



# PRODUCT INFORMATION SHEET

**MATERION**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

<b>Name of the substance</b>	Indium Metal
<b>Identification number</b>	231-180-0 (EC number)
<b>Registration number</b>	-
<b>Document number</b>	G03
<b>Synonyms</b>	None.
<b>Issue date</b>	09-November-2018
<b>Version number</b>	03
<b>Revision date</b>	26-May-2021
<b>Supersedes date</b>	26-January-2021

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

<b>Identified uses</b>	Industrial uses: Uses of substances as such or in preparations at industrial sites
<b>Uses advised against</b>	Consumer uses: Private households (= general public = consumers)

### 1.3. Details of the supplier of the product information sheet

#### Supplier

<b>Company name</b>	Materion Advanced Materials
<b>Address</b>	6070 Parkland Boulevard Mayfield Heights, OH 44124 United States
<b>Division</b>	
<b>Telephone</b>	1.216.383.4019
<b>e-mail</b>	ehs@materion.com
<b>Contact person</b>	Theodore Knudson

### 1.4. Emergency telephone number

See Section 16.

## 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

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

#### Health hazards

Specific target organ toxicity - single exposure Category 3 respiratory tract irritation H335 - May cause respiratory irritation.

**Hazard summary** Not classified for health hazards. However, occupational exposure to the mixture or substance(s) may cause adverse health effects.

### 2.2. Label elements

#### Label according to Regulation (EC) No. 1272/2008 as amended

**Contains:** Indium

#### Hazard pictograms



**Signal word** Warning

#### Hazard statements

H335 May cause respiratory irritation.

#### Precautionary statements

##### Prevention

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P261 Avoid breathing dust.  
P264 Wash thoroughly after handling.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P285 In case of inadequate ventilation wear respiratory protection.

**Response**

P342 + P311 If experiencing respiratory symptoms: Call a poison centre/doctor.

**Storage**

P405 Store locked up.

**Disposal**

P501 Dispose of contents/container (in accordance with related 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**

**3.1. Substances**

**General information**

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Indium	99,9 - 100	7440-74-6 231-180-0	-	-	

**Classification:** -

**SECTION 4: First aid measures**

**General information**

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**

Move to fresh air. Call a physician if symptoms develop or persist.

**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**

May cause respiratory irritation.

**4.3. Indication of any immediate medical attention and special treatment needed**

Provide general supportive measures and treat symptomatically.

**SECTION 5: Firefighting measures**

**General fire hazards**

No unusual fire or explosion hazards noted.

**5.1. Extinguishing media**

**Suitable extinguishing media**

Dry chemicals, sand, dolomite etc. Carbon dioxide (CO2).

**Unsuitable extinguishing media**

Water.

**5.2. Special hazards arising from the substance or mixture**

No unusual fire or explosion hazards noted.

**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** Keep unnecessary personnel away. For personal protection, see section 8 of the PIS.

**For emergency responders** Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the PIS.

**6.2. Environmental precautions** Avoid discharge into drains, water courses or onto the ground.

**6.3. Methods and material for containment and cleaning up** Pick up and arrange disposal without creating dust. Shovel up and place in a container for salvage or disposal. Sweep up or gather material and place in appropriate container for disposal.

**6.4. Reference to other sections** Not available.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling** Observe good industrial hygiene practices. Avoid contact with skin. Avoid breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation.

**7.2. Conditions for safe storage, including any incompatibilities** Keep container tightly closed in a dry and well-ventilated place.

**7.3. Specific end use(s)** Not available.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Material	Type	Value	Form
Indium Metal	MAK	0,1 mg/m <sup>3</sup>	Inhalable fraction.
	STEL	0,2 mg/m <sup>3</sup>	Inhalable fraction.
Components	Type	Value	Form
Indium (CAS 7440-74-6)	MAK	0,1 mg/m <sup>3</sup>	Inhalable fraction.
	STEL	0,2 mg/m <sup>3</sup>	Inhalable fraction.

##### Belgium. Exposure Limit Values

Material	Type	Value
Indium Metal	TWA	0,1 mg/m <sup>3</sup>
	Components	Type
Indium (CAS 7440-74-6)	TWA	0,1 mg/m <sup>3</sup>

##### Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09

Material	Type	Value
Indium Metal	MAC	0,1 mg/m <sup>3</sup>
	STEL	0,3 mg/m <sup>3</sup>
Components	Type	Value
Indium (CAS 7440-74-6)	MAC	0,1 mg/m <sup>3</sup>
	STEL	0,3 mg/m <sup>3</sup>

##### Denmark. Exposure Limit Values

Material	Type	Value	Form
Indium Metal	TLV	0,1 mg/m <sup>3</sup>	Dust.
	Components	Type	Value
Indium (CAS 7440-74-6)	TLV	0,1 mg/m <sup>3</sup>	Dust.

