

SAFETY DATA SHEET

Lugols Iodine Concentrate

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 No. 758, as amended.

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

1.1. Product identifier

Product name Lugols Iodine Concentrate
Product number PL.8010, PL.8010/4, PL.8010/5

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

Identified uses Laboratory reagent.
Uses advised against No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier Pro-Lab Diagnostics
 3 Bassendale Road
 Wirral
 Merseyside
 CH62 3QL
 Tel: 0151 353 1613
 Fax: 0151 353 1614
 mowen@pro-lab.com

1.4. Emergency telephone number

Emergency telephone +44 (0)151 353 1613 Monday to Friday 9.00 to 17.00
 +44 (0)7714 429 646 outside the above hours

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (SI 2019 No. 720)

Physical hazards Flam. Liq. 3 - H226
Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT RE 2 - H373
Environmental hazards Not Classified

Human health The product is irritating to eyes and skin.

Physicochemical The product is highly flammable.

2.2. Label elements

Hazard pictograms



Signal word Warning

Hazard statements H226 Flammable liquid and vapour.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H373 May cause damage to organs through prolonged or repeated exposure.

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Precautionary statements	<p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P314 Get medical advice/ attention if you feel unwell.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
Contains	iodine
Supplementary precautionary statements	<p>P233 Keep container tightly closed.</p> <p>P240 Ground and bond container and receiving equipment.</p> <p>P241 Use explosion-proof electrical equipment.</p> <p>P242 Use non-sparking tools.</p> <p>P243 Take action to prevent static discharges.</p> <p>P260 Do not breathe vapour/ spray.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.</p> <p>P332+P313 If skin irritation occurs: Get medical advice/ attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.</p> <p>P403+P235 Store in a well-ventilated place. Keep cool.</p>

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<p>ethanol 25 - <50%</p> <p>CAS number: 64-17-5 EC number: 200-578-6</p> <p>Substance with National workplace exposure limits.</p>
<p>Classification</p> <p>Flam. Liq. 2 - H225</p> <p>Eye Irrit. 2 - H319</p>
<p>potassium iodide 10 - <25%</p> <p>CAS number: 7681-11-0 EC number: 231-659-4</p>
<p>Classification</p> <p>Acute Tox. 4 - H302</p> <p>Skin Irrit. 2 - H315</p> <p>Eye Irrit. 2 - H319</p>

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iodine		5 - <10%
CAS number: 7553-56-2	EC number: 231-442-4	
M factor (Acute) = 1		
Classification		
Acute Tox. 4 - H302		
Acute Tox. 4 - H312		
Acute Tox. 4 - H332		
Skin Irrit. 2 - H315		
Eye Irrit. 2 - H319		
STOT SE 3 - H335		
STOT RE 1 - H372		
Aquatic Acute 1 - H400		
methanol		1 - <2.5%
CAS number: 67-56-1	EC number: 200-659-6	
Classification		
Flam. Liq. 2 - H225		
Acute Tox. 3 - H301		
Acute Tox. 3 - H311		
Acute Tox. 3 - H331		
STOT SE 1 - H370		

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Keep affected person away from heat, sparks and flames.
Inhalation	Immediate first aid is imperative. Loosen tight clothing such as collar, tie or belt. Maintain an open airway. Move affected person to fresh air at once. Place unconscious person on their side in the recovery position and ensure breathing can take place. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
Ingestion	Rinse mouth thoroughly with water. Do not induce vomiting unless under the direction of medical personnel. If in doubt, get medical attention promptly.
Skin contact	Rinse cautiously with water for several minutes. Remove contaminated clothing. Continue to rinse for at least 15 minutes and get medical attention. Wash contaminated clothing before reuse.
Eye contact	Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately with plenty of water. Get medical attention if symptoms are severe or persist after washing.

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

Inhalation	Symptoms following overexposure may include the following: Coughing, chest tightness, feeling of chest pressure. Drowsiness, dizziness, disorientation, vertigo. May cause discomfort.
Ingestion	Gastrointestinal symptoms, including upset stomach.
Skin contact	A single exposure may cause the following adverse effects: Causes skin irritation. Prolonged contact may cause redness, irritation and dry skin.

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Eye contact Causes serious eye irritation. Conjunctivitis, irritation, tearing. Pain. Profuse watering of the eyes. Vapour or spray in the eyes may cause irritation and smarting.

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

Notes for the doctor The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards Flammable liquid and vapour. Vapours may be ignited by a spark, a hot surface or an ember.

