

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH)

Revision date: 12 Oct 2022

Print date: 20 Jun 2025

Version: 2.2



INDALLOY 4 PREFORM

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

1.1. Product identifier

Trade name/designation:

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Other means of identification:

SDS-IN 101AA

UFI:

8P00-D06P-A00Y-C15Y

REACH No.:

01-2120756870-48-XXXX

Additional information:

For Indium solid metal applications i.e. sTIM and Thermal Interface Materials

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

Use of the substance/mixture:

INDUSTRIAL USE - PURE METAL INDIUM

1.3. Details of the supplier of the safety data sheet

Manufacturer:

Indium Corporation of America

HQ

301 Woods Park Dr Ste 301

13323 Clinton, NY

United States

Telephone: (315) 853-4900

Telefax: (315) 853-1000

E-mail: EHS_Compliance@indium.com

Website: <https://www.indium.com>

Importer/Only Representative:

Indium Advanced Materials GmbH

Fragnerstrasse 4

84034 Landshut

Germany

Telephone: +49 871 4309500

E-mail: EHS_Compliance@indium.com

Website: <http://www.indium.com>

E-mail (competent person): EHS_Compliance@indium.com

1.4. Emergency telephone number

Germany, 24h: 0800-181-7059 or (Frankfurt) 49-69643508409

USA, 24h: 1 (800) 424-9300

China, 24h: +86 4001-204937

Outside USA:, 24h: +1 (703) 527-3887

Poland, 24h: 48-223988029

United Kingdom, 24h: 44-870-8200418 and 44-2038073798

France, 24h: 33-975181407

Hungary, 24h: 36-18088425

Italy, 24h: 800-789-767

Portugal, 24h: 351-308801773

Romania, 24h: 40-37-6300026

Norway, 24h: +(47)-21930678

Sweden, 24h: +(46)-852503403

Taiwan, 24h: 00801-14-8954

Costa Rica (CHEMTREC), 24h: +506-40003869

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Costa Rica (National Poison Center), 24h: +506 2223 1028

Vietnam (Poison Center), 24h: +84 (0)4 912620 876

Austria, 24h: +(43)-13649237

Czech Republic, 24h: +420 224 919 293 (+420 224 915 402)

Italy (Poison Control Centre), 24h: +39 02 6610 1029

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard statements: none

Supplemental hazard information: none

Precautionary statements Prevention

P261	Avoid breathing dust/mist.
P280	Wear protective gloves/protective clothing and eye protection/face protection.

Precautionary statements Response

P301 + P312	IF SWALLOWED: Call a doctor if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of water and soap.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

Adverse human health effects and symptoms:

Contact with solid metal article is not hazardous. When handling solid metal, nitrile or equivalent gloves are recommended. Inhalation of fume or dust from high temperature melting may cause local irritation to the respiratory system.

Other adverse effects:

Kidney and liver damage from injection of indium compounds has been reported based on limited animal testing.

SECTION 3: Composition/information on ingredients

3.1. Substances

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 7440-74-6 EC No.: 231-180-0 REACH No.: 01-2120756870-48-XXXX	indium The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].	99 - ≤ 100 weight-%

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended.

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Following inhalation:

Remove to fresh air. If not breathing, give artificial respiration or oxygen by trained personnel. Seek immediate medical attention.

In case of skin contact:

After contact with skin, first remove product with a dry cloth and then wash the skin with plenty of water.

After eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Following ingestion:

Rinse mouth. Let 1 glass of water be drunk in little sips (dilution effect). Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No known symptoms to date.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media:

none

5.2. Special hazards arising from the substance or mixture

The product itself does not burn. May form combustible dust concentrations in air.

Hazardous combustion products:

In case of fire: Gases/vapours, toxic

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety. Avoid breathing dust/fume/gas/mist/vapours/spray.

Protective equipment:

Wear protective gloves/protective clothing/eye protection/face protection.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment:

Collect spillage. Measures to prevent aerosol and dust generation Wet clean or vacuum up solids.

For cleaning up:

Water (with cleaning agent). If solid metal wear gloves, pick up and return to process.

6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

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6.5. Additional information

Use appropriate container to avoid environmental contamination.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Wear personal protection equipment (refer to section 8).

Measures to prevent aerosol and dust generation:

Dust should be exhausted directly at the point of origin.

Advices on general occupational hygiene

When using do not eat, drink, smoke, sniff. Avoid contact with skin, eyes and clothes.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed in a cool, well-ventilated place.

Storage class (TRGS 510, Germany): 13 - Non-combustible solids that cannot be assigned to any of the above storage classes

7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
ES from 2 Mar 2023	indium CAS No.: 7440-74-6 EC No.: 231-180-0	① 0.1 mg/m ³
TRGS 900 (DE) from 1 Sept 2017	indium CAS No.: 7440-74-6 EC No.: 231-180-0	① 0 mg/m ³ ② 0.001 mg/m ³ ⑤ (alveolengängige Fraktion) AGS, 10
WEL (GB) from 16 Dec 2021	indium CAS No.: 7440-74-6 EC No.: 231-180-0	① 0.1 mg/m ³ ② 0.3 mg/m ³
IE from 16 Dec 2021	indium CAS No.: 7440-74-6 EC No.: 231-180-0	① 0.1 mg/m ³ ② 0.3 mg/m ³
HTP (FI) from 16 Dec 2021	indium CAS No.: 7440-74-6 EC No.: 231-180-0	① 0.1 mg/m ³ ⑤ In
SE from 16 Dec 2021	indium CAS No.: 7440-74-6 EC No.: 231-180-0	① 0.1 mg/m ³ ⑤ (beräknad som In; inhalerbar fraktion)
ACGIH (US) from 16 Dec 2021	indium CAS No.: 7440-74-6 EC No.: 231-180-0	① 0.1 mg/m ³
NIOSH (US)	indium CAS No.: 7440-74-6 EC No.: 231-180-0	① 0.1 mg/m ³

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8.1.2. Biological limit values

Limit value type (country of origin)	Substance name	Limit value	① Parameter ② Test material ③ Time of sampling: ④ Remark
ACGIH-BEI (US) from 1 Jan 2021	indium CAS No.: 7440-74-6 EC No.: 231-180-0	1 µg/L	① Indium ② plasma/serum ③ no restriction

8.1.3. DNEL-/PNEC-values

No data available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Keep in a cool, well-ventilated place.

