



PRODUCT INFORMATION SHEET

MATERION

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name or designation of the mixture	Chromium Nickel Aluminum Targets
Registration number	-
Document number	G19
Synonyms	None.
Issue date	07-February-2019
Version number	02
Revision date	02-February-2021
Supersedes date	07-February-2019

1.3. Details of the supplier of the product information sheet

Supplier

Company name	Materion Advanced Materials Germany GmbH
Address	Borsigstrasse 10 63755 Alzenau DE
Division	
Telephone	49.60.23.91.82.0 H. Schmiing
e-mail	Materion.Germany@materion.com
Contact person	Hermann Schmiing

1.4. Emergency telephone number	49.60.23.91.82.0	H. Schmiing
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1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Manufacture of computer, electronic and optical products, electrical equipment Scientific research and development Other: Manufacture of medical and defense equipment
Uses advised against	Professional uses: Public domain (administration, education, entertainment, services, craftsmen) Consumer uses: Private households (= general public = consumers)

1.3. Details of the supplier of the safety data sheet

Supplier

Company name	Materion Advanced Materials Germany GmbH
Address	Borsigstrasse 10 63755 Alzenau DE
Division	
Telephone	49.60.23.91.82.0 H. Schmiing
e-mail	Materion.Germany@materion.com
Contact person	Hermann Schmiing

1.4. Emergency telephone number	49.60.23.91.82.0	H. Schmiing
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

Health hazards

Skin sensitisation	Category 1	H317 - May cause an allergic skin reaction.
Carcinogenicity	Category 2	H351 - Suspected of causing cancer.
Specific target organ toxicity - single exposure	Category 3	respiratory tract irritation

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

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains: Aluminium, Chromium, NICKEL POWDER; [PARTICLE DIAMETER < 1MM]

Hazard pictograms



Signal word

Danger

Hazard statements

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

Precautionary statements

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/vapours/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.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Supplemental label information

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

2.3. Other hazards Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Aluminium	58 - 90	7429-90-5 231-072-3	01-2119529243-45-0056	013-002-00-1	
Classification: -					T
Chromium	5 - 30	7440-47-3 231-157-5	-	-	#
Classification: STOT RE 1;H372					
NICKEL POWDER; [PARTICLE DIAMETER < 1MM]	5 - 12	7440-02-0 231-111-4	01-2119438727-29-0049	028-002-00-7	
Classification: Skin Sens. 1;H317, STOT SE 3;H335, Carc. 2;H351, STOT RE 2;H373					7,S

SECTION 4: First aid measures

General information

If exposed or concerned: get medical attention/advice.

4.1. Description of first aid measures

Inhalation

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

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact Rinse with water. If eye irritation persists: Get medical advice/attention.
Ingestion Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed

May cause an allergic skin reaction. Prolonged exposure may cause chronic effects.

4.3. Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

SECTION 5: Firefighting measures

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media Powder. Dry sand. Water Spray or Fog

Unsuitable extinguishing media Carbon dioxide (CO2).

5.2. Special hazards arising from the substance or mixture

No unusual fire or explosion hazards noted.

5.3. Advice for firefighters

Special protective equipment for firefighters Wear suitable protective equipment.

Special firefighting procedures Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.

For emergency responders Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Stop the flow of material, if this is without risk.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

7.2. Conditions for safe storage, including any incompatibilities

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

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Slovakia. OELs for carcinogens and mutagens. Regulation No. 46/2002 on carcinogenic and mutagenic substances

Components	Type	Value	Form
NICKEL POWDER; [PARTICLE DIAMETER < 1MM] (CAS 7440-02-0)	TWA	0,05 mg/m3	Inhalable fraction.

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value	Form
Aluminium (CAS 7429-90-5)	TWA	4 mg/m3	Inhalable fraction.

Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents

Components	Type	Value	Form
		1,5 mg/m ³	Respirable fraction.

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU

Components	Type	Value
Chromium (CAS 7440-47-3)	TWA	2 mg/m ³

Biological limit values

Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2

Components	Value	Determinant	Specimen	Sampling Time
Aluminium (CAS 7429-90-5)	60 µg/g	Aluminium	Creatinine in urine	*

* - For sampling details, please see the source document.

Recommended monitoring procedures Follow standard monitoring procedures.

Derived no effect levels (DNELs) Not available.

Predicted no effect concentrations (PNECs) Not available.

8.2. Exposure controls

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.

Individual protection measures, such as personal protective equipment

General information Use personal protective equipment as required.

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

Skin protection

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

- **Other** Use personal protective equipment as required.

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

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

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

Environmental exposure 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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Solid.

Form Solid.

Colour Grey metallic.

Odour None.

Odour threshold Not applicable.

pH Not applicable.

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

Initial boiling point and boiling range Not applicable.

Flash point Not applicable.

Evaporation rate Not applicable.

Flammability (solid, gas) None known.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not applicable.

Explosive limit - lower (%) temperature Not applicable.

Explosive limit – upper (%) Not applicable.

Explosive limit - upper (%) temperature Not applicable.

Vapour pressure Not applicable.

Vapour density Not applicable.