##### Finland. Workplace Exposure Limits

Material	Type	Value
Indium Metal	TWA	0,1 mg/m <sup>3</sup>
	Components	Type
Indium (CAS 7440-74-6)	TWA	0,1 mg/m <sup>3</sup>

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace**

Material	Type	Value	Form
Indium Metal	AGW	0,0001 mg/m3	Respirable fraction.
<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Indium (CAS 7440-74-6)	AGW	0,0001 mg/m3	Respirable fraction.

**Greece. OELs (Decree No. 90/1999, as amended)**

Material	Type	Value
Indium Metal	STEL	1 mg/m3
	TWA	1 mg/m3
<b>Components</b>	<b>Type</b>	<b>Value</b>
Indium (CAS 7440-74-6)	STEL	1 mg/m3
	TWA	1 mg/m3

**Iceland. OELs. Regulation 154/1999 on occupational exposure limits**

Material	Type	Value	Form
Indium Metal	TWA	0,1 mg/m3	Dust.
<b>Components</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
Indium (CAS 7440-74-6)	TWA	0,1 mg/m3	Dust.

**Ireland. Occupational Exposure Limits**

Material	Type	Value
Indium Metal	STEL	0,3 mg/m3
	TWA	0,1 mg/m3
<b>Components</b>	<b>Type</b>	<b>Value</b>
Indium (CAS 7440-74-6)	STEL	0,3 mg/m3
	TWA	0,1 mg/m3

**Italy. Occupational Exposure Limits**

Material	Type	Value
Indium Metal	TWA	0,1 mg/m3
<b>Components</b>	<b>Type</b>	<b>Value</b>
Indium (CAS 7440-74-6)	TWA	0,1 mg/m3

**Lithuania. OELs. Limit Values for Chemical Substances, General Requirements**

Material	Type	Value
Indium Metal	TWA	0,1 mg/m3
<b>Components</b>	<b>Type</b>	<b>Value</b>
Indium (CAS 7440-74-6)	TWA	0,1 mg/m3

**Norway. Administrative Norms for Contaminants in the Workplace**

Material	Type	Value
Indium Metal	TLV	0,1 mg/m3
<b>Components</b>	<b>Type</b>	<b>Value</b>
Indium (CAS 7440-74-6)	TLV	0,1 mg/m3

**Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)**

Material	Type	Value
Indium Metal	TWA	0,1 mg/m3
<b>Components</b>	<b>Type</b>	<b>Value</b>
Indium (CAS 7440-74-6)	TWA	0,1 mg/m3

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)**

Material	Type	Value	Form
Indium Metal	TWA	0,0001 mg/m3	Respirable fraction.

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)**

Components	Type	Value	Form
Indium (CAS 7440-74-6)	TWA	0,0001 mg/m <sup>3</sup>	Respirable fraction.

**Spain. Occupational Exposure Limits**

Material	Type	Value
Indium Metal	TWA	0,1 mg/m <sup>3</sup>

Components	Type	Value
Indium (CAS 7440-74-6)	TWA	0,1 mg/m <sup>3</sup>

**Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)**

Material	Type	Value	Form
Indium Metal	TWA	0,1 mg/m <sup>3</sup>	Total dust.

Components	Type	Value	Form
Indium (CAS 7440-74-6)	TWA	0,1 mg/m <sup>3</sup>	Total dust.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Material	Type	Value	Form
Indium Metal	TWA	0,1 mg/m <sup>3</sup>	Inhalable fraction.

Components	Type	Value	Form
Indium (CAS 7440-74-6)	TWA	0,1 mg/m <sup>3</sup>	Inhalable fraction.

**UK. EH40 Workplace Exposure Limits (WELs)**

Material	Type	Value
Indium Metal	STEL	0,3 mg/m <sup>3</sup>

		0 ppm
	TWA	0,1 mg/m <sup>3</sup>

Components	Type	Value
Indium (CAS 7440-74-6)	STEL	0,3 mg/m <sup>3</sup>

		0 ppm
	TWA	0,1 mg/m <sup>3</sup>

		0 ppm
	TWA	0,1 mg/m <sup>3</sup>

**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** 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** Wear safety glasses with side shields (or goggles).

