



SAFETY DATA SHEET

MATERION

1. Identification

Product identifier **Tantalum Product**

Other means of identification

SDS number 31

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Materion Advanced Materials Group

Address 42 Mt. Ebo Road South

Brewster, NY 10509

United States

Telephone 1+845.279.0900

Website materion.com

E-mail Not available.

Emergency phone number Chemtrec 1+703.527.3887

2. Hazard(s) identification

Physical hazards Flammable solids Category 2

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements



Signal word None.

Hazard statement Not available.

Precautionary statement

Prevention 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.

Response In case of fire: Use appropriate media for extinction.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

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

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Rinse skin with water/shower. 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. If ingestion of a large amount does occur, call a poison control center immediately.

Most important symptoms/effects, acute and delayed Dusts may irritate the respiratory tract, skin and eyes.

5. Fire-fighting measures

Suitable extinguishing media DRY sand, sodium chloride powder, graphite powder or Met-L-X powder.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire. Carbon dioxide (CO2).

Specific hazards arising from the chemical Not applicable.

Special protective equipment and precautions for firefighters Not available.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up.

Methods and materials for containment and cleaning up

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.

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.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid prolonged exposure. Practice good housekeeping.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Store in a well-ventilated place.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

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

US. OSHA Table Z-3 (29 CFR 1910.1000)

Material	Type	Value	Form
Tantalum Product	TWA	5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Components	Type	Value	Form
Tantalum (CAS 7440-25-7)	TWA	5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.
		50 mppcf	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
		15 mppcf	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value	Form
Tantalum Product	STEL	10 mg/m3	Dust.
	TWA	5 mg/m3	Dust.

Components	Type	Value	Form
Tantalum (CAS 7440-25-7)	STEL	10 mg/m3	Dust.
	TWA	5 mg/m3	Dust.

US. California Code of Regulations, Title 8, Section 5155. Airborne Contaminants

Material	Type	Value	Form
Tantalum Product	PEL	5 mg/m3	Dust.

Components	Type	Value	Form
Tantalum (CAS 7440-25-7)	PEL	5 mg/m3	Dust.

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 Not available.

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 Not available.

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point 5424.8 °F (2996 °C) estimated
5424.8 °F (2996 °C)

Initial boiling point and boiling range 9804.2 °F (5429 °C) estimated

	9804.2 °F (5429 °C)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 0.0000001 kPa (77 °F (25 °C)) 0.00001 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Insoluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	15.55 g/cm3 estimated 14.49 g/cm3 16.60 g/cm3
Molecular formula	Ta
Molecular weight	180.95 g/mol
Specific gravity	15.55 estimated 14.49 16.6

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Not available.
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	Not available.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory information**US federal regulations****Toxic Substances Control Act (TSCA)****TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical

No (Exempt)

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

16. Other information, including date of preparation or last revision

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Version # 04

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