5.3. Advice for firefighters

Protective actions during firefighting Fight fire from safe distance or protected location. Use water spray to reduce vapours. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak.

Special protective equipment for firefighters Use air-supplied respirator, gloves and protective goggles. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Follow precautions for safe handling described in this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Take care as floors and other surfaces may become slippery. Contain spillage with sand, earth or other suitable non-combustible material. Absorb in vermiculite, dry sand or earth and place into containers. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid breathing vapours. Avoid contact with eyes and prolonged skin contact. Avoid the formation of mists. Ground/bond container and receiving equipment.

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Advice on general occupational hygiene

Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented. Take off contaminated clothing and wash it before reuse. Wash promptly with soap and water if skin becomes contaminated.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep at temperature not exceeding 25°C.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

ethanol

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³

iodine

Short-term exposure limit (15-minute): WEL 0.1 ppm 1.1 mg/m³

methanol

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m³

Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m³

Sk

WEL = Workplace Exposure Limit.

Sk = Can be absorbed through the skin.

iodine (CAS: 7553-56-2)

DNEL

Workers - Inhalation; Long term systemic effects: 0.07 mg/m³
Workers - Dermal; Long term systemic effects: 0.01 mg/kg/day

PNEC

- Fresh water; 18.13 µg/L
- marine water; 60.01 µg/L
- STP; 11 mg/l
- Sediment (Freshwater); 3.99 mg/kg
- Sediment (Marinewater); 20.22 mg/kg
- Soil; 5.95 mg/kg

methanol (CAS: 67-56-1)

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DNEL	Workers - Inhalation; Long term systemic effects: 260 mg/m ³
	Workers - Inhalation; Short term systemic effects: 260 mg/m ³
	Workers - Inhalation; Long term local effects: 260 mg/m ³
	Workers - Inhalation; Short term local effects: 260 mg/m ³
	Workers - Dermal; Long term systemic effects: 40 mg/kg/day
	Workers - Dermal; Short term systemic effects: 40 mg/kg/day
	General population - Inhalation; Long term systemic effects: 50 mg/m ³
	General population - Inhalation; Short term systemic effects: 50 mg/m ³
	General population - Inhalation; Long term local effects: 50 mg/m ³
	General population - Inhalation; Short term local effects: 50 mg/m ³
	General population - Dermal; Long term systemic effects: 8 mg/kg/day
	General population - Dermal; Short term systemic effects: 8 mg/kg/day
	General population - Oral; Long term systemic effects: 8 mg/kg/day
General population - Oral; Short term systemic effects: 8 mg/kg/day	
PNEC	- Fresh water; 20.8 mg/l
	- Fresh water, Intermittent release; 1540 mg/l
	- marine water; 2.08 mg/l
	- STP; 100 mg/l
	- Sediment (Freshwater); 77 mg/kg
	- Sediment (Marinewater); 7.7 mg/kg
	- Soil; 100 mg/kg

8.2. Exposure controls

Appropriate engineering controls	Avoid inhalation of vapours and spray/mists. Good general ventilation should be adequate to control worker exposure to airborne contaminants. In case of insufficient ventilation, wear suitable respiratory equipment.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Frequent changes are recommended. The breakthrough time for any glove material may be different for different glove manufacturers.
Other skin and body protection	Wear anti-static protective clothing if there is a risk of ignition from static electricity.
Hygiene measures	Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. Seek advice from supervisor on the company's respiratory protection standards. Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Dark brown.
Odour	Alcoholic.
pH	Not relevant.

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Melting point	Not relevant.
Initial boiling point and range	Not determined.
Flash point	> 26°C
Evaporation rate	Not determined.
Flammability (solid, gas)	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not determined.
Vapour density	Not relevant.
Relative density	Not determined.
Solubility(ies)	Soluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No test data specifically related to reactivity available for this product or its ingredients.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Acids. Alkalis. Oxidising agents.

10.4. Conditions to avoid

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Acids. Alkalis. Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO₂). Carbon monoxide (CO). Nitrous gases (NO_x). Hydrocarbons. Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Lugols Iodine Concentrate

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

ATE oral (mg/kg) 2,088.0

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

ATE dermal (mg/kg) 8,099.56

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

ATE inhalation (gases ppm) 32,941.84

ATE inhalation (vapours mg/l) 141.18

ATE inhalation (dusts/mists mg/l) 61.17

Skin corrosion/irritation

Animal data Skin Irrit. 2 - H315 Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Eye Irrit. 2 - H319 Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard

Aspiration hazard Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation

May be harmful if inhaled. Symptoms following overexposure may include the following: Pain or irritation. Irritation of nose, throat and airway. Coughing. Wheezing/breathing difficulties.

