



# CHEMICAL PRODUCT SAFETY DATA SHEET

Prepared in accordance with GB/T 16483 and GB/T 17519.

**MATERION**

Product name: Chromium Nickel Aluminum Targets

Issue date: 02-20-2019

Version #: 01

SDS No: G19

## SECTION 1 Chemical product and company identification

Chinese name of chemical	铬镍铝 目标
English name of chemical	Chromium Nickel Aluminum Targets
Manufacturer/Supplier	Materion Advanced Materials Germany GmbH
Address	Borsigstrasse 10 Alzenau, 63755 Germany
Contact person	Hermann Schmiing
Telephone	49.60.23.91.82.0
e-mail	Materion.Germany@materion.com
Emergency telephone number	49.60.23.91.82.0
Issue date	02-20-2019
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## SECTION 2 Hazards identification

**Emergency overview** May cause an allergic skin reaction. Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure.

### Hazard categories

Physical hazards	Not classified.	
Health hazards	Sensitization, skin	Category 1
	Carcinogenicity	Category 2
	Specific target organ toxicity, repeated exposure	Category 1 (Lung, respiratory system)
Environmental hazards	Not classified.	

### Label elements

#### Pictograms



#### Signal word

Danger

#### Hazard statement

H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.

#### Precautionary statement

##### Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

**Response**

P302 + P350	If on skin: Wash with plenty of water.
P308 + P313	If exposed or concerned: Get medical advice/attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.

**Storage**

P405	Store locked up.
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**Disposal**

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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**Physical and chemical hazards**

The product is stable and non-reactive under normal conditions of use, storage and transport. No unusual fire or explosion hazards noted.

**Health hazards**

Prolonged inhalation may be harmful. May cause an allergic skin reaction. Expected to be a low ingestion hazard. Direct contact with eyes may cause temporary irritation.

**Environmental hazards**

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.

**Supplemental information**

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

**SECTION 3 Composition/information on ingredients**

Substance/mixture	Mixture		
Chemical name	Concentration (%)	CAS Number	
Aluminum	58 - 90	7429-90-5	
Chromium	5 - 30	7440-47-3	
Nickel	5 - 12	7440-02-0	

**SECTION 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>	Rinse with water. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms and health effects</b>	May cause an allergic skin reaction. Prolonged exposure may cause chronic effects.
<b>Personal protection for first-aid responders</b>	If exposed or concerned: get medical attention/advice.
<b>Notes to physician</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

**SECTION 5 Fire-fighting measures**

<b>Extinguishing media</b>	Powder. Dry sand. Water Spray or Fog.
<b>Extinguishing media to avoid</b>	Carbon dioxide (CO <sub>2</sub> ).
<b>Specific hazards</b>	No unusual fire or explosion hazards noted.
<b>Special fire fighting procedures</b>	Move containers from fire area if you can do so without risk.
<b>Protection of fire-fighters</b>	Wear suitable protective equipment.
<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.

**SECTION 6 Accidental release measures****Personal precautions, protective equipment and emergency procedures**

<b>For non-emergency personnel</b>	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.
<b>For emergency responders</b>	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.
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**Clean-up methods and materials and containment measures** Stop the flow of material, if this is without risk. For waste disposal, see section 13 of the SDS.

**Prevention of secondary hazards** Not available.

## SECTION 7 Handling and storage

**Handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear appropriate personal protective equipment. Wash hands thoroughly after handling.

**Storage** Store locked up. Store away from incompatible materials (see Section 10 of the SDS).

## SECTION 8 Exposure controls/personal protection

### Exposure limits

China OELs. Occupational Exposure Limits for Hazardous Agents in the Workplace, Chemical Hazardous Agents (GBZ 2.1-2007)

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	PC-TWA	3 mg/m <sup>3</sup>	Total dust.
Chromium (CAS 7440-47-3)	PC-TWA	0.05 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	PC-TWA	1 mg/m <sup>3</sup>	

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Monitoring methods** Follow standard monitoring procedures.

**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.

### Personal protective equipment

**Respiratory protection** In case of inadequate ventilation, use respiratory protection.

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

**Eye protection** If contact is likely, safety glasses with side shields are recommended.

**Skin and body protection** Use personal protective equipment as required.

**Hygiene measures** Observe any medical surveillance requirements. Contaminated work clothing should not be allowed out of the workplace.

