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Tantalum Product	TWA	3 mg/m <sup>3</sup>	Respirable fraction.
		10 mg/m <sup>3</sup>	Inhalable fraction.

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Tantalum (CAS 7440-25-7)	TWA	3 mg/m <sup>3</sup>	Respirable fraction.
		10 mg/m <sup>3</sup>	Inhalable fraction.

**Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)**

<b>Material</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Tantalum Product	TWA	5 mg/m <sup>3</sup>	Dust.

<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Tantalum (CAS 7440-25-7)	TWA	5 mg/m <sup>3</sup>	Dust.

**Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)**

<b>Material</b>	<b>Type</b>	<b>Value</b>
Tantalum Product	15 minute	10 mg/m <sup>3</sup>
	8 hour	5 mg/m <sup>3</sup>

<b>Components</b>	<b>Type</b>	<b>Value</b>
Tantalum (CAS 7440-25-7)	15 minute	10 mg/m <sup>3</sup>
	8 hour	5 mg/m <sup>3</sup>

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the Occupational Exposure Limit (OEL), suitable respiratory protection must be worn. 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.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection**

**Hand protection** Not normally needed.

**Other** Wear suitable protective clothing.

**Respiratory protection** Wear respirator with dust filter.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations**

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.

## 9. Physical and chemical properties

**Appearance**

**Physical state** Solid.

**Form** Powder.

**Color** Bluish grey

**Odor** None known.

Odor threshold	Not applicable
pH	Not applicable
Melting point/freezing point	5424.8 °F (2996 °C) estimated / 5424.8 °F (2996 °C) 5424.8 °F (2996 °C) estimated
Initial boiling point and boiling range	9804.2 °F (5429 °C) estimated
Flash point	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas)	Flammable solid.
<b>Upper/lower flammability or explosive limits</b>	
Flammability limit - lower (%)	Not applicable
Flammability limit - upper (%)	Not applicable
Explosive limit - lower (%)	Not applicable
Explosive limit - upper (%)	Not applicable
Vapor pressure	Not available.
Vapor density	Not applicable
Relative density	Not applicable
<b>Solubility(ies)</b>	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not applicable
Auto-ignition temperature	Not applicable
Decomposition temperature	Not applicable
Viscosity	Not applicable
<b>Other information</b>	
Density	15.55 g/cm <sup>3</sup> estimated 16.60 g/cm <sup>3</sup>
Molecular formula	Ta
Molecular weight	180.95 g/mol
Specific gravity	15.55 estimated

## 10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Fluorine.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	Dust may irritate respiratory system.
Skin contact	Dust or powder may irritate the skin.
Eye contact	Dust may irritate the eyes.
Ingestion	Expected to be a low ingestion hazard.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Dusts may irritate the respiratory tract, skin and eyes.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	None known.
<b>Skin corrosion/irritation</b>	Prolonged skin contact may cause temporary irritation.
<b>Serious eye damage/eye irritation</b>	Direct contact with eyes may cause temporary irritation.

**Respiratory or skin sensitization**

**Canada - Alberta OELs: Irritant**

Tantalum (CAS 7440-25-7) Irritant

<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	Not available.
<b>Germ cell mutagenicity</b>	Not available.
<b>Carcinogenicity</b>	Not available.
<b>Reproductive toxicity</b>	Not available.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

**12. Ecological information**

<b>Ecotoxicity</b>	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.
<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. Disposal considerations**

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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.

**14. Transport information**

<b>TDG</b>	Not regulated as dangerous goods.
<b>IATA</b>	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 available.

## 15. Regulatory information

### Canadian regulations

#### Controlled Drugs and Substances Act

Not regulated.

#### Export Control List (CEPA 1999, Schedule 3)

Not listed.

#### Greenhouse Gases

Not listed.

#### Precursor Control Regulations

Not regulated.

### International regulations

#### Stockholm Convention

Not applicable.

#### Rotterdam Convention

Not applicable.

#### Kyoto protocol

Not applicable.

#### Montreal Protocol

Not applicable.

#### Basel Convention

Not applicable.

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	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).

## 16. Other information

Issue date 05-08-2023

**Version #**

01

**Disclaimer**

Materion Electronic Materials cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

To avoid any misunderstandings or incorrect assumptions by the receiver of the safety information, it should be made clear that the supplied information is not in the form of a Safety Data Sheet (SDS), but is actually a voluntary Product Information Sheet closely following the guidelines of the Safety Data Sheet – COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 (REACH/SDS).