Ingestion

This product is strongly irritating.

Skin contact

Irritating to skin.

Eye contact

Irritating to eyes. A single exposure may cause the following adverse effects: Pain. Redness.

Acute and chronic health hazards

Causes damage to organs .

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Route of exposure Inhalation Skin and/or eye contact Ingestion

Toxicological information on ingredients.

ethanol

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 10,470.0

Species Rat

Notes (oral LD₅₀) REACH dossier information. Based on available data the classification criteria are not met.

ATE oral (mg/kg) 10,470.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 124.7

Species Rat

Notes (inhalation LC₅₀) REACH dossier information. Based on available data the classification criteria are not met.

ATE inhalation (vapours mg/l) 124.7

Skin corrosion/irritation

Animal data Dose: 0.2 ml, 24 hours, Rabbit Primary dermal irritation index: 0 / 8 REACH dossier information. Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Dose: 0.1 mL, 21 days, Rabbit Causes eye irritation. REACH dossier information.

Respiratory sensitisation

Respiratory sensitisation Rat: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information. Read across data. Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Genotoxicity - in vivo Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Carcinogenicity

IARC carcinogenicity IARC Group 1 Carcinogenic to humans.

Reproductive toxicity

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Reproductive toxicity - fertility Two-generation study - NOEL 15 %, Oral, Mouse P REACH dossier information.

Reproductive toxicity - development Maternal toxicity: - NOEL: 16000 ppm, Inhalation, Rat REACH dossier information.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure LOAEL 4 mL/Kg, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

potassium iodide

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 1,000.0

Species Mouse

Notes (oral LD₅₀) Raw material suppliers' information.

ATE oral (mg/kg) 1,000.0

Skin corrosion/irritation

Animal data Dose: 0.5 g, 24 hours, Rabbit Moderately irritating.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Skin sensitisation

Skin sensitisation Patch test - Human: Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation: Negative.

Reproductive toxicity

Reproductive toxicity - development Developmental toxicity: - NOEL: 1 ppm, Oral, Rat

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 0.5 mg/kg/day, Oral, Rat

iodine

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 315.0

Species Rat

Notes (oral LD₅₀) Supplier's information. Based on available data the classification criteria are not met.

ATE oral (mg/kg) 315.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 1,425.0

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Species	Rabbit
Notes (dermal LD₅₀)	REACH dossier information.
ATE dermal (mg/kg)	1,425.0
<u>Acute toxicity - inhalation</u>	
Acute toxicity inhalation (LC₅₀ dust/mist mg/l)	4.588
Species	Rat
Notes (inhalation LC₅₀)	REACH dossier information.
ATE inhalation (dusts/mists mg/l)	4.588
<u>Skin corrosion/irritation</u>	
Human skin model test	Cell Viability (11%) 15 minutes Irritating. REACH dossier information.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Irritating to eyes.
<u>Skin sensitisation</u>	
Skin sensitisation	Local Lymph Node Assay (LLNA) - Mouse: Not sensitising. REACH dossier information.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Screening - NOAEL 10 mg/kg/day, Oral, Rat F1 REACH dossier information.
Reproductive toxicity - development	Developmental toxicity: - NOAEL: 10 mg/kg/day, Oral, Rat REACH dossier information. No evidence of reproductive toxicity in animal studies.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	May cause respiratory irritation.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	NOAEL 3 mg/l, Oral, Rat REACH dossier information.
Target organs	Thymus

methanol

<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	International Programme on Chemical Safety (IPCS) (1997) Environmental Health Criteria 196: Methanol. Geneva, World Health Organization. Toxic if swallowed.
ATE oral (mg/kg)	100.0
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	Converted acute toxicity point estimate (cATpE) Toxic in contact with skin.
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	Converted acute toxicity point estimate (cATpE) Toxic if inhaled.

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ATE inhalation (gases ppm) 700.0

ATE inhalation (vapours mg/l) 3.0

Skin corrosion/irritation

Animal data Dose: 2.5cm x 2.5cm, 20 hours, Rabbit Erythema/eschar score: No erythema (0). Oedema score: No oedema (0). REACH dossier information. Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Dose: 0.05 ml, 24 hours, Rabbit REACH dossier information. Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Bacterial reverse mutation test: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Genotoxicity - in vivo Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 1 - H370

Target organs Eyes Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure LOAEL 2340 mg/kg/day, Oral, Monkey REACH dossier information. Based on available data the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity Based on available data the classification criteria are not met. However, large or frequent spills may have hazardous effects on the environment.

