



# CHEMICAL PRODUCT SAFETY DATA SHEET

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

**MATERION**

Product name: Copper Zinc Targets

Issue date: 12-03-2019

Version #: 01

SDS No: G35

## SECTION 1 Chemical product and company identification

Chinese name of chemical	铜锌靶
English name of chemical	Copper Zinc 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	12-03-2019
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## SECTION 2 Hazards identification

Emergency overview	Dangerous for the environment if discharged into watercourses. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.	
Hazard categories		
Physical hazards	Not classified.	
Health hazards	Not classified.	
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1
Label elements		
Pictograms		
Signal word	Warning	
Hazard statement		
H400	Very toxic to aquatic life.	
H410	Very toxic to aquatic life with long lasting effects.	
Precautionary statement		
Prevention		
P273	Observe good industrial hygiene practices. Avoid release to the environment.	
Response		
P391	Wash hands after handling. Collect spillage.	
Storage		
P405	Store locked up.	

**Disposal**

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.  
 P502 Refer to manufacturer/supplier for information on recovery/recycling.

**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** Very toxic to aquatic life with long lasting effects.

**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
Copper	50 - 75	7440-50-8
Zinc	25 - 50	7440-66-6

**SECTION 4 First aid measures**

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

**Skin contact** Wash hands with water as a precaution.

**Eye contact** Flush eyes with water as a precaution.

**Ingestion** Rinse mouth. Get medical advice/attention if you feel unwell.

**Most important symptoms and health effects** Under normal conditions of intended use, this material does not pose a risk to health.

**Personal protection for first-aid responders** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**Notes to physician** Treat symptomatically.

**SECTION 5 Fire-fighting measures**

**Extinguishing media** Powder. Dry sand.

**Extinguishing media to avoid** Water.

**Specific hazards** This product is not flammable.

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

**Protection of fire-fighters** Wear suitable protective equipment.

**General fire hazards** No unusual fire or explosion hazards noted.

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

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

**For non-emergency personnel** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

**For emergency responders** Wear appropriate protective equipment and clothing during clean-up. Use personal protection recommended in Section 8 of the SDS.

**Environmental precautions** Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**Clean-up methods and materials and containment measures** The product is immiscible with water and will spread on the water surface. Prevent product from entering drains. Clean up in accordance with all applicable regulations. Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

**Prevention of secondary hazards** Not available.

## SECTION 7 Handling and storage

<b>Handling</b>	Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices. Wear gloves to prevent metal cuts and skin abrasions during handling.
<b>Storage</b>	Keep locked up. Store in tightly closed container. 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
Copper (CAS 7440-50-8)	PC-TWA	1 mg/m <sup>3</sup>	Dust.
		0.2 mg/m <sup>3</sup>	Fume.

<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Monitoring methods</b>	Follow standard monitoring procedures.
<b>Engineering measures</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>Personal protective equipment</b>	
<b>Respiratory protection</b>	In case of insufficient ventilation, wear suitable respiratory equipment.
<b>Hand protection</b>	Wear gloves to prevent metal cuts and skin abrasions during handling.
<b>Eye protection</b>	Wear approved safety glasses, goggles, face shield and/or welder's helmet when risk of eye injury is present, particularly during operations that generate dust, mist or fume.
<b>Skin and body protection</b>	No specific recommendations.
<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.

## SECTION 9 Physical and chemical properties

### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Yellow.
<b>Odor</b>	None.
<b>Odor threshold</b>	Not applicable.
<b>pH</b>	Not applicable.
<b>Melting point/freezing point</b>	1660 °F (904.44 °C) estimated / Not applicable.
<b>Boiling point, initial boiling point, and boiling range</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Explosive limit - lower (%)</b>	Not applicable.
<b>Explosive limit - lower (%) temperature</b>	Not applicable.
<b>Explosive limit - upper (%)</b>	Not applicable.
<b>Explosive limit - upper (%) temperature</b>	Not applicable.
<b>Vapor pressure</b>	Not applicable.

Vapor density	Not applicable.
Relative density	Not applicable.
Density	8.22 g/cm <sup>3</sup> estimated
Solubility(ies)	
Solubility (water)	Insoluble.
Solubility (other)	Not applicable.
Partition coefficient (n-octanol/water)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	None known.
Other data	
Explosive properties	Not explosive.
Molecular formula	Not applicable.
Oxidizing properties	Not oxidizing.
Viscosity	Not applicable.

## SECTION 10 Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

## SECTION 11 Toxicological information

Acute toxicity	Not known.
Routes of exposure	None known.
Symptoms	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 or skin sensitization	
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitizer	Not a skin sensitizer.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not classified.
Toxic to reproduction	Not classified.
Specific target organ toxicity following single exposure	Not classified.
Specific target organ toxicity following repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	None known through occupational exposure.

## SECTION 12 Ecological information

Ecotoxicity	Very toxic to aquatic life with long lasting effects.
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<b>Persistence and degradability</b>	No data is available on the degradability of this product.
<b>Bioaccumulation</b>	No data available.
<b>Mobility in soil</b>	The product is immiscible with water and will spread on the water surface.
<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. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. 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

Copper (CAS 7440-50-8)

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

##### Catalog of Hazardous Chemicals

ZINC ASHES (CAS 7440-66-6)

#### 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).

<b>Other regulations</b>	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)
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#### International regulations

##### Stockholm Convention

Not applicable.

**Rotterdam Convention**

Not applicable.

**Montreal Protocol**

Not applicable.

**Kyoto protocol**

Not applicable.

**Basel Convention**

Zinc (CAS 7440-66-6)

**SECTION 16 Other information****Bibliography**

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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