## SECTION 9 Physical and chemical properties

### Appearance

**Physical state** Solid.

**Form** Solid.

**Color** Grey metallic.

**Odor** None.

**Odor threshold** Not applicable.

**pH** Not applicable.

**Melting point/freezing point** 2453 °F (1345 °C) estimated / Not applicable.

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

**Flash point** Not applicable.

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Explosive limit - lower (%)** Not applicable.

**Explosive limit - lower (%) temperature** Not applicable.

**Explosive limit - upper (%)** Not applicable.

<b>Explosive limit - upper (%) temperature</b>	Not applicable.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Relative density</b>	Not applicable.
<b>Density</b>	7.30 - 8.50 g/cm <sup>3</sup>
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble.
<b>Partition coefficient (n-octanol/water)</b>	Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	None known.
<b>Other data</b>	
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.
<b>Surface tension</b>	Not applicable.
<b>Viscosity</b>	Not applicable.

## SECTION 10 Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>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 acids. Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## SECTION 11 Toxicological information

<b>Acute toxicity</b>	None known.
<b>Routes of exposure</b>	Inhalation. Skin contact.
<b>Symptoms</b>	May cause an allergic skin reaction.
<b>Skin corrosion/irritation</b>	Not likely, due to the form of the product.
<b>Serious eye damage/eye irritation</b>	Not likely, due to the form of the product.
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.
<b>Skin sensitizer</b>	May cause an allergic skin reaction.
<b>Germ cell mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Suspected of causing cancer.

### China OELs for hazardous agents in the workplace: Carcinogen Category

CHROMIUM TRIOXIDE, CHROMATE, DICHROMATE, AS CR (CAS 7440-47-3)	Carcinogenic to humans.
NICKEL METAL (CAS 7440-02-0)	Possible human carcinogen.

### IARC Monographs. Overall Evaluation of Carcinogenicity

Chromium (CAS 7440-47-3)	3 Not classifiable as to carcinogenicity to humans.
Nickel (CAS 7440-02-0)	2B Possibly carcinogenic to humans.

<b>Toxic to reproduction</b>	Not classified.
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<b>Specific target organ toxicity following single exposure</b>	Not classified.
<b>Specific target organ toxicity following repeated exposure</b>	Causes damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged exposure may cause chronic effects.

## SECTION 12 Ecological information

<b>Ecotoxicity</b>	The product is not classified as environmentally hazardous.
<b>Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.
<b>Bioaccumulation</b>	No data available.
<b>Mobility in soil</b>	No data available for this product.
<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.

## SECTION 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>	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.

## SECTION 14 Transport information

### CNDG

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.

## SECTION 15 Regulatory information

### Law of the People's Republic of China on Prevention and Control of Occupational Diseases

#### Classification of occupational disease hazards

Aluminum (CAS 7429-90-5)

Chromium (CAS 7440-47-3)

### Regulations on the Control over Safety of Dangerous Chemicals

#### Catalog of Hazardous Chemicals

ALUMINIUM POWDER (CAS 7429-90-5)

### Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used

#### Directory of Highly Toxic Substances

Chromium (CAS 7440-47-3)

Nickel (CAS 7440-02-0)

**Provision on the Environmental Administration of New Chemical Substances****China Inventory of Existing Chemical Substances**

Country(s) or region	Inventory name	On inventory (yes/no)*
China	Inventory of Existing Chemical Substances in China (IECSC)	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).

**Other regulations**

This safety data sheet conforms to the following laws, regulations and standards:  
 Measures for the Safe Use of Chemicals in Workplaces  
 General Rules for Preparation of Precautionary Labels for Chemicals (GB15258-2009 )  
 Regulations on Labor Protection in Workplaces Where Toxic Products Are Used  
 Packing Symbol of Dangerous Goods(GB190-2009)  
 Regulations on the Control over Safety of Dangerous Chemicals  
 Safety Data Sheet for Chemical Products - Content and Order of Sections (GB/T 16483-2008)  
 Packing - Pictorial Marking for Handling of Goods (GB/T191-2009)

**International regulations****Stockholm Convention**

Not applicable.

**Rotterdam Convention**

Not applicable.

**Montreal Protocol**

Not applicable.

**Kyoto protocol**

Not applicable.

**Basel Convention**

Not applicable.

**SECTION 16 Other information****References**

EPA: AQUIRE database  
 GB6944-2012: Classification and Code of Dangerous Goods.  
 GB12268-2012: List of Dangerous Goods.  
 NLM: Hazardous Substances Data Base  
 US. IARC Monographs on Occupational Exposures to Chemical Agents

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