



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 Zinc Targets |
| Registration number | - |
| Document number | G35 |
| Synonyms | None. |
| Issue date | 08-February-2019 |
| Version number | 02 |
| Revision date | 12-February-2021 |

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 |
|---------------------------------|------------------|-------------|

| | |
|-----------------|------------------|
| Supersedes date | 08-February-2019 |
|-----------------|------------------|

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

| | | |
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| 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 |
|---------------------------------|------------------|-------------|

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

| | |
|----------------|--|
| 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), Zinc
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
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.

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

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 FLAKES (COATED WITH ALIPHATIC ACID) | 50 - 75 | 7440-50-8 231-159-6 | 01-2119480154-42-0080 | - | |
| Classification: - | | | | | |
| Zinc | 25 - 50 | 7440-66-6 231-175-3 | - | 030-001-01-9 | |
| Classification: Water-React. 3;H261 | | | | | T |

SECTION 4: First aid measures

General information Not available.

4.1. Description of first aid measures

Inhalation Not available.
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.

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

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 Do not use water as an extinguisher.

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 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 Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the PIS.

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

6.2. Environmental precautions Avoid release to the environment.

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 Wear gloves to prevent metal cuts and skin abrasions during handling. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities Keep locked up. Store away from incompatible materials (see Section 10 of the PIS).

7.3. Specific end use(s) Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Ireland. Occupational Exposure Limits

| Components | Type | Value | Form |
|--|------|-----------------------|----------------|
| COPPER FLAKES (COATED WITH ALIPHATIC ACID) (CAS 7440-50-8) | TWA | 1 mg/m ³ | Dust and mist. |
| | | 0.2 mg/m ³ | Fume. |

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 Not available.

Eye/face protection 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.

Skin protection

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

- **Other** No specific recommendations.

Respiratory protection If ventilation is insufficient, suitable respiratory protection must be provided.

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 Yellow.

Odour None.

Odour threshold Not applicable.

pH Not applicable.

Melting point/freezing point 904.44 °C (1660 °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.

Solubility (other) Not applicable.

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 8.22 g/cm³ 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 Irritating and/or toxic fumes and gases may be emitted upon the product's decomposition.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

| | |
|---------------------|--|
| Inhalation | Not likely, due to the form of the product. |
| Skin contact | No adverse effects due to skin contact are expected. |
| Eye contact | Not relevant, due to the form of the product. |
| Ingestion | Expected to be a low ingestion hazard. |

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 | Not classified. |
| Carcinogenicity | Not classified. |
| Reproductive toxicity | Not classified. |
| 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

| Product | | Species | Test Results |
|---------------------|------|---------|---------------------------------|
| Copper Zinc Targets | | | |
| Aquatic | | | |
| <i>Acute</i> | | | |
| Crustacea | EC50 | Daphnia | 2.8 mg/l, 48 hours estimated |
| Fish | LC50 | Fish | 0.0401 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 |

Zinc (CAS 7440-66-6)

| | | | |
|----------------|------|--|----------------------------|
| Aquatic | | | |
| <i>Acute</i> | | | |
| Fish | LC50 | Bony fish superclass (<i>Osteichthyes</i>) | 0.52 - 3.59 mg/l, 96 hours |

* 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. 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. |
| 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)

Zinc (CAS 7440-66-6)

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

Zinc (CAS 7440-66-6)

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)

Zinc (CAS 7440-66-6)

Other regulations

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

National regulations

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.

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

H261 In contact with water releases flammable gases.

Revision information

SECTION 2: Hazards identification: Hazard summary
Composition / Information on Ingredients: Ingredient Classification
Physical & Chemical Properties: Multiple Properties

Training information

Not available.

Disclaimer

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