**Skin protection**

**- Hand protection** Wear protective gloves.

**- Other** Wear suitable protective clothing.

**Respiratory protection** In case of inadequate ventilation, use respiratory protection.

**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.

## **SECTION 9: Physical and chemical properties**

### **9.1. Information on basic physical and chemical properties**

#### **Appearance**

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Colour</b>	Silver-white.

**Odour** None.

**Odour threshold** Not applicable.

**pH** Not applicable.

**Melting point/freezing point** 156,6 °C (313,88 °F)

**Initial boiling point and boiling range** 2072 °C (3761,6 °F)

**Flash point** Not applicable.

**Evaporation rate** Not applicable.

**Flammability (solid, gas)** 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.

**Vapour pressure** < 0,0000001 kPa (25 °C (77 °F))

**Vapour density** Not applicable.

**Relative density** Not applicable.

#### **Solubility(ies)**

**Solubility (water)** Insoluble

**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** 7,31 g/cm<sup>3</sup> at 20 °C

**Explosive limit** Not applicable.

**Molecular formula** In

**Molecular weight** 114,82 g/mol

**Specific gravity** 7,31

## **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. Acids. Sulfur. Halogens.

**10.6. Hazardous decomposition products** No hazardous decomposition products are known.

## SECTION 11: Toxicological information

<b>General information</b>	Occupational exposure to the substance or mixture may cause adverse effects.
<b>Information on likely routes of exposure</b>	
<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	May cause eye irritation.
<b>Ingestion</b>	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
<b>Symptoms</b>	Exposure may cause temporary irritation, redness, or discomfort.
<b>11.1. Information on toxicological effects</b>	
<b>Acute toxicity</b>	None known.
<b>Skin corrosion/irritation</b>	Not relevant, due to the form of the product.
<b>Serious eye damage/eye irritation</b>	May cause eye irritation.
<b>Respiratory sensitisation</b>	Not a respiratory sensitizer.
<b>Skin sensitisation</b>	This product is not expected to cause skin sensitisation.
<b>Germ cell mutagenicity</b>	Not classified.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
<b>Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)</b>	Not listed.
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	May cause respiratory irritation.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Mixture versus substance information</b>	No information available.
<b>Other information</b>	None known.

## SECTION 12: Ecological information

<b>12.1. Toxicity</b>	Due to partial or complete lack of data the classification for hazardous to the aquatic environment, is not possible.
<b>12.2. Persistence and degradability</b>	
<b>12.3. Bioaccumulative potential</b>	No data available.
<b>Partition coefficient n-octanol/water (log Kow)</b>	Not available.
<b>Bioconcentration factor (BCF)</b>	Not available.
<b>12.4. Mobility in soil</b>	No data available.
<b>12.5. Results of PBT and vPvB assessment</b>	Not a PBT or vPvB substance or mixture.
<b>12.6. Other adverse effects</b>	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

<b>13.1. Waste treatment methods</b>	
<b>Residual waste</b>	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).
<b>Contaminated packaging</b>	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.
<b>EU waste code</b>	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.

**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**

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.

### **15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out.



## SECTION 16: Other information

<b>List of abbreviations</b>	Not available.
<b>References</b>	Not available.
<b>Information on evaluation method leading to the classification of mixture</b>	Not applicable.
<b>Training information</b>	Not available.
<b>Further information</b>	Transportation Emergency Call Chemtrec at: International: 703.741.5970 Spain: 900.868.538 Switzerland: 0800.564.402 Chemtrec's toll free, mobile-enabled number in Germany – 0800 1817059
<b>Disclaimer</b>	<p>This document has been prepared using data from sources considered to be technically reliable and the information is believed to be correct. Materion makes no warranties, expressed or implied, as to the accuracy of the information contained herein. Materion cannot anticipate all conditions under which this information and its products may be used and the actual conditions of use are beyond its control. The user is responsible to evaluate all available information when using this product for any particular use and to comply with all Federal, State, Provincial and Local laws, statutes and regulations.</p> <p>To avoid any misunderstandings or incorrect assumptions by the receiver of the safety information, it should be made clear that the supplied information is not in the form of a Safety Data Sheet (SDS), but is actually a voluntary Product Information Sheet closely following the guidelines of the Safety Data Sheet – COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 (REACH/SDS).</p>