



CHEMICAL PRODUCT SAFETY DATA SHEET

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

MATERION

Product name: Tin Product

Issue date: 12-12-2018

Version #: 01

SDS No: G16

1. Chemical product and company identification

Product name	Tin Product
Synonyms	TIN, ELEMENTAL
Manufacturer/Supplier	Materion Advanced Materials Germany GmbH
Address	Borsigstrasse 10 Alzenau, 63755 Germany
Contact person	Hermann Schmiing
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Emergency telephone number	49.60.23.91.82.0
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2. Hazards identification

Emergency overview

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 and/or powder), a potential health hazard could exist and risk management measures must be taken to minimize risk.

Hazard categories

Not classified.

Label elements

Pictograms

None.

Signal word

None.

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

None.

Response

None.

Storage

Store away from incompatible materials.

Disposal

P501

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

Physical and chemical hazards Not available.

Health hazards Not available.

Environmental hazards Not available.

Supplemental information None.

3. Composition/information on ingredients

Substance/mixture Substance

Chemical name	Concentration (%)	CAS Number
Tin Product	100	7440-31-5

4. First aid measures

Inhalation

Call a physician if symptoms develop or persist.

Skin contact

Treat skin cuts and wounds with standard first aid practices such as cleansing, disinfecting and covering to prevent wound infection and contamination before continuing work.

Eye contact	Flush thoroughly with water. If irritation occurs, get medical assistance.
Ingestion	If swallowed: Immediately call a poison center/doctor.
Most important symptoms and health effects	None known.
Personal protection for first-aid responders	Not available.

5. Fire-fighting measures

Extinguishing media	Powder. Dry sand. Use methods for the surrounding fire.
Extinguishing media to avoid	Use fire-extinguishing media appropriate for surrounding materials.
Specific hazards	This product is not flammable.
Special fire fighting procedures	None.
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.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Keep unnecessary personnel away. Wear appropriate personal protective equipment. For personal protection, see section 8 of the SDS.
For emergency responders	Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

Environmental precautions	Collect spillage.
Clean-up methods and materials and containment measures	Collect spillage. For waste disposal, see section 13 of the SDS.
Prevention of secondary hazards	Not available.

7. Handling and storage

Handling	Observe good industrial hygiene practices.
Storage	Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Exposure limits

No exposure limits noted for ingredient(s).

Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	This material does not have established exposure limits.
Monitoring methods	Not available.
Engineering measures	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.

Personal protective equipment

Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Hand protection	Wear gloves to prevent metal cuts and skin abrasions during handling.
Eye protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Use personal protective equipment as required.

9. Physical and chemical properties

Appearance

Physical state	Solid.
Form	Solid.
Color	Silver-white.
Odor	None.
Odor threshold	Not applicable.

pH	Not applicable.
Melting point/freezing point	449.42 °F (231.9 °C)
Boiling point, initial boiling point, and boiling range	Not applicable.
Flash point	Not applicable.
Flammability limit - lower (%)	Not applicable.
Flammability limit - upper (%)	Not applicable.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Relative density	Not applicable.
Density	7.26 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	
Dynamic viscosity	Not applicable.
Dynamic viscosity temp	Not applicable.
Explosive properties	Not explosive.
Kinematic viscosity	Not applicable.
Molecular formula	Sn
Molecular weight	118.69 g/mol
Oxidizing properties	Not oxidizing.
Surface tension	Not applicable.
Viscosity	Not applicable.

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. Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Acute toxicity	Not available.
Routes of exposure	Not established.
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.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous.
Persistence and degradability	The product is not expected to be biodegradable.
Bioaccumulation	No data available.
Mobility in soil	The product is insoluble in water.
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.

13. Disposal considerations

Residual waste	Dispose of in accordance with local regulations.
Contaminated packaging	Refer to manufacturer/supplier for information on recovery/recycling.
Local disposal regulations	Dispose of contents/container in accordance with local/regional/national/international regulations.

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.

15. Regulatory information

Inventory of Existing Chemical Substances in China

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).

Applicable regulations

Occupational exposure limits for hazardous agents in the workplace (GBZ 2.1-2007)

Not listed.

Restricted Import/Export Toxic Chemical List (MEP and GCA Announcement No. 2008-66, Dec. 1, 2008, amended through MEP and Customs Notice No. 2013-85, December 30, 2013)

Not regulated.

Classification and code of dangerous goods (GB 6944-2012)

Not regulated.

UN Recommendations on the Transport of Dangerous Goods (UN RTDG)

Not regulated.

16. Other information

References

EPA: AQUIRE database
 NLM: Hazardous Substances Data Base
 US. IARC Monographs on Occupational Exposures to Chemical Agents

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