



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 ITO Targets
Registration number -
Document number G42
Synonyms None.
Issue date 15-February-2019
Version number 01

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
e-mail Materion.Germany@materion.com
Contact person Hermann Schmiing

1.4. Emergency telephone number 49.60.23.91.82.0

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)

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The substance 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 and/or powder), 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: Indium oxide, Tin oxide
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 Store away from incompatible materials.
Disposal
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

2.3. Other hazards Not a PBT or vPvB substance or mixture.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Indium oxide	80 - 99	1312-43-2 215-193-9	-	-	
Classification:	-				
Tin oxide	1 - 20	18282-10-5 242-159-0	-	-	#
Classification:	-				

SECTION 4: First aid measures

General information 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.

4.1. Description of first aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison centre 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 Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed None known.

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. None known.

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide or dry powder.
Unsuitable extinguishing media None known.

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 Use protective equipment appropriate for surrounding materials.
Special firefighting procedures Use standard firefighting procedures and consider the hazards of other involved materials. Use water spray to cool unopened containers.

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 Keep unnecessary personnel away. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area. For personal protection, see section 8 of the PIS.

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 PIS.

6.2. Environmental precautions

Collect spillage.

6.3. Methods and material for containment and cleaning up

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 PIS.

6.4. Reference to other sections

For personal protection, see section 8 of the PIS. For waste disposal, see section 13 of the PIS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames and high temperatures.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

Belgium. Exposure Limit Values.

Components	Type	Value
Indium oxide (CAS 1312-43-2)	TWA	0,1 mg/m ³
Tin oxide (CAS 18282-10-5)	TWA	2 mg/m ³

EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU

Components	Type	Value
Tin oxide (CAS 18282-10-5)	TWA	2 mg/m ³

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.

Exposure guidelines

Belgium OELs: Skin designation

Tin oxide (CAS 18282-10-5)

Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls

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.

Individual protection measures, such as personal protective equipment

General information

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection

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

Skin protection

- Hand protection

Wear gloves to prevent metal cuts and skin abrasions during handling.

- Other

Wear suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

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	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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state	Solid.
Form	Solid.
Colour	Black.
Odour	None.
Odour threshold	Not applicable.
pH	Not applicable.
Melting point/freezing point	1630 °C (2966 °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.
Partition coefficient (n-octanol/water)	Not applicable. 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	6,95 g/cm ³ estimated
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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	None under normal conditions.
10.5. Incompatible materials	None known.
10.6. Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Inhalation No adverse effects due to inhalation are expected.
Skin contact No adverse effects due to skin contact are expected.
Eye contact Not likely, 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 likely, due to the form of the product.
Serious eye damage/eye irritation None known.
Respiratory sensitisation Not a respiratory sensitizer.
Skin sensitisation Not a skin sensitizer.
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 Not relevant, due to the form of the product.
12.2. Persistence and degradability No data is available on the degradability of this substance.
12.3. Bioaccumulative potential No data available.
Partition coefficient n-octanol/water (log Kow) Not applicable.
Bioconcentration factor (BCF) Not available.
12.4. Mobility in soil No data available.
12.5. Results of PBT and vPvB assessment Not a PBT or vPvB substance or mixture.
12.6. 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.

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. 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 (EC) No. 850/2004 On persistent organic pollutants, Annex I 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

Not listed.

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

Not listed.

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

Not listed.

Other regulations

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

National regulations

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.

Training information

Follow training instructions when handling this material.

Disclaimer

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