

**MATERION****1. Chemical and company identification**

Name of chemical (Product name)	Tantalum Chromium Alloy Bar		
Supplier's company name, address and phone number			
Company name	Materion Newton Inc.		
Address	6070 Parkland Boulevard Mayfield Heights, OH 44124 United States		
Contact person	Theodore Knudson		
Telephone		1+216.383.4019	
	Not available		
e-mail address	ehs@materion.com		
Emergency telephone number	See Section 16.		
Reference number	H01		

**2. Hazards identification****GHS classification**

The product is not classified according to GHS.

**GHS label elements**

**Pictograms** None.

**Signal words** 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** Wash hands after handling.

**Storage** Store away from incompatible materials.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Other hazards which do not result in classification** None known.

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

**Main symptoms and emergency overview**

**Main symptoms** None known.

**Emergency overview** 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.

**3. Composition/information on ingredients**

**Substance or mixture** Mixture

Chemical name or generic name	CAS Number	Gazette notification		Concentration (%)
		ENCS no.	ISHL no.	
Tantalum	7440-25-7			97 - 99
Chromium	7440-47-3			3

**Chemical formula** Ta (7440-25-7), Cr (7440-47-3)

**4. First aid measures**

**If inhaled** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.

**If on skin** Wash off with soap and water. Get medical attention if irritation develops and persists.

<b>If in eyes</b>	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
<b>If swallowed</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	None known.
<b>Protection of first-aid responders</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.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

## 5. Fire-fighting measures

<b>Extinguishing media</b>	Dry powder. Dry sand.
<b>Extinguishing media to avoid</b>	Carbon dioxide (CO <sub>2</sub> ).
<b>Specific hazards</b>	This product is not flammable.
<b>Special fire fighting procedures</b>	Move containers from fire area if you can do so without risk.
<b>Protection of fire-fighters</b>	Use protective equipment appropriate for surrounding materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

## 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
<b>Methods and materials for containment and cleaning up</b>	Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). 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.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

## 7. Handling and storage

<b>Handling</b>	
<b>Technical measures (e.g. Local and general ventilation)</b>	Provide appropriate exhaust ventilation at places where dust is formed.
<b>Safe handling advice</b>	Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Avoid breathing dust. Avoid prolonged exposure. Observe good industrial hygiene practices. Use personal protection recommended in Section 8 of the SDS.
<b>Contact avoidance measures</b>	Strong oxidizing agents. Fluorine. For further information, please refer to section 10 of the SDS.
<b>Hygiene measures</b>	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.
<b>Storage</b>	
<b>Safe storage conditions</b>	Store locked up. Keep container tightly closed. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).
<b>Safe packaging materials</b>	Store in original tightly closed container.

## 8. Exposure controls/personal protection

<b>Control parameters</b>	Follow standard monitoring procedures.
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## Occupational exposure limits

### Japan. OELs - JSOH (Japan Society of Occupational Health: Recommendation of Occupational Exposure Limits)

Material	Type	Value	Form
Tantalum Chromium Alloy Bar	TWA	8 mg/m <sup>3</sup>	Total dust.
		2 mg/m <sup>3</sup>	Respirable dust.
Components	Type	Value	Form
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m <sup>3</sup>	
Tantalum (CAS 7440-25-7)	TWA	8 mg/m <sup>3</sup>	Total dust.
		2 mg/m <sup>3</sup>	Respirable dust.

### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m <sup>3</sup>	Inhalable fraction.

## Engineering measures

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. 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.

## Personal protective equipment

<b>Respiratory protection</b>	Chemical respirator with organic vapor cartridge, full facepiece, dust and mist filter.
<b>Hand protection</b>	Wear gloves to prevent metal cuts and skin abrasions during handling.
<b>Eye protection</b>	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.
<b>Skin and body protection</b>	Wear suitable protective clothing.

## 9. Physical and chemical properties

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Dark grey.
<b>Odor</b>	None.
<b>Odor threshold</b>	Not applicable.
<b>Melting point/freezing point</b>	3452 °F (1900 °C) estimated / Not applicable. 5424.8 °F (2996 °C)
<b>Boiling point, initial boiling point, and boiling range</b>	Not applicable.
<b>Combustibility</b>	Not applicable.
<b>Lower and upper explosion limit / flammability limit</b>	
<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Explosive limit - lower (%)</b>	Not applicable.
<b>Explosive limit - upper (%)</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not applicable.
<b>pH</b>	Not applicable.
<b>Kinematic viscosity</b>	Not applicable.

