



# SAFETY DATA SHEET

**MATERION**

## 1. Identification

**Product identifier** Tantalum Aluminum Targets

**Other means of identification**  
**SDS number** G50

**Recommended use** Manufacture of computer, electronic and optical products, electrical equipment  
 Scientific research and development  
 Other: Manufacture of medical and defense equipment

**Recommended restrictions** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
 Consumer uses: Private households (= general public = consumers)

### Manufacturer/Importer/Supplier/Distributor information

#### Manufacturer

**Company name** Materion Advanced Materials

**Address** 6070 Parkland Boulevard  
 Mayfield Heights, OH 44124  
 United States

**Telephone** EH&S 1.216.383.4019

**Website** www.materion.com

**E-mail** ehs@materion.com

**Contact person** Theodore Knudson

**Emergency phone number** See Section 16.

**Supplier** See above.

## 2. Hazard identification

**Physical hazards** Not classified.

**Health hazards** Specific target organ toxicity, repeated exposure Category 1

**Environmental hazards** Not classified.

**Label elements**

**Hazard symbol** None.

**Signal word** None.

**Hazard statement** 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.

**Precautionary statement**

**Prevention** Observe good industrial hygiene practices.

**Response** Get medical advice/attention if you feel unwell.

**Storage** Store away from incompatible materials.

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

**Other hazards** None known.

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

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Tantalum		7440-25-7	86 - 88

Chemical name	Common name and synonyms	CAS number	%
Aluminum		7429-90-5	14 - 16

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Under normal conditions of intended use, this material does not pose a risk to health.
<b>General information</b>	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Powder. Dry sand. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Water.
<b>Specific hazards arising from the chemical</b>	Non-combustible, substance itself does not burn.
<b>Special protective equipment and precautions for firefighters</b>	Wear suitable protective equipment.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Stop the flow of material, if this is without risk. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	No special environmental precautions required.

#### 7. Handling and storage

<b>Precautions for safe handling</b>	Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store away from incompatible materials (see Section 10 of the SDS).

#### 8. Exposure controls/personal protection

##### Occupational exposure limits

##### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.

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

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	5 mg/m <sup>3</sup>	Pyrophoric powder.
		10 mg/m <sup>3</sup>	Dust.
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)**

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m <sup>3</sup>	Respirable.
Tantalum (CAS 7440-25-7)	TWA	5 mg/m <sup>3</sup>	

**Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)**

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.

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

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
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)**

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	5 mg/m <sup>3</sup> 10 mg/m <sup>3</sup>	Welding fume.
Tantalum (CAS 7440-25-7)	TWA	5 mg/m <sup>3</sup>	Dust.

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

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	15 minute	20 mg/m <sup>3</sup>	Dust.
		10 mg/m <sup>3</sup>	Pyrophoric powder.
	8 hour	5 mg/m <sup>3</sup>	Pyrophoric powder.
		10 mg/m <sup>3</sup>	Dust.
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 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. Provide eyewash station.

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

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

**Skin protection**

**Hand protection** Wear gloves to prevent metal cuts and skin abrasions during handling.

**Other** Wear suitable protective clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**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. Routinely wash work clothing and protective equipment to remove contaminants.

**9. Physical and chemical properties**

**Appearance**

**Physical state** Solid.

**Form** Solid.

**Color** Grey.

Odor	None.
Odor threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	1220 °F (660 °C) estimated / Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	None known.
<b>Upper/lower flammability or explosive limits</b>	
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 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	13.57 g/cm <sup>3</sup> estimated
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

## 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	Acids. Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Not likely, due to the form of the product.
Eye contact	Not likely, due to the form of the product.
Ingestion	Expected to be a low ingestion hazard.

<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	None known.
<b>Information on toxicological effects</b>	
<b>Acute toxicity</b>	None known.
<b>Skin corrosion/irritation</b>	Not likely, due to the form of the product.
<b>Serious eye damage/eye irritation</b>	None known.
<b>Respiratory or skin sensitization</b>	

**Canada - Alberta OELs: Irritant**

Aluminum (CAS 7429-90-5)	Irritant
Tantalum (CAS 7440-25-7)	Irritant

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** Not a skin sensitizer.

**Germ cell mutagenicity** Not classified.

**Carcinogenicity** Not classifiable as to carcinogenicity to humans.

**ACGIH Carcinogens**

Aluminum (CAS 7429-90-5)	A4 Not classifiable as a human carcinogen.
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**Canada - Manitoba OELs: carcinogenicity**

Aluminum (CAS 7429-90-5)	Not classifiable as a human carcinogen.
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**Reproductive toxicity** Not classified.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** None known.

## 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.

Product	Species	Test Results
Tantalum Aluminum Targets		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50 Fish	1.9375 mg/l, 96 hours estimated

**Persistence and degradability** No data is available on the degradability of any ingredients in the mixture.

**Bioaccumulative potential** No data available.

**Mobility in soil** No data available.

**Other adverse effects** 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

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products**

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.

**14. Transport information**

**TDG**

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.

**15. Regulatory information**

**Canadian regulations** This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

**Controlled Drugs and Substances Act**

Not regulated.

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

Not listed.

**Greenhouse Gases**

Not listed.

**Ontario. Toxic Substances. Toxic Reduction Act, 2009. Regulation 455/09 (July 1, 2011)**

Aluminum (CAS 7429-90-5)

**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

Country(s) or region	Inventory name	On inventory (yes/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

<b>Issue date</b>	06-13-2019
<b>Revision date</b>	09-20-2021
<b>Version #</b>	03
<b>Further information</b>	Transportation Emergency Call Chemtrec at: International: 703.741.5970 Spain: 900.868.538 Switzerland: 0800.564.402 Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059

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