8.2.2. Personal protection equipment

Eye/face protection:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection:

Tested protective gloves must be worn EN ISO 374. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Respiratory protection:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: solid

Form: solid

Colour: metallic

Odour: odourless

flammability: No

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	<i>not applicable</i>		
Melting point	156.7 °C		
Freezing point	<i>No data available</i>		
Initial boiling point and boiling range	2,080 °C		
Flash point	<i>not applicable</i>		
Evaporation rate	<i>No data available</i>		
Auto-ignition temperature	<i>not applicable</i>		
Vapour pressure	<i>No data available</i>		
Density	<i>No data available</i>		
Relative density	7.3	25 °C	
Bulk density	<i>No data available</i>		
Water solubility	practically insoluble		

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particle characteristics:

No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product itself does not burn. not relevant

10.2. Chemical stability

No known hazardous reactions.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Avoid: extreme temperatures

10.5. Incompatible materials

Acids ,strong base, Oxidizing agent,

10.6. Hazardous decomposition products

May form hazardous decomposition products when exposed to high temperatures.(Gases/vapours, toxic)
In case of fire:

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity:

Based on available data, the classification criteria are not met.

Acute dermal toxicity:

Based on available data, the classification criteria are not met.

Acute inhalation toxicity:

Based on available data, the classification criteria are not met.

Skin corrosion/irritation:

Based on available data, the classification criteria are not met.

Serious eye damage/irritation:

Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Based on available data, the classification criteria are not met.

Carcinogenicity:

Based on available data, the classification criteria are not met.

Reproductive toxicity:

Based on available data, the classification criteria are not met.

STOT-single exposure:

Based on available data, the classification criteria are not met.

STOT-repeated exposure:

Based on available data, the classification criteria are not met.

Aspiration hazard:

Based on available data, the classification criteria are not met.

Additional information:

No data available

11.2. Information on other hazards

No data available

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SECTION 12: Ecological information

12.1. Toxicity

indium CAS No.: 7440-74-6 EC No.: 231-180-0

EC₅₀: >0.00032 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)) OECD Guideline 201 (Alga, Growth Inhibition Test)

NOEC: >0.00032 mg/L 3 d (Algae/water plant, Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)) OECD Guideline 201 (Alga, Growth Inhibition Test)

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

indium CAS No.: 7440-74-6 EC No.: 231-180-0

Results of PBT and vPvB assessment: —

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recycling/reclamation of metals and metal compounds.

Waste treatment options

Appropriate disposal / Product:

Consult the appropriate local waste disposal expert about waste disposal.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or ID number			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.2. UN proper shipping name			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.3. Transport hazard class(es)			
not relevant	not relevant	not relevant	not relevant
14.4. Packing group			
not relevant	not relevant	not relevant	not relevant
14.5. Environmental hazards			
not relevant	not relevant	not relevant	not relevant
14.6. Special precautions for user			
not relevant	not relevant	not relevant	not relevant

14.7. Maritime transport in bulk according to IMO instruments

No data available

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SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU legislation

Authorisations:

Contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: none

15.1.2. National regulations

[DE] National regulations

Water hazard class

WGK:

1 - slightly hazardous to water

[US] National regulations

California Proposition 65 list of chemicals



WARNING: This product can expose you to chemicals including [trace amounts of lead] which is known to the State of California to cause cancer, and can cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

Other regulations, restrictions and prohibition regulations

All ingredients are listed on the EPA's TSCA Inventory. This product does not contain any U.S. TSCA PBT chemicals.

15.2. Chemical Safety Assessment

No data available

15.3. Additional information

Regulation (EC) No. 1005/2009 on substances that lead to the depletion of the ozone layer: No chemicals contained.

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

ACGIH	American Conference of Governmental Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
DNEL	derived no-effect level
EC ₅₀	Effective Concentration 50%
EN	European Standard
ES	Exposure scenario
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
ISO	International Standards Organisation
MAK	Maximum concentration in the workplace air (CH)
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety & Health
NOEC	No Observed Effect Concentration
OECD	Organisation for Economic Cooperation and Development
OEL	Threshold Limit Value
OSHA	Occupational Safety & Health Administration
PBT	persistent and bioaccumulative and toxic
PNEC	Predicted No Effect Concentration

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REACH Registration, Evaluation and Authorization of Chemicals
RID Dangerous goods regulations for transport by rail
SVHC substances of very high concern
TRGS Technische Regeln für Gefahrstoffe
UN United Nations

16.3. Key literature references and sources for data

Substance name	Type	source of supply
indium CAS No.: 7440-74-6 EC No.: 231-180-0	EC ₅₀ ; NOEC	Source: European Chemicals Agency, http://echa.europa.eu/

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

No data available

16.6. Training advice

No data available

16.7. Additional information

No data available