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date of compilation: 2018-01-24

Revision: 2024-03-03

#### Iodine ≥ 99,8%, p.a., ACS resublimated

article number: **X864** Version: **GHS 3.0 en** Replaces version of: 2021-02-11 Version: (GHS 2)

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

#### 1.1 Product identifier

Identification of the substance

Article number

CAS number

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7553-56-2

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

Relevant identified uses:

Uses advised against:

Laboratory chemical Laboratory and analytical use

Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). Food, drink and animal feedingstuffs.

#### 1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co. KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

**Telephone:**+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data Department Health, Safety and Environment sheet:

#### e-mail (competent person):

#### sicherheit@carlroth.de

#### 1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
NSW Poisons Information Centre Childrens Hospital	Hawkesbury Road	2145 West- mead, NSW	131126	

### **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

#### Classification acc. to GHS

Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.10	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.1D	Acute toxicity (dermal)	4	Acute Tox. 4	H312
3.1I	Acute toxicity (inhal.)	4	Acute Tox. 4	H332
3.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315

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Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.3	Serious eye damage/eye irritation	2A	Eye Irrit. 2A	H319
3.8R	Specific target organ toxicity - single exposure (respirat- ory tract irritation)	3	STOT SE 3	H335
3.9	Specific target organ toxicity - repeated exposure	1	STOT RE 1	H372

For full text of abbreviations: see SECTION 16

**The most important adverse physicochemical, human health and environmental effects** Delayed or immediate effects can be expected after short or long-term exposure.

#### 2.2 Label elements

#### Labelling

Signal word Danger

**Pictograms** 

GHS07, GHS08



#### **Hazard statements**

H302+H312+H332 H315	Harmful if swallowed, in contact with skin or if inhaled Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H372	Causes damage to organs (thyroid gland) through prolonged or repeated exposure (if swallowed)

#### **Precautionary statements**

#### **Precautionary statements - prevention**

P260	Do not breathe dust/fume/gas/mist/vapours/spray
P280	Wear protective gloves/protective clothing

#### **Precautionary statements - response**

P302+P352	IF ON SKIN: Wash with plenty of soap and water
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact
	lenses, if present and easy to do. Continue rinsing
P312	Call a POISON CENTER or doctor/physician if you feel unwell

#### **Precautionary statements - storage**

P403+P233 Store in a well-ventilated place. Keep container tightly closed

#### **Precautionary statements - disposal**

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#### 2.3 Other hazards

#### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

#### **Endocrine disrupting properties**

Does not contain an endocrine disruptor (ED) at a concentration of  $\ge 0,1\%$ .

### **SECTION 3: Composition/information on ingredients**

#### 3.1 Substances

Name of substance	Iodine
Molecular formula	I <sub>2</sub>
Molar mass	253.8 <sup>g</sup> / <sub>mol</sub>
CAS No	7553-56-2

### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures



#### **General notes**

Take off contaminated clothing.

#### **Following inhalation**

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

#### Following skin contact

Rinse skin with water/shower. In case of skin irritation, consult a physician.

#### Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

#### **Following ingestion**

Rinse mouth with water (only if the person is conscious). Call a doctor.

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

Breathing difficulties, Circulatory collapse, Diarrhoea, Vomiting, Irritation, Discoloration of the cornea, Cough, Dyspnoea, Corrosivity, Spasms

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

none



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### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings! water, foam, dry extinguishing powder, ABC-powder

#### Unsuitable extinguishing media

water jet

#### 5.2 Special hazards arising from the substance or mixture

Non-combustible.

#### Hazardous combustion products

Hydrogen iodide (HI)

#### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

### **SECTION 6: Accidental release measures**

#### 6.1 Personal precautions, protective equipment and emergency procedures



#### For non-emergency personnel

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Do not breathe dust.

#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

#### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains. Take up mechanically.

#### Advice on how to clean up a spill

Take up mechanically. Control of dust.

