Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 26.04.2022 Version number 3.00 Revision: 26.04.2022

* 1 Identification of the substance/mixture and of the company/undertaking

· **Product identifier**

· **Trade name:** Iodine

· **Article number:** 2282
· **CAS Number:**
7553-56-2
· **EC number:**
231-442-4
· **Index number:**
053-001-00-3
· **Registration number** The substance is exempt from REACH-registration.
· **Relevant identified uses of the substance or mixture and uses advised against**
· **Application of the substance / the mixture** Ingredient for pharmaceutical drugs
· **Uses advised against** No relevant information available.

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
CAELO
Caesar & Loretz GmbH
Herderstr. 31
D-40721 Hilden
GERMANY

· **Further information obtainable from:**
E-mail: info@caelo.de
Tel.: +49210349940 (during regular opening hours)
· **Emergency telephone number:**
Poison Information Center Bonn
Venusberg-Campus 1, 53127 Bonn
Tel: +49 (0) 228-192400

2 Hazards identification

· **Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Aquatic Acute 1 H400 Very toxic to aquatic life.

· **Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.

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· **Hazard pictograms**

GHS07 GHS09

· **Signal word** Warning
· **Hazard statements**
H312+H332 Harmful in contact with skin or if inhaled.
H400 Very toxic to aquatic life.
· **Precautionary statements**
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves / protective clothing.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P321 Specific treatment (see on this label).
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterisation: Substances**
· **CAS No. Description**
7553-56-2 iodine
· **Identification number(s)**
· **EC number:** 231-442-4
· **Index number:** 053-001-00-3

4 First aid measures

· **Description of first aid measures**
· **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **After inhalation:**
Bring the person out of the contaminated area to fresh air.
Call a doctor immediately.
Show product-label or this MSDS.
· **After skin contact:**
Take off contaminated clothes and shoes, wash immediately with plenty of water and soap.

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Colouring of skin can be removed with sodium thiosulfate solution.

· **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:**
Rinse out mouth and then drink plenty of water.
Seek immediate medical advice.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed**
No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**
All regular extinguishing media can be used.
Use fire extinguishing methods suitable to surrounding conditions.

· **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
iodine vapor

· **Advice for firefighters**

· **Protective equipment:** In case of fire wear suitable protective clothes and respiratory protection.

· **Additional information**
Prevent from entering into drains. Fire residues must be disposed in accordance with official regulations.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Ensure adequate ventilation

· **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· **Methods and material for containment and cleaning up:**
Take up dry. Clean up with water.
Dispose contaminated material as waste according to item 13.

· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**

· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Provide eye rinsing kit.

· **Information about fire - and explosion protection:** No special measures required.

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· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Tightly closed. Store at a dry place. At room temperature (+15°C to +25°C).
· **Information about storage in one common storage facility:** Not required.
· **Further information about storage conditions:** No further information
· **Storage class:**
TRHS 510: 6.1 D non-combustible acutely toxic substances or substances with chronic effects
· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **Control parameters**
· **Ingredients with limit values that require monitoring at the workplace:**

CAS: 7553-56-2 iodine

AGW (Germany) Long-term value: 1.1 mg/m³, 0.1 ppm
1(I);DFG, H

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
The usual precautionary measures are to be adhered to when handling chemicals.
· **Respiratory protection:** Dust protection mask.
· **Protection of hands:** Protective gloves
· **Material of gloves**
Nitrile rubber, NBR
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	Powder
Colour:	Violet
· **Odour:**	Pungent
· **Odour threshold:**	Not determined.
· **pH-value:**	Not applicable.
· **Change in condition**	
Melting point/freezing point:	113.6 °C

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Initial boiling point and boiling range:	184.35 °C
· **Flash point:**	Not applicable.
· **Flammability (solid, gas):**	Product is not flammable.
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Not determined.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapour pressure at 20 °C:**	0.35 hPa
· **Density at 20 °C:**	4.93 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not applicable.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with water at 20 °C:**	0.34 g/l
· **Partition coefficient: n-octanol/water:**	0.3962
· **Viscosity:**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **Chemical stability**
· **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** No further relevant information available.
· **Incompatible materials:**
Metals
metals in powder form
non-metals
alkali metals
ammonium compounds
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity**
Harmful in contact with skin or if inhaled.

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· **LD/LC50 values relevant for classification:**
Oral LD50 14,000 mg/kg (rat)
· **Primary irritant effect:**
· **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.
· **Subacute to chronic toxicity:**
Skin damage and allergic reactions with rhinitis, conjunktivitis, bronchitis and asthma.
· **Additional toxicological information:**
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
· **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.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:**
LC50 1.67 mg/L /4d (Fish)
0.55–0.59 mg/L /48h (invertebrates)
EC50 0.13 mg/L /72h (Algae)
280 mg/L /3h (Microorganism)
· **Persistence and degradability** No further relevant information available.
· **Behaviour in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:** Very toxic for fish
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Very toxic for aquatic organisms
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

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· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to local regulations.

14 Transport information

· **UN-Number**	
· **ADR, IMDG, IATA**	UN3495
· **UN proper shipping name**	
· **ADR**	3495 IODINE, ENVIRONMENTALLY HAZARDOUS
· **IMDG**	IODINE
· **IATA**	Iodine
· **Transport hazard class(es)**	
· **ADR**	
· **Class**	8 Corrosive substances.
· **Label**	8+6.1
· **IMDG**	
· **Class**	8 Corrosive substances.
· **Label**	8/6.1
· **IATA**	
· **Class**	8 Corrosive substances.
· **Label**	8 (6.1)
· **Packing group**	
· **ADR, IMDG, IATA**	III
· **Environmental hazards:**	Environmentally hazardous substance, solid
· **Special marking (ADR):**	Symbol (fish and tree)
· **Special precautions for user**	Warning: Corrosive substances.
· **Hazard identification number (Kemler code):**	86
· **EMS Number:**	F-A,S-B
· **Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	5 kg
· **Transport category**	3
· **Tunnel restriction code**	E
· **IMDG**	
· **Limited quantities (LQ)**	5 kg

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)** Not listed
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Not listed

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· **National regulations:**
· **Storage of hazardous substances in in nonstationary vessels (TRGS 510) (Germany)**
TRHS 510: 6.1 D non-combustible acutely toxic substances or substances with chronic effects
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information provided is based on our current level of knowledge. This MSDS has been compiled and is exclusively for this product intended.
· **Reasons for alterations** This version replaces all old versions.
· **Abbreviations and acronyms:**
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised 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)
MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Acute Tox. 4: Acute toxicity – Category 4
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
· *** Data compared to the previous version altered.**