

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

Name of chemical (Product name)	Chromium Targets
Company name	Materion Advanced Materials Germany GmbH
Address	Borsigstrasse 10 Alzenau 63755 Germany
Contact person	Hermann Schmiing
Telephone	49.60.23.91.82.0
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Emergency telephone number	49.60.23.91.82.0
Reference number	G24

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

The product is not classified according to GHS.

**GHS label elements**

Symbols	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 contents/container in accordance with local/regional/national/international regulations.

**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      Substance

Components	CAS Number	Gazette notification		Concentration (%)
		ENCS no.	ISHL no.	
Chromium	7440-47-3			100

Chemical formula      Cr (7440-47-3)

**4. First aid measures**

If inhaled	Move to fresh air. Call a physician if symptoms develop or persist.
If on skin	Wash off with soap and water. Get medical attention if irritation develops and persists.
If in eyes	Rinse with water. Get medical attention if irritation develops and persists.
If swallowed	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 exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>Notes to physician</b>	Treat symptomatically.

## 5. Fire-fighting measures

<b>Extinguishing media</b>	Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.
<b>Extinguishing media to avoid</b>	None known.
<b>Specific hazards</b>	This product is not flammable.
<b>Special fire fighting procedures</b>	Use standard firefighting procedures and consider the hazards of other involved materials. Use water spray to cool unopened containers.
<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. None known.
<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 measures</b>	Keep unnecessary personnel away. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area. For personal protection, see section 8 of the SDS.
<b>Environmental precautions</b>	Collect spillage.
<b>Methods or materials for containment and cleaning up</b>	Avoid dust formation. Stop the flow of material, if this is without risk. Sweep up or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see section 13 of the SDS.
<b>Prevention of secondary hazards</b>	None known.

## 7. Handling and storage

### Handling

<b>Technical measures (e.g. Local and general ventilation)</b>	Provide adequate ventilation.
<b>Safe handling advice</b>	Wash hands thoroughly after handling. Observe good industrial hygiene practices. Use personal protection recommended in Section 8 of the SDS.
<b>Contact avoidance measures</b>	Strong oxidizing agents. 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.

### Storage

<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

### Occupational exposure limits

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

Material	Type	Value
Chromium Targets	TWA	0.5 mg/m <sup>3</sup>
Components	Type	Value
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m <sup>3</sup>

#### US. ACGIH Threshold Limit Values

Material	Type	Value	Form
Chromium Targets	TWA	0.5 mg/m <sup>3</sup>	Inhalable fraction.

**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. General ventilation normally adequate. Provide eyewash station.

**Personal protective equipment**

<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Hand protection</b>	Wear gloves to prevent metal cuts and skin abrasions during handling.
<b>Eye protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin and body protection</b>	Wear suitable protective clothing.

**9. Physical and chemical properties****Appearance**

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Light grey.

**Odor** None.

**Odor threshold** Not applicable.

**pH** Not applicable.

**Melting point/Freezing point** 3452 °F (1900 °C) / Not applicable.

**Boiling point, initial boiling point, and boiling range** Not applicable.

**Flash point** Not applicable.

**Combustion characteristics (solid, gas)** None known.

**Upper/lower flammability or explosive limits**

<b>Explosive limit - lower (%)</b>	Not applicable.
<b>Explosive limit - lower (%) temperature</b>	Not applicable.
<b>Explosive limit - upper (%)</b>	Not applicable.
<b>Explosive limit - upper (%) temperature</b>	Not applicable.

**Vapor pressure** Not applicable.

**Vapor density** Not applicable.

**Evaporation rate** Not applicable.

**Specific gravity** Not applicable.

**Solubility(ies)**

**Solubility (water)** Insoluble

**Partition coefficient (n-octanol/water)** Not applicable.

**Auto-ignition temperature** Not applicable.

**Decomposition temperature** Not applicable.

**Viscosity (Coefficient of viscosity)** Not applicable.

**Other information**

<b>Density</b>	7.14 g/cm <sup>3</sup> estimated
<b>Explosive properties</b>	Not explosive.
<b>Molecular formula</b>	Cr
<b>Molecular weight</b>	52 g/mol

<b>Oxidizing properties</b>	Not oxidizing.
<b>Relative density</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. Strong acids.
<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>	Not a skin sensitizer.
<b>Germ cell mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Not classified.
<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>	Not classified.
<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.

## 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>	Not applicable.
<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

Dispose in accordance with all applicable regulations.	
<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.

**Local disposal regulations**

Contract with a disposal operator licensed by the Law on Disposal and Cleaning. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. 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****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.

**National regulations** Follow regulation in section 15 for domestic transportation.

**15. Regulatory information****Industrial Safety and Health Act****Notifiable substances**

CHROMIUM AND CHROMIUM COMPOUNDS (EXCLUDING Table 9 Ordinance No. 142  
CHROMIC ACID AND CHROMIC ACID SALTS AND  
DICHROMIC ACID AND DICHROMATE)

**Labeling substances**

CHROMIUM (POWDER)  
CHROMIUM AND CHROMIUM COMPOUNDS (EXCLUDING  
CHROMIC ACID AND CHROMIC ACID SALTS AND  
DICHROMIC ACID AND DICHROMATE)

**Poisonous and Deleterious Substances Control Act****Specified poisonous substances**

Not regulated.

**Poisonous substances**

Not regulated.

**Deleterious substances**

Not regulated.

**Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.****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) Ordinance No. 87  
COMPOUNDS

**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

**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)

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