Ecological information on ingredients.

ethanol

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 14200 mg/l, Pimephales promelas (Fat-head Minnow) REACH dossier information.

Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 5012 mg/l, Ceriodaphnia dubia REACH dossier information.

Acute toxicity - aquatic plants EC₅₀, 72 hours: 275 mg/l, Chlorella vulgaris REACH dossier information.

Chronic aquatic toxicity

Chronic toxicity - fish early life stage NOEC, 120 hours: 250 mg/l, Brachydanio rerio (Zebra Fish)

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Chronic toxicity - aquatic invertebrates NOEC, 9 days: 9.6 mg/l, Daphnia magna
REACH dossier information.

potassium iodide

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 100 mg/l, Brachydanio rerio (Zebra Fish)
NOEC, 7 days: 100 mg/l, Brachydanio rerio (Zebra Fish)
REACH dossier information.

Acute toxicity - aquatic invertebrates LC₅₀, 24 hours: 226 mg/l, dreissena polymorpha (zebra mussel)
REACH dossier information.

Acute toxicity - aquatic plants MIC₁₀₀, 10 days: 356.8 mg/l, Dunaliella salina
REACH dossier information.

Acute toxicity - microorganisms MIC₁₀₀, 24 hours: 358.3 mg/l, Staphylococcus auerus
REACH dossier information.

Chronic aquatic toxicity

Chronic toxicity - fish early life stage LC₁₀₀, 22 days: 166002.8 mg/l, Oncorhynchus mykiss (Rainbow trout)
REACH dossier information.

iodine

Toxicity Aquatic Acute 1 - H400 Very toxic to aquatic life.

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC₅₀, 96 hours: 1.67 mg/l, Oncorhynchus mykiss (Rainbow trout)
REACH dossier information.

Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 0.55 - 0.59 mg/l, Daphnia magna
REACH dossier information.

Acute toxicity - aquatic plants NOEC, 72 hours: 0.025 mg/l, Desmodesmus subspicatus
EC₅₀, 72 hours: 0.13 mg/l, Desmodesmus subspicatus
REACH dossier information.

Acute toxicity - microorganisms EC₅₀, 3 hours: 280 mg/l, Activated sludge
EC₁₀, 3 hours: 110 mg/l, Activated sludge
REACH dossier information.

methanol

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 15400 mg/l, Lepomis macrochirus (Bluegill)
EC₅₀, 96 hours: 12700 mg/l, Lepomis macrochirus (Bluegill)
REACH dossier information.

Acute toxicity - aquatic invertebrates EC₅₀, 96 hours: 18260 mg/l, Daphnia magna
REACH dossier information.

Acute toxicity - aquatic plants EC₅₀, 96 hours: ~ 22000 mg/l, Pseudokirchneriella subcapitata
REACH dossier information.

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Acute toxicity - microorganisms

IC₅₀, 3 hours: >1000 mg/l, Activated sludge
REACH dossier information.

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product. Volatile substances are degraded in the atmosphere within a few days.

Ecological information on ingredients.

ethanol

Biodegradation

Water - Degradation (74%): 10 days
REACH dossier information.
The substance is readily biodegradable.

Chemical oxygen demand

1.99 g O₂/g substance REACH dossier information.

potassium iodide

Biodegradation

Water - Half-life : 720 hours
Water - Half-life : 360 hours
Water - Degradation (50%): 360 hours
Calculation method.
REACH dossier information.
The substance is readily biodegradable.

iodine

Phototransformation

Water - DT₅₀ : 0.14 minutes
REACH dossier information.

Stability (hydrolysis)

pH5 - Half-life : ~ 0.005 minutes @ 20°C

methanol

Phototransformation

Water - DT₅₀ : 17.2 days
REACH dossier information.

Biodegradation

Water - Degradation (95%): 20 days
Water - Degradation (91%): 15 days
Water - Degradation (88%): 10 days
Water - Degradation (76%): 5 days
REACH dossier information.
The substance is readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential Not determined.

Partition coefficient Not determined.

Ecological information on ingredients.

ethanol

Partition coefficient

log Pow: - 0.35 REACH dossier information.

potassium iodide

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Bioaccumulative potential BCF: 2.268, Fish Calculation method. REACH dossier information.