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

#### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

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### **SECTION 7: Handling and storage**

#### **Precautions for safe handling** 7.1

Use extractor hood (laboratory). Provision of sufficient ventilation. Avoid dust formation.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

#### 7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### **Consideration of other advice:**

#### **Ventilation requirements**

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted.

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

#### 7.3 Specific end use(s)

No information available.

### SECTION 8: Exposure controls/personal protection

#### 8.1 **Control parameters**

#### National limit values

#### **Occupational exposure limit values (Workplace Exposure Limits)**

Coun try	Name of agent	CAS No	Identifi- er	TWA [mg/ m³]	STEL [mg/ m³]	Ceil- ing-C [mg/ m <sup>3</sup> ]	Nota- tion	Source
AU	iodine	7553-56-2	WES			1		WES

Notation

Ceiling-C Ceiling value is a limit value above which exposure should not occur

Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified) Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified) STEL TWA

#### Human health values

Relevant DNELs and other threshold levels					
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time	
DNEL	0.07 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects	
DNEL	0.01 mg/kg bw/ day	human, dermal	worker (industry)	chronic - systemic effects	

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Environm	nvironmental values					
Relevant PNECs and other threshold levels						
End- point	Threshold level	Organism	Environmental com- partment	Exposure time		
PNEC	18.13 <sup>µg</sup> / <sub>l</sub>	aquatic organisms	freshwater	short-term (single instance)		
PNEC	60.01 <sup>µg</sup> / <sub>l</sub>	aquatic organisms	marine water	short-term (single instance)		
PNEC	11 <sup>mg</sup> / <sub>l</sub>	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)		
PNEC	3.99 <sup>mg</sup> / <sub>kg</sub>	aquatic organisms	freshwater sediment	short-term (single instance)		
PNEC	20.22 <sup>mg</sup> / <sub>kg</sub>	aquatic organisms	marine sediment	short-term (single instance)		
PNEC	5.95 <sup>mg</sup> / <sub>kg</sub>	terrestrial organisms	soil	short-term (single instance)		

#### 8.2 Exposure controls

#### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggle with side protection.

#### **Skin protection**



#### hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a consider-able reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

#### • type of material

NBR (Nitrile rubber)

#### material thickness

>0,11 mm

#### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

#### • other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

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#### **Respiratory protection**



Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White).

#### **Environmental exposure controls**

Keep away from drains, surface and ground water.

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

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

	•
Physical state	solid
Form	-
Colour	dark violet
Odour	stinging
Melting point/freezing point	113 – 114 °C
Boiling point or initial boiling point and boiling range	184.4 °C at 1 atm (ECHA)
Flammability	non-combustible
Lower and upper explosion limit	not determined
Flash point	not applicable
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	not applicable
Kinematic viscosity	0.47 <sup>mm²</sup> / <sub>s</sub> not relevant
Dynamic viscosity	2.3 mPa s at 115 °C
Solubility(ies)	
Water solubility	<0.5 <sup>g</sup> / <sub>l</sub> at 20 °C
Partition coefficient	
Partition coefficient n-octanol/water (log value):	2.49 (20 °C) (ECHA)
Vapour pressure	0.31 hPa at 25 °C
Density and/or relative density	
Density	4.93 <sup>g</sup> / <sub>cm³</sub> at 20 °C
Relative vapour density	8.8 (air = 1)



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Particle characteristics	No data available.
Other safety parameters	
Oxidising properties	none
Other information	
Information with regard to physical hazard classes:	hazard classes acc. to GHS (physical hazards): not relevant
Other safety characteristics:	There is no additional information.

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

9.2

This material is not reactive under normal ambient conditions.

#### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

#### 10.3 Possibility of hazardous reactions

#### strong oxidiser,

**Exothermic reaction with:** Aldehydes, Metal powder, Phosphorus oxides (e.g. P2O5), **Danger of explosion:** Acetylene, Alkali metals, Amines, Ammonium compounds, Azides, Reducing agents, Sodium, Potassium, Iodide

#### 10.4 Conditions to avoid

There are no specific conditions known which have to be avoided.

