

# Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 13.07.2010

Revision: 13.07.2010

## 1 Identification of substance

### Product details

Trade name

**Indium antimonide**

Stock number:

14626

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG  
Benzstrasse 3  
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com  
www.alfa-chemcat.com

Informing department:

Product safety department.

Emergency information:

Giftnotruf Universität Mainz / Poison Information Center Mainz  
www.giftinfo.uni-mainz.de Telefon: +49(0)6131/19240

## 2 Hazards identification

Hazard designation:



Xn Harmful

N Dangerous for the environment

Information pertaining to particular dangers for man and environment

R 20/22 Harmful by inhalation and if swallowed.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

GHS label elements

**Warning**

H302 - Harmful if swallowed.

H332 - Harmful if inhaled.



H411 - Toxic to aquatic life with long lasting effects.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312 Call a POISON CENTER or doctor/physician if you feel unwell.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Prevention:

Response:

Disposal:

## 3 Composition/information on ingredients

Chemical characterization:

Designation: (CAS#)

Indium antimonide (CAS# 1312-41-0); 100%

Identification number(s):

EINECS Number:

215-192-3

Index number:

051-003-00-9

## 4 First aid measures

After inhalation

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.

Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.

After swallowing

Rinse opened eye for several minutes under running water. Then consult doctor.

Seek immediate medical advice.

## 5 Fire fighting measures

Suitable extinguishing agents

Special powder for metal fires. Do not use water.

For safety reasons unsuitable extinguishing agents

Water.

Special hazards caused by the material, its products of combustion or flue gases:

Can be released in case of fire:

Toxic metal oxide smoke

Wear self-contained breathing apparatus.

Wear full protective suit.

Protective equipment:

## 6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

Ensure adequate ventilation

Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

Additional information:

## 7 Handling and storage

Handling

Information for safe handling:

Keep containers tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of dust.

Information about protection against explosions and fires:

No special measures required.

Storage

Requirements to be met by storerooms and containers:

No special requirements.

Information about storage in one common storage facility:

Store away from oxidizing agents.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

## 8 Exposure controls and personal protection

Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with critical values that require monitoring at the workplace:

Antimony and antimony compounds  
mg/m3(Contd. on page 2)  
GB

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(Contd. of page 1)

ACGIH TLV 0.5  
 Austria MAK 0.5  
 Belgium TWA 0.5  
 Denmark TWA 0.5  
 Finland TWA 0.5  
 France VME 0.5  
 Germany MAK 0.5 (total dust)  
 Hungary TWA 0.5-STEEL  
 Japan OEL 0.1; 2B Carcinogen  
 Korea TLV 0.5  
 Ireland TWA 0.5  
 Netherlands MAC-TGG 0.5  
 Norway TWA 0.5  
 Poland TWA 0.5; 1.5-STEEL  
 Russia TWA 0.2; 0.5-STEEL  
 Sweden NGV 0.5  
 Switzerland MAK-W 0.5  
 United Nations TWA 0.5  
 USA PEL 0.5

Indium and compounds  
 mg/m3

ACGIH TLV 0.1(In)  
 Belgium TWA 0.1  
 Denmark TWA 0.1(In)  
 Finland TWA 0.1  
 Netherlands MAC-TGG 0.1  
 Norway TWA 0.1  
 Switzerland MAK-W 0.1  
 United Kingdom TWA 0.1(In); 0.3(In)-STEEL  
 OSHA PEL TWA 0.1  
 No data

**Additional information:**
**Personal protective equipment**  
**General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.  
 Keep away from foodstuffs, beverages and food.  
 Instantly remove any soiled and impregnated garments.  
 Wash hands during breaks and at the end of the work.  
 Use breathing protection with high concentrations.  
 Safety glasses  
 Protective work clothing.

