



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 Tungsten Targets
Registration number	-
Document number	G55
Synonyms	None.
Issue date	10-June-2019
Version number	03
Revision date	22-September-2021
Supersedes date	24-February-2021

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

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

Health hazards

Acute toxicity, oral	Category 4
Acute toxicity, inhalation	Category 3
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity - single exposure	Category 3 respiratory tract irritation

Hazard summary

The products are classified as articles and, as such, do not present a physical or health hazard in the present form. If the products are processed or handled in ways that generate particles (dust, fume, particles or powder) and/or chemical compounds, a potential health hazard could exist and risk management measures must be taken to minimize risk.

2.2. Label elements

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

Contains:	COPPER FLAKES (COATED WITH ALIPHATIC ACID), Tungsten
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
COPPER FLAKES (COATED WITH ALIPHATIC ACID)	95 - 99	7440-50-8 231-159-6	01-2119480154-42-0080	-	
Classification: -					
Tungsten	1 - 5	7440-33-7 231-143-9	-	-	
Classification: -					

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	Remove contact lenses, if present and easy to do. 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 Irritation of eyes.

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	DRY sand, sodium chloride powder, graphite powder or Met-L-X powder.
Unsuitable extinguishing media	Water. Carbon dioxide (CO ₂).

5.2. Special hazards arising from the substance or mixture This product is not flammable.

5.3. Advice for firefighters

Special protective equipment for firefighters	Use protective equipment appropriate for surrounding materials.
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	For personal protection, see section 8 of the PIS.
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For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the PIS.
6.2. Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
6.3. Methods and material for containment and cleaning up	Clean up in accordance with all applicable regulations.
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 in original tightly closed container.
7.3. Specific end use(s)	Not applicable.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Components	Type	Value	Form
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)	MAC	1 mg/m ³	
	STEL	0,2 mg/m ³	Dust and fume.
		2 mg/m ³	Dust and fume.
Tungsten (CAS 7440-33-7)	MAC	5 mg/m ³	
	STEL	3 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 Wear suitable protective clothing.

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

- **Hand protection** Wear appropriate chemical resistant gloves.

- **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

Environmental manager must be informed of all major releases.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Solid.
Form	Not available.
Colour	Copper.
Odour	None.
Odour threshold	Not available.
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	
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.
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	9,41 g/cm ³ estimated
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	Acids. Caustics.
10.6. Hazardous decomposition products	Not applicable.

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	Not relevant, due to the form of the product.

Eye contact	Not relevant, due to the form of the product.
Ingestion	Not relevant, due to the form of the product.
Symptoms	None known.
11.1. Information on toxicological effects	
Acute toxicity	None 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	Due to partial or complete lack of data the classification is not possible.
Carcinogenicity	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 The product is not classified as environmentally hazardous.

Product	Species	Test Results
Copper Tungsten Targets		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fish
		0,0328 mg/l, 96 hours estimated
Components	Species	Test Results
COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8)		
Aquatic		
<i>Acute</i>		
Crustacea	EC50	Blue crab (<i>Callinectes sapidus</i>)
		0,0031 mg/l
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)
		0,0219 - 0,0446 mg/l, 96 hours

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

12.2. Persistence and degradability

12.3. Bioaccumulative potential No data available.

Partition coefficient n-octanol/water (log Kow) 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 Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Processing, use or contamination of this product may change the waste management options.

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 (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 FLAKES (COATED WITH ALIPHATIC ACID) (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 FLAKES (COATED WITH ALIPHATIC ACID) (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	The classification for health and environmental hazards is derived by a combination of calculator methods and test data, if available.
Training information	Follow training instructions when handling this material.
Further information	Transportation Emergency Call Chemtrec at: International: 703.741.5970 Spain: 900.868.538 Switzerland: 0800.564.402 Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059
Disclaimer	<p>This document has been prepared using data from sources considered to be technically reliable and the information is believed to be correct. Materion makes no warranties, expressed or implied, as to the accuracy of the information contained herein. Materion cannot anticipate all conditions under which this information and its products may be used and the actual conditions of use are beyond its control. The user is responsible to evaluate all available information when using this product for any particular use and to comply with all Federal, State, Provincial and Local laws, statutes and regulations.</p> <p>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).</p>