



CHEMICAL PRODUCT SAFETY DATA SHEET

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

MATERION

Product name: Zinc Tin Antimony Targets

Issue date: 11-27-2019

Version #: 01

SDS No: G25

SECTION 1 Chemical product and company identification

Chinese name of chemical	锌锡锑目标
English name of chemical	Zinc Tin Antimony 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	11-27-2019
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SECTION 2 Hazards identification

Emergency overview Fatal if swallowed. May cause respiratory irritation. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic organisms.

Hazard categories	
Physical hazards	Not classified.
Health hazards	Acute toxicity, oral Category 2 Specific target organ toxicity, single exposure Category 3 respiratory tract irritation Specific target organ toxicity, repeated exposure Category 1 (Respiratory system)
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 Danger

Hazard statement

H300	Fatal if swallowed.
H335	May cause respiratory irritation.
H372	Causes damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response

P301 + P310	Wash hands after handling.
P330	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P304 + P340	Rinse mouth.
P312	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

Storage

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

Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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Physical and chemical hazards No unusual fire or explosion hazards noted.

Health hazards Fatal if swallowed. None known.

Environmental hazards Very toxic to aquatic life with long lasting effects. 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.

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
Zinc	50 - 99	7440-66-6
Tin	0 - 50	7440-31-5
Antimony	1 - 5	7440-36-0

SECTION 4 First aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician if you feel unwell.
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.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
Most important symptoms and health effects	Nausea, vomiting. Diarrhea. Prolonged exposure may cause chronic effects. None known.
Personal protection for first-aid responders	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.
Notes to physician	Treat symptomatically. Keep victim warm.

SECTION 5 Fire-fighting measures

Extinguishing media	Powder. Dry sand. Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.
Extinguishing media to avoid	Water. Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards	This product is not flammable.
Special fire fighting procedures	Use standard firefighting procedures and consider the hazards of other involved materials.
Protection of fire-fighters	Use protective equipment appropriate for surrounding materials.
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. For personal protection, see section 8 of the SDS. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.

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

Environmental precautions Avoid discharge into drains, water courses or onto the ground. Collect spillage.

Clean-up methods and materials and containment measures Avoid dust formation. Stop the flow of material, if this is without risk. Sweep up or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see section 13 of the SDS.

Prevention of secondary hazards None known.

SECTION 7 Handling and storage

Handling Do not taste or swallow. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Storage Keep container tightly closed. 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)

Material	Type	Value
Zinc Tin Antimony Targets	PC-TWA	0.05 mg/m ³
Components	Type	Value
Antimony (CAS 7440-36-0)	PC-TWA	0.5 mg/m ³

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

Monitoring methods Follow standard monitoring procedures.

Engineering measures Good general ventilation 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.

Personal protective equipment

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

Hand protection Suitable gloves can be recommended by the glove supplier. Wear gloves to prevent metal cuts and skin abrasions during handling.

Eye protection If contact is likely, safety glasses with side shields are recommended.

Skin and body protection Wear suitable protective clothing. Use of an impervious apron is recommended.

Hygiene measures Keep away from food and drink. 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

Physical state Solid.

Form Solid.

Color Grey

Odor None.

Odor threshold Not applicable.

pH Not applicable.

Melting point/freezing point	449.42 °F (231.9 °C) estimated / Not applicable.
Boiling point, initial boiling point, and boiling range	Not applicable.
Flash point	Not applicable.
Flammability limit - lower (%)	Not applicable.
Flammability limit - lower (%) temperature	Not applicable.
Flammability limit - upper (%)	Not applicable.
Flammability limit - upper (%) temperature	Not applicable.
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.
Relative density	Not applicable.
Density	7.16 g/cm ³ estimated
Solubility(ies)	
Solubility (water)	Insoluble.
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.
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	Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11 Toxicological information

Acute toxicity	Fatal if swallowed.
Routes of exposure	Inhalation. Ingestion.
Symptoms	Nausea, vomiting. May cause respiratory irritation.
Skin corrosion/irritation	Not likely, due to the form of the product.
Serious eye damage/eye irritation	None known.

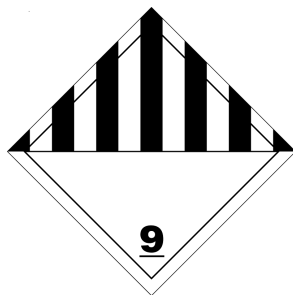
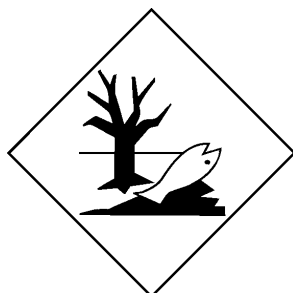
Respiratory or skin sensitization**Respiratory sensitization** Not a respiratory sensitizer.**Skin sensitizer** Not a skin sensitizer.**Germ cell mutagenicity** Not classified.**Carcinogenicity** Not classified.**Toxic to reproduction** Not classified.**Specific target organ toxicity following single exposure** Not classified.**Specific target organ toxicity following repeated exposure** Causes damage to organs (Respiratory system) through prolonged or repeated exposure.**Aspiration hazard** Not an aspiration hazard.**Chronic effects** Prolonged inhalation may be harmful.**SECTION 12 Ecological information****Ecotoxicity** Very toxic to aquatic life with long lasting effects. 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.**Persistence and degradability** No data is available on the degradability of any ingredients in the mixture.**Bioaccumulation** No data available.**Mobility in soil** The product is immiscible with water and will spread on the water surface.**Other hazardous 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****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.**Local disposal regulations** 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****UN number** UN3077**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.**Transport hazard class(es)****Class** 9**Subsidiary risk** -**Packing group** III**Environmentally hazardous** Yes**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.**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.

CNDG**Marine pollutant****SECTION 15 Regulatory information****Law of the People's Republic of China on Prevention and Control of Occupational Diseases****Classification of occupational disease hazards**

Antimony (CAS 7440-36-0)

Tin (CAS 7440-31-5)

Regulations on the Control over Safety of Dangerous Chemicals**Catalog of Hazardous Chemicals**

ANTIMONY POWDER (CAS 7440-36-0)

ZINC ASHES (CAS 7440-66-6)

Regulations on Labor Protection in Workplaces Where Toxic Substances Are Used**Directory of Highly Toxic Substances**

Antimony (CAS 7440-36-0)

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).

Other regulations

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)

China. National Catalogue of Hazardous Wastes

Antimony (CAS 7440-36-0)

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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