**Breathing equipment:**
**Eye protection:**  
**Body protection:**
**9 Physical and chemical properties:****General Information**

**Form:** Granulate  
**Colour:** Silver grey  
**Smell:** Odourless

**Change in condition**  
**Melting point/Melting range:** 500 dec°C  
**Boiling point/Boiling range:** Not determined  
**Sublimation temperature / start:** Not determined

**Flash point:** Not applicable

**Ignition temperature:** Not determined

**Decomposition temperature:** Not determined

**Danger of explosion:** Product is not explosive.

**Critical values for explosion:**  
**Lower:** Not determined  
**Upper:** Not determined

**Steam pressure:** Not determined

**Density at 20°C** 5.75 g/cm³

**Solubility in / Miscibility with Water:** Insoluble

**10 Stability and reactivity**

**Thermal decomposition / conditions to be avoided:** No decomposition if used and stored according to specifications.  
**Materials to be avoided:** Oxidizing agents  
**Dangerous reactions:** No dangerous reactions known  
**Dangerous products of decomposition:** Toxic metal oxide smoke

**11 Toxicological information**

**Acute toxicity:**  
**Primary irritant effect:**  
**on the skin:** Irritant for skin and mucous membranes.  
**on the eye:** Irritant effect.  
**Sensitization:** No sensitizing effect known.  
**Additional toxicological information:** To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.  
 No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**12 Ecological information:**

**Ecotoxical effects:**  
**Remark:** Toxic for fish  
**Additional ecological information:**  
**General notes:** Do not allow product to reach ground water, water bodies or sewage system.  
 Water hazard class 2 (Self-assessment): hazardous for water.  
 Danger to drinking water if even small quantities leak into soil.  
 Also poisonous for fish and plankton in water bodies.  
 Do not allow material to be released to the environment without proper governmental permits.

(Contd. on page 3)  
GB

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Toxic for aquatic organisms

(Contd. of page 2)

**13 Disposal considerations****Product:  
Recommendation**Consult state, local or national regulations for proper disposal.  
Hand over to disposers of hazardous waste.  
Must be specially treated under adherence to official regulations.**Uncleaned packagings:  
Recommendation:**

Disposal must be made according to official regulations.

**14 Transport information****Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

**ADR/RID-GGVS/E Class:** 6.1 (T5) Toxic substances.  
**Kemler Number:** 60  
**UN-Number:** 1549  
**Packaging group:** III  
**Label:** 6.1  
**Special marking:** Symbol (fish and tree)  
**Designation of goods:** 1549 ANTIMONY COMPOUND, INORGANIC, SOLID, N.O.S. (Indium antimonide)  
**Limited quantities (LQ)** LQ9  
**Transport category** 2  
**Tunnel restriction code** E

**Maritime transport IMDG/GGVSea:**

**IMDG/GGVSea Class:** 6.1  
**UN Number:** 1549  
**Label:** 8  
**Packaging group:** III  
**Marine pollutant:** No  
**Correct technical name:** ANTIMONY COMPOUND, INORGANIC, SOLID, N.O.S. (Indium antimonide)

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** 6.1  
**UN/ID Number:** 1549  
**Label:** 8  
**Packaging group:** III  
**Correct technical name:** ANTIMONY COMPOUND, INORGANIC, SOLID, N.O.S. (Indium antimonide)

**UN "Model Regulation":**UN1549, ANTIMONY COMPOUND, INORGANIC, SOLID, N.O.S., 6.1, III  
Environmentally hazardous substance, solid; Marine Pollutant**Environmental hazards:****15 Regulatory information****Designation according to EC guidelines:****Code letter and hazard designation of product:**Xn Harmful  
N Dangerous for the environment**Risk phrases:**20/22 Harmful by inhalation and if swallowed.  
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.**Safety phrases:**

61 Avoid release to the environment. Refer to special instructions/safety data sheets.

**National regulations****Information about limitation of use:**Employment restrictions concerning young persons must be observed.  
For use only by technically qualified individuals.**Water hazard class:**

Water hazard class 2 (Self-assessment): hazardous for water.

**16 Other information:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing data specification sheet:** Health, Safety and Environmental Department.**Contact:** Zachariah Holt**Abbreviations and acronyms:** ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)