

SAFETY DATA SHEET

IODINE 0.05M

According to Regulation (EC) No 1907/2006, Annex II, as amended. Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

1.1. Product identifier

Product name IODINE 0.05M
Product number 1049

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. Use only for intended applications.

1.3. Details of the supplier of the safety data sheet

Supplier

Reagent Chemical Services
 18 Aston Fields Road
 Whitehouse Industrial Estate
 Runcorn
 Cheshire WA7 3DL

T: 01928 716903 (08.30 - 17.00)
 F: 01928 716425
 E: info@reagent.co.uk

1.4. Emergency telephone number

Emergency telephone OHES Environmental Ltd 24-7
 Tel. 0333 333 9939 (24 hour)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified
Health hazards STOT RE 2 - H373
Environmental hazards Not Classified

2.2. Label elements

Pictogram



Signal word Warning
Hazard statements H373 May cause damage to organs through prolonged or repeated exposure.

IODINE 0.05M

Precautionary statements P260 Do not breathe vapour/ spray.
 P314 Get medical advice/ attention if you feel unwell.
 P501 Dispose of contents/ container in accordance with national regulations.

Contains POTASSIUM IODIDE, IODINE

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

POTASSIUM IODIDE	1-5%
CAS number: 7681-11-0	EC number: 231-659-4
	REACH registration number: 01-2119966161-40-0000

Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302	-
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	
STOT RE 1 - H372	

IODINE	1-5%
CAS number: 7553-56-2	EC number: 231-442-4
	REACH registration number: 01-2119485285-30-0000
M factor (Acute) = 1	

Classification	Classification (67/548/EEC or 1999/45/EC)
Acute Tox. 4 - H302	Xn;R20/21 N;R50
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	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

Inhalation Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Maintain an open airway. Loosen tight clothing such as collar, tie or belt. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Place unconscious person on their side in the recovery position and ensure breathing can take place.

IODINE 0.05M

Ingestion	Rinse mouth thoroughly with water. Remove any dentures. Do not induce vomiting unless under the direction of medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Place unconscious person on their side in the recovery position and ensure breathing can take place. Maintain an open airway. Loosen tight clothing such as collar, tie or belt.
Skin contact	Rinse with water.
Eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

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

General information	See Section 11 for additional information on health hazards. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	May cause temporary eye irritation.

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

Notes for the doctor	Treat symptomatically.
-----------------------------	------------------------

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
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

Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Iodine compounds
--------------------------------------	-------------------------------------------------------------------------------------------------------------------------------

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

IODINE 0.05M

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material.

6.2. Environmental precautions

Environmental precautions Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Approach the spillage from upwind. Small Spillages: If the product is soluble in water, dilute the spillage with water and mop it up. Alternatively, or if it is not water-soluble, absorb the spillage with an inert, dry material and place it in a suitable waste disposal container. Large Spillages: If leakage cannot be stopped, evacuate area. Flush spilled material into an effluent treatment plant, or proceed as follows. Contain and absorb spillage with sand, earth or other non-combustible material. Place waste in labelled, sealed containers. Clean contaminated objects and areas thoroughly, observing environmental regulations. The contaminated absorbent may pose the same hazard as the spilled material. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. 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. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Handle all packages and containers carefully to minimise spills. Keep container tightly sealed when not in use. Avoid the formation of mists. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Bund storage facilities to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class Chemical storage.

7.3. Specific end use(s)

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

IODINE 0.05M

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

IODINE

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

WEL = Workplace Exposure Limit

POTASSIUM IODIDE (CAS: 7681-11-0)

DNEL	<p>Workers - Inhalation; Long term systemic effects: 0.07 mg/m³</p> <p>Workers - Dermal; Long term systemic effects: 1 mg/kg/day</p> <p>General population - Inhalation; Long term systemic effects: 0.035 mg/m³</p> <p>General population - Dermal; Long term systemic effects: 1 mg/kg</p> <p>General population - Oral; Long term systemic effects: 0.01 mg/kg/day</p> <p>General population - Oral; Long term systemic effects: 0.01 mg/kg</p>
PNEC	<p>- Fresh water; 0.007 mg/l</p> <p>- Intermittent release; 0.075 mg/l</p> <p>- Sediment (Freshwater); 0.007 mg/kg</p> <p>- ;</p>

