



# 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** Copper Nickel Targets  
**Registration number** -  
**Document number** G86  
**Synonyms** None.  
**Issue date** 25-April-2022  
**Version number** 01

### 1.3. Details of the supplier of the product information sheet

#### Supplier

**Company name** Materion Advanced Materials  
**Address** 6070 Parkland Boulevard  
Mayfield Heights, OH 44124  
United States  
**Division**  
**Telephone** 1.216.383.4019  
**e-mail** ehs@materion.com  
**Contact person** Theodore Knudson

**1.4. Emergency telephone number** See Section 16.

### 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  
**Address** 6070 Parkland Boulevard  
Mayfield Heights, OH 44124  
United States  
**Division**  
**Telephone** 1.216.383.4019  
**e-mail** ehs@materion.com  
**Contact person** Theodore Knudson

**1.4. Emergency telephone number** See Section 16.

## 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 - repeated exposure	Category 1	H372 - Causes damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.

## Hazard summary

May cause damage to organs through prolonged or repeated exposure. Suspected of causing cancer. May cause an allergic skin reaction. May cause irritation to the respiratory system. Prolonged exposure may cause chronic effects.

## 2.2. Label elements

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

**Contains:** copper, Nickel

#### Hazard pictograms



#### Signal word

Danger

#### Hazard statements

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.

## 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.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P285	In case of inadequate ventilation wear respiratory protection.

### Response

P312	Call a POISON CENTRE/doctor if you feel unwell.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.

### Storage

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

### Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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## Supplemental label information

For further information, please contact the Product Stewardship Department at +1.800.862.4118.

## 2.3. Other hazards

None known.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
copper	75 - 99	7440-50-8 231-159-6	-	029-019-01-X	
<b>Classification:</b> Aquatic Chronic 1;H410(M=100)					
Nickel	1 - 25	7440-02-0 231-111-4	01-2119438727-29-0049	028-002-00-7	
<b>Classification:</b> Skin Sens. 1;H317, STOT SE 3;H335, Carc. 2;H351, STOT RE 2;H373					7,S

## 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.

<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>4.2. Most important symptoms and effects, both acute and delayed</b>	Exposure may cause temporary irritation, redness, or discomfort.
<b>4.3. Indication of any immediate medical attention and special treatment needed</b>	Treat symptomatically.

## SECTION 5: Firefighting measures

<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>5.1. Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Powder. Dry sand.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>5.2. Special hazards arising from the substance or mixture</b>	None known.
<b>5.3. Advice for firefighters</b>	
<b>Special protective equipment for firefighters</b>	Wear suitable protective equipment.
<b>Special firefighting procedures</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.

## SECTION 6: Accidental release measures

<b>6.1. Personal precautions, protective equipment and emergency procedures</b>	
<b>For non-emergency personnel</b>	Keep unnecessary personnel away.
<b>For emergency responders</b>	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the PIS.
<b>6.2. Environmental precautions</b>	Collect spillage. Prevent further leakage or spillage if safe to do so.
<b>6.3. Methods and material for containment and cleaning up</b>	Stop the flow of material, if this is without risk. Following product recovery, flush area with water.
<b>6.4. Reference to other sections</b>	Not available.

## SECTION 7: Handling and storage

<b>7.1. Precautions for safe handling</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Provide adequate ventilation. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
<b>7.2. Conditions for safe storage, including any incompatibilities</b>	Store locked up.
<b>7.3. Specific end use(s)</b>	Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### Latvia. OELs. Occupational exposure limit values of chemical substances in work environment

Components	Type	Value
copper (CAS 7440-50-8)	STEL	1 mg/m <sup>3</sup>
	TWA	0,5 mg/m <sup>3</sup>
Nickel (CAS 7440-02-0)	TWA	0,05 mg/m <sup>3</sup>

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

**Recommended monitoring procedures** Follow standard monitoring procedures.

<b>Derived no effect levels (DNELs)</b>	Not available.
<b>Predicted no effect concentrations (PNECs)</b>	Not available.
<b>8.2. Exposure controls</b>	
<b>Appropriate engineering controls</b>	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.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>General information</b>	Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.
<b>Eye/face protection</b>	Wear safety glasses with side shields (or goggles).
<b>Skin protection</b>	
- <b>Hand protection</b>	Wear gloves to prevent metal cuts and skin abrasions during handling.
- <b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Thermal hazards</b>	Wear appropriate thermal protective clothing, when necessary.
<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>Environmental exposure controls</b>	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

