



SAFETY DATA SHEET

MATERION

1. Identification of the chemical and information about the manufacturer or supplier

1.1 Identification of the chemical products

1.1.1 Technical name **Zinc Tin Targets**

Other means of identification

SDS number G40

1.1.2 Recommended use of the chemical and restrictions on use

Recommended use Manufacture of computer, electronic and optical products, electrical equipment
Scientific research and development
Other: Manufacture of medical and defense equipment

Limitations on use Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Consumer uses: Private households (= general public = consumers)

1.2 Manufacturer/Importer/Supplier/Distributor information

1.2.1 Manufacturer

Company name Materion Advanced Materials Germany GmbH

1.2.2 Address (post and legal) Borsigstrasse 10
Germany

Website www.materion.com

Contact person Hermann Schmiing

1.2.3 Telephone, including Emergency consultations and time limits

Telephone 49.60.23.91.82.0 H. Schmiing

**Emergency phone
number** 49.60.23.91.82.0 H. Schmiing

1.2.4 Fax

1.2.5 E-mail Materion.Germany@materion.com

2. Hazard(s) identification

2.1. Hazard identification of chemical product as a whole (classification according to GOST 12.1.007-76 and GHS)

**Classification according to
GOST 12.1.007-76** Not available.

GHS classification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

2.2 Labeling elements in compliance with GOST 31340-2013

2.2.1 Signal word None.

2.2.2 Symbols None.

2.2.3 Hazard statement 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 statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards None known.

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

3. Composition/information on ingredients

3.1 Information on product as a whole

- 3.1.1 Chemical name (IUPAC) Zinc Tin Targets
- 3.1.2 Chemical formula Zn (7440-66-6), Sn (7440-31-5)
- 3.1.3 General description of the composition (taking into account the brand assortment; preparation method) Not applicable.

3.2 Components

Components	Hygienic standards in the working area				CAS-No.	EC No.
	Concentration by weight (%)	MAC, mg/m ³	TSEL, mg/m ³	Hazard classification		
Zinc	50 - 99	None.	None.		7440-66-6	231-175-3
Tin	1 - 50	None.	None.		7440-31-5	231-141-8

4. First-aid measures

4.1. Observed symptoms

- 4.1.1 In case of exposure via inhalation No adverse effects due to inhalation are expected.
- 4.1.2 In contact with skin No adverse effects due to skin contact are expected.
- 4.1.3 In contact with eyes Direct contact with eyes may cause temporary irritation.
- 4.1.4 In case of exposure via ingestion Expected to be a low ingestion hazard.

4.2 First-aid measures to be provided to victims

- 4.2.1 In case of exposure via inhalation Move to fresh air. Call a physician if symptoms develop or persist.
- 4.2.2 In contact with skin Get medical attention if irritation develops and persists.
- 4.2.3 In contact with eyes Get medical attention if irritation develops and persists.
- 4.2.4 In case of exposure via ingestion Rinse mouth. Get medical attention if symptoms occur.
- 4.2.5 Contraindications Not available.

General advice

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

5. Fire-fighting and explosion safety measures and means

- 5.1 General characteristics of fire-explosion properties No unusual fire or explosion hazards noted.
- 5.2 Fire-explosion indicators None known.
- 5.3 Combustion and/or thermal destruction products and hazards arising from these No unusual fire or explosion hazards noted.
- 5.4 Recommended extinguishing media Foam. Dry chemical powder. Dry sand. Carbon dioxide (CO₂). Dry chemical, soda ash, lime or DRY sand.
- 5.5 Forbidden extinguishing media Water.
- 5.6 Special protective equipment for firefighters Wear suitable protective equipment.
- 5.7 Specific extinguishing methods Use standard firefighting procedures and consider the hazards of other involved materials.
- Special fire fighting procedures Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accident and emergency prevention and response measures and their consequences

6.1 Measures to prevent harmful effects on people, environment, buildings, constructions, etc. in case of accidents and emergencies

- 6.1.1 General required actions in case of an accident or emergency** Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
- 6.1.2 Personal protection equipment in case of the accident** Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2 Procedures for the elimination of accidents and emergencies

- 6.2.1 Procedures in case of leaks, spills, splashes** Clean up in accordance with all applicable regulations.
- 6.2.2 Actions in case of fire** For detailed information see section 5.

Methods and materials for containment and cleaning up

Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see section 13 of the SDS.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

7. Storage and handling requirements of chemicals during loading and unloading

7.1 Safety precautions when handling chemical products

- 7.1.1 Technical safety measures** No specific recommendations.
- 7.1.2 Environmental protection measures** Avoid release to the environment.
- 7.1.3 Recommended safe handling and transportation advice** Observe good industrial hygiene practices. Use personal protection recommended in Section 8 of the SDS.
- Local and general ventilation** Provide adequate ventilation.

7.2 Chemical storage requirements

- 7.2.1 Terms and conditions for safe storage** Not available.
- 7.2.2 Packaging** Keep locked up.

7.3 Safety measures and storage requirements at domestic use

No specific recommendations.

8. Equipment for monitoring exposure and personal protective equipment

8.1 Parameters of the working area that require monitoring

Occupational exposure limits

Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended

Material	Type	Value	Form
Zinc Tin Targets	Ceiling	6 mg/m3	Aerosol.
	TWA	2 mg/m3	Aerosol.