#### 10.5 Incompatible materials

There is no additional information.

#### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

### **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

#### Classification acc. to GHS

#### Acute toxicity

Harmful if swallowed. Harmful in contact with skin. Harmful if inhaled.

Acute toxicity					
Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	14,000 <sup>mg</sup> / <sub>kg</sub>	not specified		TOXNET
inhalation: dust/ mist	LC50	>4.588 <sup>mg</sup> / <sub>l</sub> /4h	rat		ECHA
dermal	LD50	>2,000 <sup>mg</sup> / <sub>kg</sub>	rabbit		ECHA

#### Skin corrosion/irritation

Causes skin irritation.

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#### Serious eye damage/eye irritation

Causes serious eye irritation.

#### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

#### Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

#### Carcinogenicity

Shall not be classified as carcinogenic.

#### **Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

#### Specific target organ toxicity - single exposure

May cause respiratory irritation.

#### Specific target organ toxicity - repeated exposure

Causes damage to organs (thyroid gland) through prolonged or repeated exposure (if swallowed).

Hazard category	Target organ	Exposure route
1	thyroid gland	if swallowed

#### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

#### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

diarrhoea, vomiting

#### • If in eyes

discoloration of the cornea, Causes serious eye irritation

#### • If inhaled

Dyspnoea, Irritation to respiratory tract, cough

#### • If on skin

causes skin irritation

#### Other information

Other adverse effects: Liver and kidney damage, Circulatory collapse, Spasms

#### **11.2** Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\ge 0,1\%$ .

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### **SECTION 12: Ecological information**

#### 12.1 Toxicity

Very toxic to aquatic life.

#### Aquatic toxicity (acute)

Aquatic toxicity (acute)				
Endpoint	Value	Species	Source	Exposure time
LC50	1.67 <sup>mg</sup> / <sub>l</sub>	fish	ECHA	96 h
ErC50	0.13 <sup>mg</sup> / <sub>l</sub>	algae	ECHA	72 h

#### Aquatic toxicity (chronic)

Endpoint	Value	Species	Source	Exposure time
EC50	280 <sup>mg</sup> /l	microorganisms	ECHA	3 h

#### 12.2 Persistence and degradability

Data are not available.

#### 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)	2.49 (20 °C) (ECHA)	
_		

#### 12.4 Mobility in soil

Henry's law constant	0.031 <sup>Pa m³</sup> / <sub>mol</sub> at 20 °C (ECHA)
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# 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq$  0,1%.

## 12.7 Other adverse effects

Data are not available.

### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

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#### Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

#### **Relevant provisions relating to waste(Basel Convention)**

#### Properties of waste which render it hazardous

H8 Corrosives

H11 Toxic (Delayed or chronic)

#### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-contaminated packages may be recycled.

### **SECTION 14: Transport information**

### 14.1 UN number

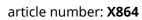
	UN RTDG	UN 3495
	IMDG-Code	UN 3495
	ICAO-TI	UN 3495
14.2	UN proper shipping name	
	UN RTDG	IODINE
	IMDG-Code	IODINE
	ICAO-TI	Iodine
14.3	Transport hazard class(es)	
	UN RTDG	8 (6.1)
	IMDG-Code	8 (6.1)
	ICAO-TI	8 (6.1)
14.4	Packing group	
	UN RTDG	III
	IMDG-Code	III
	ICAO-TI	III
14.5	Environmental hazards	hazardous to the aquatic environment
14.6	<b>Special precautions for user</b> There is no additional information.	
14.7	Transport in bulk according to IMO instruments	5

The cargo is not intended to be carried in bulk.

#### 14.8 Information for each of the UN Model Regulations

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ie number. <b>x804</b>	
Transport informationNational regulations	Additional information(UN RTDG)
UN number	3495
Class	8
Subsidiary risk(s)	6.1
Environmental hazards	Yes Hazardous to the aquatic environment
Packing group	III
Danger label(s)	8+6.1 Fish and tree
Special provisions (SP)	279 UN RTDG
Excepted quantities (EQ)	E1 UN RTDG
Limited quantities (LQ)	5 kg UN RTDG
Emergency Action Code	2WE
International Maritime Dangerous Goods C	ode (IMDG) - Additional information
Proper shipping name	IODINE
Particulars in the shipper's declaration	UN3495, IODINE, 8 (6.1), III, MARINE POLLUTANT
Marine pollutant	<b>Yes</b> (hazardous to the aquatic environment)
Danger label(s)	8+6.1, "Fish and tree"
Special provisions (SP)	279
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
EmS	F-A, S-B
Stowage category	В
International Civil Aviation Organization (I	CAO-IATA/DGR) - Additional information
Proper shipping name	Iodine
Particulars in the shipper's declaration	UN3495, Iodine, 8 (6.1), III
Environmental hazards	<b>Yes</b> (hazardous to the aquatic environment)
Danger label(s)	8+6.1
Special provisions (SP)	A113
Excepted quantities (EQ)	E1

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Limited quantities (LQ)

5 kg

### **SECTION 15: Regulatory information**

**15.1** Safety, health and environmental regulations/legislation specific for the substance or mixture There is no additional information.

#### National regulations(Australia)

#### Australian Inventory of Chemical Substances(AICS)

Substance is listed.

#### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

#### **National inventories**

Country	Inventory	Status
AU	AIIC	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed
EU	REACH Reg.	substance is listed
KR	KECI	substance is listed
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TR	CICR	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed (ACTIVE)
VN	NCI	substance is listed

#### Legend

LegendAIICAustralian Inventory of Industrial ChemicalsCICRChemical Inventory and Control RegulationDSLDomestic Substances List (DSL)ECSIEC Substance Inventory (EINECS, ELINCS, NLP)IECSCInventory of Existing Chemical Substances Produced or Imported in ChinaINSQNational Inventory of Chemical SubstancesKECIKorea Existing Chemicals InventoryNCINational Chemical InventoryNZIOCNew Zealand Inventory of Chemicals and Chemical Substances (PICCS)REACH Reg.REACH registered substancesTCSITaiwan Chemical Substance InventoryTSCAToxic Substance Control Act

#### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

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### **SECTION 16: Other information**

#### Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
1.1	Index No: 053-001-00-3		yes
1.1	EC number: 231-442-4	CAS number: 7553-56-2	yes
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.1		The most important adverse physicochemical, human health and environmental effects: Delayed or immediate effects can be expected after short or long-term exposure.	yes
2.2		Pictograms: change in the listing (table)	yes
2.2		Hazard statements: change in the listing (table)	yes
2.2		Precautionary statements - response: change in the listing (table)	yes
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Danger		yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.3	Other hazards: There is no additional information.	Other hazards	yes
2.3		Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes
2.3		Endocrine disrupting properties: Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.	yes
3.1	Index No: 053-001-00-3		yes
11.1		Acute toxicity: change in the listing (table)	yes
12.1		Aquatic toxicity (chronic): change in the listing (table)	yes
14.1	UN number: 3495	UN number	yes
14.1		UN RTDG: UN 3495	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety relev ant
14.1		IMDG-Code: UN 3495	yes
14.1		ICAO-TI: UN 3495	yes
14.2	UN proper shipping name: IODINE	UN proper shipping name	yes
14.2	Hazardous ingredients: Iodine		yes
14.2		UN RTDG: IODINE	yes
14.2		IMDG-Code: IODINE	yes
14.2		ICAO-TI: Iodine	yes
14.3	Transport hazard class(es): class 6.1 hazard - toxic substances class 8 hazard - corrosive substances	Transport hazard class(es)	yes
14.3	Class: 8 (corrosive substances)		yes
14.3		UN RTDG: 8 (6.1)	yes
14.3		IMDG-Code: 8 (6.1)	yes
14.3		ICAO-TI: 8 (6.1)	yes
14.4	Packing group: III (substance presenting low danger)	Packing group	yes
14.4		UN RTDG: III	yes
14.4		IMDG-Code: III	yes
14.4		ICAO-TI: III	yes
14.6	Special precautions for user: Provisions for dangerous goods (ADR) should be complied within the premises.	Special precautions for user: There is no additional information.	yes
14.8	• Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)		yes
14.8	UN number: 3495		yes
14.8	Proper shipping name: IODINE		yes
14.8	Particulars in the transport document: UN3495, IODINE, 8 (6.1), III, (E), environment- ally hazardous		yes
14.8	Class: 8		yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety relev ant
14.8	Classification code: CT2		yes
14.8	Packing group: III		yes
14.8	Danger label(s): 8+6.1 + "fish and tree"		yes
14.8		Danger label(s): change in the listing (table)	yes
14.8	Environmental hazards: yes (hazardous to the aquatic environment)		yes
14.8	Special provisions (SP): 279, 802(ADN)		yes
14.8	Excepted quantities (EQ): E1		yes
14.8	Limited quantities (LQ): 5 kg		yes
14.8	Transport category (TC): 3		yes
14.8	Tunnel restriction code (TRC): E		yes
14.8	Hazard identification No: 86		yes
14.8	Emergency Action Code: 2WE		yes
14.8	UN number: 3495		yes
14.8	Class: 8		yes
14.8	Subsidiary risk(s): 6.1		yes
14.8	Packing group: III		yes
14.8	Acute toxicity: oralLD5014,000 <sup>mg</sup> / <sub>kg</sub> not specifiedTOXNET	Transport informationNational regulationsAddi- tional information(UN RTDG)	yes
14.8	Aquatic toxicity (chronic): EC50280 <sup>mg</sup> / <sub>l</sub> microorganismsECHA3 h growth (EbCx) 10%110 <sup>mg</sup> /lmicroorgan- ismsECHA3 h	UN number: 3495	yes
14.8		Class: 8	yes
14.8		Subsidiary risk(s): 6.1	yes
14.8		Environmental hazards: Yes Hazardous to the aquatic environment	yes
14.8		Packing group: III	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safet relev ant
14.8		Danger label(s): 8+6.1 Fish and tree	yes
14.8		Danger label(s): change in the listing (table)	yes
14.8		Special provisions (SP): 279 UN RTDG	yes
14.8		Excepted quantities (EQ): E1 UN RTDG	yes
14.8		Limited quantities (LQ): 5 kg UN RTDG	yes
14.8		Emergency Action Code: 2WE	yes
14.8	Marine pollutant: yes (P) (hazardous to the aquatic environment)	Marine pollutant: yes (hazardous to the aquatic environment)	yes
14.8	UN number: 3495		yes
14.8	Class: 8		yes
14.8	Subsidiary risk(s): 6.1		yes
14.8	Packing group: III		yes
14.8		Danger label(s): change in the listing (table)	yes
14.8		Danger label(s): change in the listing (table)	yes
15.1	Safety, health and environmental regulations/ legislation specific for the substance or mixture	Safety, health and environmental regulations/ legislation specific for the substance or mixture: There is no additional information.	yes
15.1	National inventories: Substance is listed in the following national in- ventories:		yes
15.1		National inventories: change in the listing (table)	yes
15.1		National regulations(Australia)	yes
15.1		Australian Inventory of Chemical Substances(AICS): Substance is listed.	yes
15.1		Other information: Directive 94/33/EC on the protection of young people at work. Observe employment restric- tions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.	yes
15.1		National inventories	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
15.1		National inventories: change in the listing (table)	yes

#### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	= EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Na- tions
ΙΑΤΑ	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
STEL	Short-term exposure limit
TWA	Time-weighted average
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative
WES	Safe Work Australia: Workplace exposure standards for airborne contaminants

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#### Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

#### List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H372	Causes damage to organs (thyroid gland) through prolonged or repeated exposure (if swallowed).

#### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.