<b>Physical state</b>	Solid.
<b>Form</b>	Various shapes.
<b>Colour</b>	Red
<b>Odour</b>	None.
<b>Odour threshold</b>	Not applicable.
<b>pH</b>	Not applicable.
<b>Melting point/freezing point</b>	1083 °C (1981,4 °F) estimated / Not applicable.
<b>Initial boiling point and boiling range</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Flammability (solid, gas)</b>	None known.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower ( %)</b>	Not applicable.
<b>Explosive limit – upper ( %)</b>	Not applicable.
<b>Vapour pressure</b>	Not applicable.
<b>Vapour density</b>	Not applicable.
<b>Relative density</b>	Not applicable.
<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>Viscosity</b>	Not applicable.
<b>Explosive properties</b>	Not explosive.
<b>Oxidising properties</b>	Not oxidising.

## 9.2. Other information

Density 8,88 g/cm<sup>3</sup> estimated

## 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** May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
- Skin contact** May cause an allergic skin reaction.
- 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** May cause an allergic skin reaction.

### 11.1. Information on toxicological effects

- Acute toxicity** May cause an allergic skin reaction. May cause respiratory irritation.
- Skin corrosion/irritation** Due to partial or complete lack of data the classification is not possible.
- Serious eye damage/eye irritation** Not likely, due to the form of the product.
- Respiratory sensitisation** Due to partial or complete lack of data the classification is not possible. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin sensitisation** May cause an allergic skin reaction.
- Germ cell mutagenicity** Due to partial or complete lack of data the classification is not possible.
- Carcinogenicity** Suspected of causing cancer.
- IARC Monographs. Overall Evaluation of Carcinogenicity**  
Nickel (CAS 7440-02-0) 2B Possibly carcinogenic to humans.
- Reproductive toxicity** Due to partial or complete lack of data the classification is not possible.
- Specific target organ toxicity - single exposure** Not classified.
- Specific target organ toxicity - repeated exposure** May cause damage to organs (respiratory system) through prolonged or repeated exposure.
- Aspiration hazard** Due to partial or complete lack of data the classification is not possible.
- Mixture versus substance information** No information available.
- Other information** Not available.

## SECTION 12: Ecological information

### 12.1. Toxicity

Components		Species	Test Results
copper (CAS 7440-50-8)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	0,036 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	0,0319 - 0,0544 mg/l, 96 hours

Components	Species	Test Results
Nickel (CAS 7440-02-0)		
<b>Aquatic</b>		
<i>Acute</i>		
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)
		0,06 mg/l, 4 days

\* Estimates for product may be based on additional component data not shown.

**12.2. Persistence and degradability** No data is available on the degradability of this product.

**12.3. Bioaccumulative potential** Not available.

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

**Bioconcentration factor (BCF)** Not available.

**12.4. Mobility in soil** Not available.

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

**12.6. Other adverse effects** Not available.

## 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** Yes

**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** Yes

**14.6. Special precautions for user** Not available.

#### 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** Yes

**14.6. Special precautions for user** Not available.

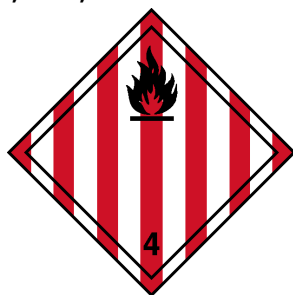
#### IATA

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

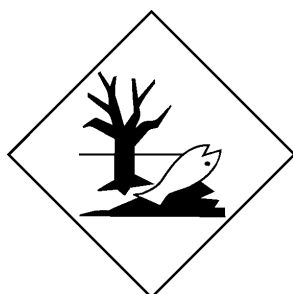
#### IMDG

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

#### ADN; ADR; RID



#### Marine pollutant



## 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**

copper (CAS 7440-50-8)

Nickel (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 (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**

copper (CAS 7440-50-8)

**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**

Not available.

**Training information**

Not available.

**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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