Partition coefficient Pow: 0.11 REACH dossier information.

iodine

Partition coefficient log Pow: 2.49 REACH dossier information.

methanol

Partition coefficient log Pow: -0.77 REACH dossier information.

12.4. Mobility in soil

Mobility The product contains organic solvents which will evaporate easily from all surfaces. The product contains substances which are water-soluble and may spread in water systems.

Ecological information on ingredients.

ethanol

Surface tension 24.5 mN/m @ 20°C/68°F REACH dossier information.

potassium iodide

Adsorption/desorption coefficient Water - Koc: 13.22 @ 25°C Calculation method. REACH dossier information.

Henry's law constant 3.717E-18 Pa m³/mol @ 25°C Calculation method. REACH dossier information.

iodine

Adsorption/desorption coefficient Water - Kd: 0.13 - 7.7 @ 20°C REACH dossier information.

Henry's law constant 0.02961 - 0.03257 Pa m³/mol @ 20°C REACH dossier information.

methanol

Mobility Mobile.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

ethanol

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current UK criteria.

potassium iodide

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current UK criteria.

iodine

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Results of PBT and vPvB assessment Substance is inorganic.

methanol

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current UK criteria.

12.6. Other adverse effects

Other adverse effects Not relevant.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Reuse or recycle products wherever possible. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

Disposal methods Absorb in vermiculite, dry sand or earth and place into containers. Place waste in labelled, sealed containers. Dispose of contents/container in accordance with national regulations.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	1993
UN No. (IMDG)	1993
UN No. (ICAO)	1993
UN No. (ADN)	1993

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	FLAMMABLE LIQUID, N.O.S. (ethanol)
Proper shipping name (IMDG)	FLAMMABLE LIQUID, N.O.S. (ethanol)
Proper shipping name (ICAO)	FLAMMABLE LIQUID, N.O.S. (ethanol)
Proper shipping name (ADN)	FLAMMABLE LIQUID, N.O.S. (ethanol)

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels



14.4. Packing group

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ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III
ADN packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS	F-E, S-E
ADR transport category	3
Emergency Action Code	•3Y
Hazard Identification Number (ADR/RID)	30
Tunnel restriction code	(D/E)

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

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not relevant.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations	EH40/2005 Workplace exposure limits. The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 No. 758, as amended. The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019 No. 720, as amended.
EU legislation	Council Directive of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers (75/324/EEC).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

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Abbreviations and acronyms used in the safety data sheet	<p>ATE: Acute Toxicity Estimate. cATpE: Converted acute toxicity point estimate. ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road. ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. DNEL: Derived No Effect Level. IATA: International Air Transport Association. ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air. IMDG: International Maritime Dangerous Goods. LD50: Lethal Dose to 50% of a test population (Median Lethal Dose). LC50: Lethal Concentration to 50 % of a test population. PNEC: Predicted No Effect Concentration. RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail. BCF: Bioconcentration Factor. EC₅₀: 50% of maximal Effective Concentration. NOAEL: No Observed Adverse Effect Level. NOEC: No Observed Effect Concentration.</p>
Classification abbreviations and acronyms	<p>Acute Tox. = Acute toxicity Eye Dam. = Serious eye damage Eye Irrit. = Eye irritation Flam. Liq. = Flammable liquid Skin Corr. = Skin corrosion STOT SE = Specific target organ toxicity-single exposure STOT RE = Specific target organ toxicity-repeated exposure Aquatic Acute = Hazardous to the aquatic environment (acute)</p>
Classification procedures according to SI 2019 No. 720	<p>Flam. Liq. 3 - H226: Expert judgement. Skin Irrit. 2 - H315, Eye Irrit. 2 - H319, STOT RE 2 - H373: Calculation method.</p>
Revision comments	<p>Revised regulations.</p>
Revision date	<p>26/09/2022</p>
Revision	<p>10</p>
Supersedes date	<p>01/10/2017</p>
SDS number	<p>808</p>
Hazard statements in full	<p>H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H301 Toxic if swallowed. H302 Harmful if swallowed. H311 Toxic in contact with skin. H312 Harmful in contact with skin. H315 Causes skin irritation. H319 Causes serious eye irritation. H331 Toxic if inhaled. H332 Harmful if inhaled. H335 May cause respiratory irritation. H370 Causes damage to organs . H372 Causes damage to organs (Thyroid) through prolonged or repeated exposure. H373 May cause damage to organs through prolonged or repeated exposure. H400 Very toxic to aquatic life.</p>

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