Relative density Not applicable.

Solubility(ies)

Solubility (water) Insoluble.

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

Auto-ignition temperature Not applicable.

Decomposition temperature Not applicable.

Viscosity Not applicable.

Explosive properties Not explosive.

Oxidising properties Not oxidising.

9.2. Other information

Density 7,30 - 8,50 g/cm³

Surface tension Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability Material is stable under normal conditions.

10.3. Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid Contact with incompatible materials.

10.5. Incompatible materials Strong acids. Strong oxidising agents.

10.6. Hazardous decomposition products No hazardous decomposition products are known.

SECTION 11: Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Inhalation Prolonged inhalation may be harmful.

Skin contact May cause an allergic skin reaction.

Eye contact Direct contact with eyes may cause temporary irritation.

Ingestion May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms May cause an allergic skin reaction.

11.1. Information on toxicological effects

Acute toxicity None known.

Skin corrosion/irritation Not likely, due to the form of the product.

Serious eye damage/eye irritation Not likely, due to the form of the product.

Respiratory sensitisation Not a respiratory sensitizer.

Skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity Not classified.

Carcinogenicity Suspected of causing cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Chromium (CAS 7440-47-3)

3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity	Not classified.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not an aspiration hazard.
Mixture versus substance information	No information available.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity The product is not classified as environmentally hazardous.

Product	Species	Test Results	
Chromium Nickel Aluminum Targets			
Aquatic			
<i>Acute</i>			
Fish	LC50	Fish	0,3444 mg/l, 96 hours estimated
Components	Species	Test Results	

NICKEL POWDER; [PARTICLE DIAMETER < 1MM] (CAS 7440-02-0)

Aquatic			
<i>Acute</i>			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0,06 mg/l, 4 days

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

12.3. Bioaccumulative potential No data available.

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

Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil No data available.

12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.

12.6. 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.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste 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.

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

Disposal methods/information 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.

Special precautions Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	UN3178
14.2. UN proper shipping name	FLAMMABLE SOLID, INORGANIC, N.O.S.
14.3. Transport hazard class(es)	
Class	4.1

Subsidiary risk	-
Label(s)	4.1
Hazard No. (ADR)	40
Tunnel restriction code	E
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

RID

14.1. UN number	UN3178
14.2. UN proper shipping name	FLAMMABLE SOLID, INORGANIC, N.O.S.
14.3. Transport hazard class(es)	
Class	4.1
Subsidiary risk	-
Label(s)	4.1
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

ADN

14.1. UN number	UN3178
14.2. UN proper shipping name	FLAMMABLE SOLID, INORGANIC, N.O.S.
14.3. Transport hazard class(es)	
Class	4.1
Subsidiary risk	-
Label(s)	4.1
14.4. Packing group	III
14.5. Environmental hazards	No.
14.6. Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

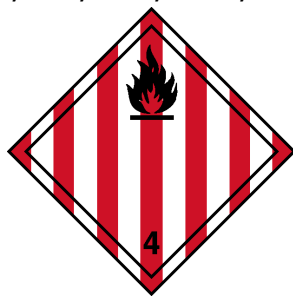
14.1. UN number	UN3178
14.2. UN proper shipping name	Flammable solid, inorganic, n.o.s.
14.3. Transport hazard class(es)	
Class	4.1
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	No.
ERG Code	3L
14.6. Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

14.1. UN number	UN3178
14.2. UN proper shipping name	FLAMMABLE SOLID, INORGANIC, N.O.S.
14.3. Transport hazard class(es)	
Class	4.1
Subsidiary risk	-
14.4. Packing group	III
14.5. Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-G

14.6. Special precautions for user Not available.

ADN; ADR; IATA; IMDG; RID



SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Aluminium (CAS 7429-90-5)

Chromium (CAS 7440-47-3)

NICKEL POWDER; [PARTICLE DIAMETER < 1MM] (CAS 7440-02-0)

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

NICKEL POWDER; [PARTICLE DIAMETER < 1MM] (CAS 7440-02-0)

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Aluminium (CAS 7429-90-5)

Other regulations

The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended.

National regulations

According to Directive 92/85/EEC as amended, pregnant women should not work with the product, if there is the least risk of exposure.

Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended. Follow national regulation for work with chemical agents in accordance with Directive 98/24/EC, as amended.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

SECTION 16: Other information

List of abbreviations

Not available.

References

Not available.

Information on evaluation method leading to the classification of mixture

The classification for health and environmental hazards is derived by a combination of calculator methods and test data, if available.

Full text of any H-statements not written out in full under Sections 2 to 15

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

H372 Causes damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.

H372 Causes damage to organs through prolonged or repeated exposure by inhalation.

H373 May cause damage to organs through prolonged or repeated exposure.

Revision information

None.

Training information

Follow training instructions when handling this material.

Disclaimer

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To avoid any misunderstandings or incorrect assumptions by the receiver of the safety information, it should be made clear that the supplied information is not in the form of a Safety Data Sheet (SDS), but is actually a voluntary Product Information Sheet closely following the guidelines of the Safety Data Sheet – COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 (REACH/SDS).