<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble
<b>Partition coefficient (n-octanol/water) (log value)</b>	Not applicable.
<b>Vapor pressure</b>	Not applicable.
<b>Density and/or relative density</b>	
<b>Density</b>	15.30 g/cm <sup>3</sup> estimated
<b>Relative density</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Particle characteristics</b>	Not available.
<b>Other information</b>	
<b>Evaporation rate</b>	Not applicable.
<b>Explosive properties</b>	Not explosive.
<b>Flammability</b>	Not applicable.
<b>Oxidizing properties</b>	Not oxidizing.
<b>Viscosity (Coefficient of viscosity)</b>	Not applicable.

## 10. Stability and reactivity

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

## 11. Toxicological information

<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>	
<b>Japan Society for Occupational Health: Respiratory sensitizer</b>	
Chromium (CAS 7440-47-3)	2 Probable respiratory sensitizer.
<b>Japan Society for Occupational Health: Skin sensitizer</b>	
Chromium (CAS 7440-47-3)	1 Known skin sensitizer.
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Chromium (CAS 7440-47-3)	3 Not classifiable as to carcinogenicity to humans.
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	May cause respiratory irritation.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.

## 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 substance.
<b>Bioaccumulation</b>	No data available.
<b>Mobility in soil</b>	The product is immiscible with water and will spread on the water surface.
<b>Hazardous to the ozone layer</b>	No data available.
<b>Other hazardous 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>Residual waste</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.
<b>Local disposal regulations</b>	Contract with a disposal operator licensed by the Law on Disposal and Cleaning. Dispose of contents/container in accordance with local/regional/national/international regulations. When your own wastewater treatment plant is not available, collect entire waste and then charge to a licensed industrial waste management professional with manifests for industrial waste.

## 14. Transport information

<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.
<b>National regulations</b>	Follow regulation in section 15 for domestic transportation.

## 15. Regulatory information

### Industrial Safety and Health Act

#### Notifiable substances

CHROMIUM AND CHROMIUM COMPOUNDS (EXCLUDING CHROMIC ACID AND CHROMIC ACID SALTS AND DICHROMIC ACID AND DICHROMATE)	Table 9 Ordinance No. 142	1.0 - 3.0 %
TANTALUM AND TANTALUM OXIDES	Table 9 Ordinance No. 338	97 - 99 %

#### Labeling substances

CHROMIUM (POWDER)	1.0 - 3.0 %
CHROMIUM AND CHROMIUM COMPOUNDS (EXCLUDING CHROMIC ACID AND CHROMIC ACID SALTS AND DICHROMIC ACID AND DICHROMATE)	1.0 - 3.0 %
TANTALUM (POWDER)	97 - 99 %
TANTALUM AND TANTALUM OXIDES	97 - 99 %

### Poisonous and Deleterious Substances Control Act

#### Specified poisonous substances

Not regulated.

#### Poisonous substances

Not regulated.

#### Deleterious substances

Not regulated.

### Act on the Regulation of Manufacture and Evaluation of Chemical Substances

#### Class I specified chemical substances

Not regulated.

#### Class II specified chemical substances

Not regulated.

**Monitoring chemical substances**

Not regulated.

**Priority Assessment Chemical Substances (PACs)**

Not regulated.

**Reporting Exempted Substances**

Not regulated.

**Law concerning Pollutant Release and Transfer Register****Specified class 1 substances (substance name, ordinance number and content)**

Not regulated.

**Class 1 substances (substance name, ordinance number and content)**

CHROMIUM AND CHROMIUM(III) COMPOUNDS (AS CR)	Ordinance No. 87	3.0 %	(Chromium)
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**Class 2 substances (substance name, ordinance number and content)**

Not regulated.

**Ship Safety Law, Dangerous Goods Marine Transport and Storage Rule**

Not regulated.

**Air Law, Enforcement Rule**

Not regulated.

**Explosives Control Act**

Not regulated.

**Water Pollution Control Act**

CHROMIUM

**Sewage Act**

CHROMIUM AND ITS COMPOUNDS, EXCEPT HEXAVALENT CHROMIUM COMPOUNDS (AS CR)	2 MG/L
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**16. Other information****Bibliography**

ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices  
 HSDB® - Hazardous Substances Data Bank  
 IARC Monographs. Overall Evaluation of Carcinogenicity  
 National Toxicology Program (NTP) Report on Carcinogens  
 Japan Society for Occupational Health, Recommendation of Occupational Exposure Limits  
 Japan Chemical Industry Association (JCIA) GHS Guideline, June 2012  
 JIS Z 7252:2014 Classification of chemicals based on "Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"  
 JIS Z 7253:2012 Hazard communication of chemicals based on GHS - Labelling and Safety Data Sheet (SDS)

**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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