

# 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

**Iodine**

Stock number:

41955

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 20/21 Harmful by inhalation and in contact with skin.  
R 50 Very toxic to aquatic organisms.

GHS label elements

**Warning**

H400 - Very toxic to aquatic life.

**Warning**

H312 - Harmful in contact with skin.

H332 - Harmful if inhaled.

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

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

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

P322 Specific measures (see on this label).

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#)

Iodine (CAS# 7553-56-2); 100%

Identification number(s):

EINECS Number:

231-442-4

Index number:

053-001-00-3

## 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

CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

## 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.

Additional information:

See Section 7 for information on safe handling

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

## 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.

Information about protection against explosions and fires:

The product is not flammable

Storage

Requirements to be met by storerooms and containers:

No special requirements.

Information about storage in one common storage facility:

Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.

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:

Iodine

ppm

ACGIH TLV 0.1-Ceiling

Austria MAK 0.1

Belgium TWA 0.1-STEL

Denmark TWA 0.1

Finland TWA 0.1-STEL (skin)

France VME 0.1

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Germany MAK 0.1-STEL  
 Hungary TWA 1 mg/m3; 2 mg/m3-STEL  
 Korea TLV 0.1-Ceiling  
 Netherlands MAC-TGG 0.1  
 Norway TWA 0.1  
 Poland TWA 1 mg/m3  
 Russia 0.1; 1-STEL (skin)  
 Sweden TWA 0.1-Ceiling  
 Switzerland MAK-W 0.1  
 United Kingdom TWA 0.1-STEL  
 USA PEL 0.0-Ceiling  
 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.  
 Do not inhale gases / fumes / aerosols.  
 Avoid contact with the eyes and skin.  
 Use breathing protection with high concentrations.  
 Safety glasses  
 Face protection  
 Protective work clothing.

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

**Form:** Solid.  
**Colour:** Violet  
**Smell:** Acrid

**Change in condition**

**Melting point/Melting range:** 113.6°C  
**Boiling point/Boiling range:** 184.35°C  
**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 at 20°C:** 0.35 hPa**Density at 20°C** 4.93 g/cm<sup>3</sup>**10 Stability and reactivity****Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

**Materials to be avoided:**

Reducing agents, easily oxidized materials

**Dangerous reactions:**

No dangerous reactions known

**Dangerous products of decomposition:**

Irritant gases/vapours

**11 Toxicological information****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral LD50 22000 mg/kg (mouse)  
 14000 mg/kg (rat)

**Primary irritant effect:**

Irritant for skin and mucous membranes.

**on the skin:**

Irritant effect.

**on the eye:**

No sensitizing effect known.

**Sensitization:**

Danger by skin resorption.

**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:****Ecotoxicical effects:**

Very toxic for fish

**Remark:****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.  
 Very toxic for aquatic organisms

**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.

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## 14 Transport information

### Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)



**ADR/RID-GGVS/E Class:** 8 (C10) Corrosive substances.  
**Kemler Number:** 80  
**UN-Number:** 1759  
**Packaging group:** III  
**Label:** 8  
**Special marking:** Symbol (fish and tree)  
**Designation of goods:** 1759 CORROSIVE SOLID, N.O.S. (Iodine)  
**Limited quantities (LQ)** LQ24  
**Transport category** 3  
**Tunnel restriction code** E

### Maritime transport IMDG/GGVSea:



**IMDG/GGVSea Class:** 8  
**UN Number:** 1759  
**Label:** 8  
**Packaging group:** III  
**EMS Number:** F-A,S-B  
**Marine pollutant:** No  
**Correct technical name:** CORROSIVE SOLID, N.O.S. (Iodine)

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



**ICAO/IATA Class:** 8  
**UN/ID Number:** 1759  
**Label:** 8  
**Packaging group:** III  
**Correct technical name:** CORROSIVE SOLID, N.O.S. (Iodine)

### UN "Model Regulation":

**Environmental hazards:** UN1759, CORROSIVE SOLID, N.O.S., 8, III  
Environmentally hazardous substance, solid; Marine Pollutant

## 15 Regulatory information

### Designation according to EC guidelines:

### Code letter and hazard designation of product:



Xn Harmful  
 N Dangerous for the environment

### Risk phrases:

20/21 Harmful by inhalation and in contact with skin.  
 50 Very toxic to aquatic organisms.

### Safety phrases:

23 Do not breathe fumes.  
 25 Avoid contact with eyes.  
 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 Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent