

according to Regulation (EC) No 1907/2006

Lugol's solution (<5%)

Revision date: 15.01.2021

Product code: I114

Page 1 of 8

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Lugol's solution (<5%)

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

Use as laboratory reagent

1.3. Details of the supplier of the safety data sheet

Company name:	Waldeck GmbH & Co KG		
Street:	Havixbecker Str. 62		
Place:	D-48161 Münster		
Post-office box:	410180		
	D-48065 Münster		
Telephone:	+49(0)2534/9700	Telefax: +49(0)2534/970258	
Contact person:	Dr. Wolfgang Schröder	Telephone: -212	
Responsible Department:	Labor		
	Mo. – Do.: 08.00 – 17.00 Uhr, Fr.: 08.00 – 15.00 Uhr		
	labor1@waldeck-ms.de		

1.4. Emergency telephone number:

Informationszentrale gegen Vergiftungen Bonn, Tel.: +49 (0) 228 19240

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazard Statements:

May cause damage to organs through prolonged or repeated exposure.

2.2. Label elements**Regulation (EC) No. 1272/2008****Hazard components for labelling**

Potassium iodide

Signal word: Warning**Pictograms:****Hazard statements**

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P314	Get medical advice/attention if you feel unwell.
P501	Dispose of contents/container to an appropriate recycling or disposal facility..

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

according to Regulation (EC) No 1907/2006

Lugol's solution (<5%)

Revision date: 15.01.2021

Product code: I114

Page 2 of 8

3.2. Mixtures**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7681-11-0	Potassium iodide			5 - < 10 %
	231-659-4			
	Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT RE 1; H302 H315 H319 H372			
7553-56-2	iodine			1 - < 5 %
	231-442-4	053-001-00-3		
	Acute Tox. 4, Acute Tox. 4, Aquatic Acute 1; H332 H312 H400			

Full text of H and EUH statements: see section 16.

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).

After inhalation

Provide fresh air. Medical treatment necessary.

After contact with skin

Wash with plenty of water. Immediately remove any contaminated clothing, shoes or stockings. Medical treatment necessary.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of eye irritation consult an ophthalmologist.

After ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

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

No information available.

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.

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Hazardous combustion products

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

according to Regulation (EC) No 1907/2006

Lugol's solution (<5%)

Revision date: 15.01.2021

Product code: I114

Page 3 of 8

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep container tightly closed.

Hints on joint storage

No special measures are necessary.

Further information on storage conditions

storage temperature: at room temperature

7.3. Specific end use(s)

Use as laboratory reagent

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
7553-56-2	Iodine	0.1	1.1		STEL (15 min)	WEL

8.2. Exposure controls**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

according to Regulation (EC) No 1907/2006

Lugol's solution (<5%)

Revision date: 15.01.2021

Product code: I114

Page 4 of 8

Protective and hygiene measures

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

Eye/face protection

Wear eye protection/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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.

Skin protection

Use of protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	Liquid
Colour:	brown
Odour:	Iodine

pH-Value (at 20 °C):

3,5

Test method**Changes in the physical state**

Melting point:	not determined
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Initial boiling point and boiling range:	not determined
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Flash point:	not determined
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Flammability

Solid:	not applicable
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Gas:	not applicable
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Explosive properties

The product is not: Explosive.

Lower explosion limits:	not determined
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Upper explosion limits:	not determined
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Auto-ignition temperature

Solid:	not applicable
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Gas:	not applicable
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Decomposition temperature:	not determined
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Oxidizing properties

Not oxidising.

Vapour pressure:	not determined	OECD 104
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Density (at 20 °C):	1,1 g/cm³
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Water solubility:	easily soluble
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Solubility in other solvents

not determined

Partition coefficient:	not determined	OECD (TG) 117
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according to Regulation (EC) No 1907/2006

Lugol's solution (<5%)

Revision date: 15.01.2021

Product code: I114

Page 5 of 8

Vapour density: not determined

Evaporation rate: not determined

9.2. Other information

Solid content: not determined

SECTION 10: Stability and reactivity**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

none

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****Acute toxicity**

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7681-11-0	Potassium iodide				
	oral	LD50 mg/kg 1000	Mouse		
7553-56-2	iodine				
	oral	LD50 mg/kg 14000	Rat	RTECS	
	dermal	ATE mg/kg 1100			
	inhalation vapour	ATE 11 mg/l			
	inhalation aerosol	ATE 1,5 mg/l			

Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

SECTION 12: Ecological information**12.1. Toxicity**

The product is not: Ecotoxic.

according to Regulation (EC) No 1907/2006

Lugol's solution (<5%)

Revision date: 15.01.2021

Product code: I114

Page 6 of 8

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7681-11-0	Potassium iodide					
	Acute fish toxicity	LC50 mg/l	2190	96 h Oncorhynchus mykiss (Rainbow trout)		
7553-56-2	iodine					
	Acute fish toxicity	LC50 mg/l	0,53	96 h Oncorhynchus mykiss	ECOTOX Database	
	Acute crustacea toxicity	EC50 mg/l	1,63	48 h Daphnia magna	ECOTOX Database	

12.2. Persistence and degradability

The product has not been tested.

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
7553-56-2	iodine	2,49

12.4. Mobility in soil

The product has not been tested.

12.5. Results of PBT and vPvB assessment

The product has not been tested.

12.6. Other adverse effects

No information available.

Further information

Avoid release to the environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Contaminated packaging

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)****14.1. UN number:**

No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4. Packing group:

No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)**14.1. UN number:**

No dangerous good in sense of this transport regulation.

14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

14.4. Packing group:

No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

according to Regulation (EC) No 1907/2006

Lugol's solution (<5%)

Revision date: 15.01.2021

Product code: I114

Page 7 of 8

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

No information available.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3

Information according to 2012/18/EU
(SEVESO III):

Not subject to 2012/18/EU (SEVESO III)

Additional information

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D):

1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**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)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals

according to Regulation (EC) No 1907/2006

Lugol's solution (<5%)

Revision date: 15.01.2021

Product code: I114

Page 8 of 8

GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
 UN: United Nations
 DNEL: Derived No Effect Level
 DMEL: Derived Minimal Effect Level
 PNEC: Predicted No Effect Concentration
 ATE: Acute toxicity estimate
 LL50: Lethal loading, 50%
 EL50: Effect loading, 50%
 EC50: Effective Concentration 50%
 ErC50: Effective Concentration 50%, growth rate
 NOEC: No Observed Effect Concentration
 BCF: Bio-concentration factor
 PBT: persistent, bioaccumulative, toxic
 vPvB: very persistent, very bioaccumulative
 RID: Regulations concerning the international carriage of dangerous goods by rail
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation
 intérieures)
 EmS: Emergency Schedules
 MFAG: Medical First Aid Guide
 ICAO: International Civil Aviation Organization
 MARPOL: International Convention for the Prevention of Marine Pollution from Ships
 IBC: Intermediate Bulk Container
 SVHC: Substance of Very High Concern
 For abbreviations and acronyms, see table at <http://abbrev.esdscom.eu>

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

Classification	Classification procedure
STOT RE 2; H373	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.

Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)