



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 Copper Targets
Registration number -
Document number G33
Synonyms None.
Issue date 06-February-2019
Version number 01

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
e-mail Materion.Germany@materion.com
Contact person Hermann Schmiing

1.4. Emergency telephone number 49.60.23.91.82.0

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)

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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

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Health hazards

Specific target organ toxicity - single exposure Category 3 respiratory tract irritation

Hazard summary

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.

2.2. Label elements

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

Contains:	Chromium, Copper
Hazard pictograms	None.
Signal word	None.
Hazard statements	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 statements

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.

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
Chromium	50	7440-47-3 231-157-5	-	-	#
Classification:	Aquatic Chronic 3;H412				
Copper	50	7440-50-8 231-159-6	01-2119480154-42-0080	029-019-01-X	
Classification:	STOT SE 3;H335				

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

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. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed Exposure may cause temporary irritation, redness, or discomfort.

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

SECTION 5: Firefighting measures

General fire hazards No unusual fire or explosion hazards noted.

5.1. Extinguishing media

Suitable extinguishing media	Powder. Dry sand.
Unsuitable extinguishing media	Water.

5.2. Special hazards arising from the substance or mixture None known.

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.

For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the PIS.

6.2. Environmental precautions

Collect spillage. Prevent further leakage or spillage if safe to do so.

6.3. Methods and material for containment and cleaning up

Stop the flow of material, if this is without risk. Following product recovery, flush area with water.

6.4. Reference to other sections

Not available.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store away from incompatible materials (see Section 10 of the PIS).

7.3. Specific end use(s)

Not applicable.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Occupational exposure limits****Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)**

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	TWA	0,5 mg/m ³	Total dust.
Copper (CAS 7440-50-8)	TWA	0,01 mg/m ³	Respirable dust.

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

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

Biological limit values

No biological exposure limits noted for the ingredient(s).

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 (typically 10 air changes per hour) 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**

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the 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.

Hygiene measures

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.

Environmental exposure controls Inform appropriate managerial or supervisory personnel of all environmental releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state Solid.
Form Solid.
Colour Red. Silver.

Odour None.

Odour threshold Not applicable.

pH Not applicable.

Melting point/freezing point 1083 °C (1981,4 °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

Flammability limit - lower (%) Not applicable.

Flammability limit - lower (%) temperature Not applicable.

Flammability limit - upper (%) Not applicable.

Flammability limit - upper (%) temperature Not applicable.

Explosive limit - lower (%) 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.

Auto-ignition temperature Not applicable.

Decomposition temperature Not applicable.

Viscosity Not applicable.

Explosive properties Not available.

Oxidising properties Not oxidising.

9.2. Other information

Density 8,04 g/cm³ estimated

Explosivity Not applicable.

Flammability 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 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** No adverse effects due to inhalation are expected.
- Skin contact** No adverse effects due to skin contact are expected.
- Eye contact** Not likely, due to the form of the product.
- Ingestion** May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.

Symptoms None known.

11.1. Information on toxicological effects

- Acute toxicity** Not known.
- Skin corrosion/irritation** Not relevant, 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** Not a skin sensitiser.
- Germ cell mutagenicity** Not classified.
- Carcinogenicity** Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Chromium (CAS 7440-47-3) 3 Not classifiable as to carcinogenicity to humans.

- Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.
- Specific target organ toxicity - single exposure** Not classified.
- Specific target organ toxicity - repeated exposure** Not classified.
- Aspiration hazard** Not an aspiration hazard.
- Mixture versus substance information** No information available.
- Other information** Not available.

SECTION 12: Ecological information

- 12.1. Toxicity** No toxicity data noted for the ingredient(s).
- 12.2. Persistence and degradability** No data is available on the degradability of this product.
- 12.3. Bioaccumulative potential** No data available.
- Partition coefficient n-octanol/water (log K_{ow})** Not available.
- 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.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. - 14.6.: Not regulated as dangerous goods.

RID

14.1. - 14.6.: Not regulated as dangerous goods.

ADN

14.1. - 14.6.: Not regulated as dangerous goods.

IATA

14.1. - 14.6.: Not regulated as dangerous goods.

IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

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 (EC) No. 850/2004 On persistent organic pollutants, Annex I 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

Chromium (CAS 7440-47-3)

Copper (CAS 7440-50-8)

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

Not listed.

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

Copper (CAS 7440-50-8)

National regulations Not available.

15.2. Chemical safety assessment Not available.

SECTION 16: Other information

List of abbreviations	Not available.
References	Not available.
Information on evaluation method leading to the classification of mixture	Not available.
Full text of any H-statements not written out in full under Sections 2 to 15	H335 May cause respiratory irritation. H412 Harmful to aquatic life with long lasting effects.
Revision information	None.
Training information	Not available.
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