8.2 Measures to ensure the content of harmful substances in the working area below the exposure level concentration

Not available.

8.3 Worker personal protective equipment

- 8.3.1 General recommendations** Use personal protective equipment as required.
- 8.3.2 Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

8.3.3 Protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear suitable protective clothing.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

8.3.4 Personal protection equipment in case of domestic use Not applicable.

9. Physical and chemical properties

9.1 Physical appearance

Physical state	Solid.
Form	Solid.
Color	Grey.

Odor None.

Odor threshold Not applicable.

9.2 Parameters characterizing basic properties of the product

pH	Not applicable.
Melting point/freezing point	449,42 °F (231,9 °C) estimated / Not applicable.
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not applicable.
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.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Density	7,18 g/cm ³ estimated
Viscosity	Not applicable.
Solubility(ies)	
Solubility (water)	Insoluble.
Partition coefficient (n-octanol/water)	Not applicable.
Other data	
Explosive properties	Not explosive.
Evaporation rate	Not applicable.
Flammability (solid, gas)	None known.
Oxidizing properties	Not oxidizing.

10. Stability and reactivity

10.1 Chemical stability Material is stable under normal conditions.
Hazardous decomposition products No hazardous decomposition products are known.

10.2 Reactivity The product is stable and non-reactive under normal conditions of use, storage and transport.

10.3 Conditions to avoid Contact with incompatible materials.

Possibility of hazardous reactions No dangerous reaction known under conditions of normal use.

Incompatible materials Strong oxidizing agents.

11. Toxicological information

11.1 General exposure characteristics Direct contact with eyes may cause temporary irritation.

11.2 Routes of exposure None known.

11.3 Affected/target organs, tissues and systems of humans

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

11.4 Information on health hazards in case of direct exposure to the product and its effect

Effect on upper respiratory tract irritation None known.

Respiratory or skin sensitization

Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended

Not listed.

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Skin corrosion/irritation Not likely, due to the form of the product.

Serious eye damage/eye irritation None known.

Aspiration hazard Not an aspiration hazard.

11.5 Information on long-term hazardous health effects

Carcinogenicity Not classifiable as to carcinogenicity to humans.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Mutagenicity Not classified.

Cumulativeness Not available.

Chronic effects None known.

11.6 Acute toxicity data Not known.

12. Environmental impact information

12.1 General description of the impact on the environment The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

12.2 Routes of exposure to environment None known.

12.3 The most important characteristics of the environmental impact

12.3.1 Hygienic standards Not available.

12.3.2 Ecotoxicity Not expected to be harmful to aquatic organisms.

12.3.3 Biomigration and transformation of the environment due to the biodegradation or other processes

Persistence and degradability No data is available on the degradability of this substance.

Bioaccumulative potential No data available.

Mobility in soil No data available.

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.

13. Recommendations for waste (residues) disposal

13.1 Safety precautions when handling the waste generated during use, storage, transportation Consult authorities before disposal. 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.

13.2 Information on the location and disposal methods, recycling or disposal of product waste, including packaging

Dispose in accordance with all applicable regulations.

13.3 Recommendation on the waste disposal generated during its domestic use

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.

Waste from residues / unused products

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).

14. Transport information

ADR

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.

15. National and international regulatory information

15.1 National legislation

15.1.1 Laws of the Russian Federation

On technical regulation.
On sanitary and epidemiological welfare of the population.
On Environmental Protection.
On Air Protection.

15.1.2 Information about the documentation, regulatory requirements for the protection of human health and environment

Sanitary-Epidemiological Rules, 1.2.2353-08, Chemical substances, mixtures and products which are carcinogenic factors, 21 April 2008

Not listed.

Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended

Not listed.

15.2 International Conventions and Agreements

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Montreal Protocol

Not applicable.

Kyoto protocol

Not applicable.

Basel Convention

Zinc (CAS 7440-66-6)

International Inventories

Country(s) or region

Inventory name

On inventory (yes/no)*

Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	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).

16. Other information

16.1 Information on revision of the SDS

Issue date	07-07-2020
Version #	01
Previous SDS number	Not applicable.

16.2 List of references used in compiling the safety data sheet

GOST 19433-88. Dangerous goods. Classification and marking.
 GOST 12.1.004-91. Occupational safety standards system. Fire safety. General requirements.
 GOST 12.1.044-89. Occupational safety standards system. Fire and explosion hazard of substances and materials. Nomenclature of substances and materials. Nomenclature of indices and methods of their determination.
 GOST 31340-2013 Labeling of chemicals. General requirements.
 GOST 32419-2013 Classification of chemical products. General requirements.
 GOST 30333-2007 Chemical production safety passport. General requirements.
 GOST 32424-2013 Classification of chemicals for environmental hazards. General principles.
 GOST 12.1.007-76 Occupational safety standard system. Noxious substances. Classification and general safety requirements.
 Hygiene Norm GN 2.2.5.1313-03. Executive No. 76 of 30 April 2003. Maximum allowable concentration (MAC) of harmful substances in the air of working zones, as amended.

List of abbreviations

Not available.

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