IODINE (CAS: 7553-56-2)

DNEL	<p>Workers - Inhalation; Long term systemic effects: 0.07 mg/m³</p> <p>Workers - Dermal; Long term systemic effects: 0.01 mg/kg</p>
PNEC	<p>- Fresh water; 18.13µg/L</p> <p>- Marine water; 60.01µg/L</p> <p>- STP; 11 mg/l</p> <p>- Sediment (Freshwater); 3.99 mg/kg</p> <p>- Sediment (Marinewater); 20.22 mg/kg</p> <p>- Soil; 5.95 mg/kg</p>

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimise worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimise exposure.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with European Standard EN166. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

IODINE 0.05M

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. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
Other skin and body protection	Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.
Hygiene measures	Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.
Environmental exposure controls	Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Dark brown.
Odour	Slight pungent.
pH	Not determined.
Melting point	Not determined.
Initial boiling point and range	Not determined.
Flash point	Not applicable.
Upper/lower flammability or explosive limits	Not relevant.
Vapour pressure	Not determined.
Relative density	~ 1.0
Solubility(ies)	Miscible with water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not relevant.
Decomposition Temperature	Not determined.

IODINE 0.05M

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	The following materials may react with the product: Acids. Oxidising agents. Chemically-active metals.
-------------------	--------------------------------------------------------------------------------------------------------

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
------------------	---------------------------------------------------------------------------------------------------------------------

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No potentially hazardous reactions known. May generate heat. Pressure may build up if reaction occurs in a sealed container.
-------------------------------------------	------------------------------------------------------------------------------------------------------------------------------

10.4. Conditions to avoid

Conditions to avoid	Avoid heat. Containers can burst violently or explode when heated, due to excessive pressure build-up. Avoid freezing.
----------------------------	------------------------------------------------------------------------------------------------------------------------

10.5. Incompatible materials

Materials to avoid	Acids. Oxidising agents. Chemically-active metals.
---------------------------	----------------------------------------------------

10.6. Hazardous decomposition products

Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Iodine Hydrogen Iodide Oxides of the following substances: Potassium.
-----------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Other health effects	Contains potassium iodide. Risk of sensitisation with allergic reactions among sensitive individuals.
-----------------------------	-------------------------------------------------------------------------------------------------------

Acute toxicity - oral

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

ATE oral (mg/kg)	15,243.9
-------------------------	----------

Acute toxicity - dermal

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

ATE dermal (mg/kg)	111,328.13
---------------------------	------------

Acute toxicity - inhalation

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

ATE inhalation (dusts/mists mg/l)	358.44
------------------------------------------	--------

Skin corrosion/irritation

IODINE 0.05M

Animal data	Based on available data the classification criteria are not met.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Based on available data the classification criteria are not met.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	STOT RE 2 - H373 May cause damage to organs through prolonged or repeated exposure.
<u>Aspiration hazard</u>	
Aspiration hazard	Based on available data the classification criteria are not met.
<u>General information</u>	
General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Prolonged inhalation of high concentrations may damage respiratory system.
Ingestion	Gastrointestinal symptoms, including upset stomach. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	May cause temporary eye irritation.
Route of entry	Ingestion Inhalation Skin and/or eye contact
Target organs	No specific target organs known.

POTASSIUM IODIDE

Other health effects	Risk of sensitisation and allergic reactions among sensitive individuals.
<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	Acute Tox. 4 - H302 Harmful if swallowed. LD ₅₀ 3118 mg/kg, Oral, Rat
ATE oral (mg/kg)	500.0
<u>Acute toxicity - dermal</u>	

IODINE 0.05M

Notes (dermal LD₅₀)	Acute Tox. 4 - H312 Harmful in contact with skin.
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	
Animal data	Irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye irritation.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met. Developmental toxicity: - NOAEL: 1 ppm, Oral, Rat
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure. NOAEL 0.01 mg/kg/day, Oral, Human
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant. Solid.
<u>General information</u>	
General information	Dust may irritate the eyes and the respiratory system. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Dust may irritate the respiratory system.
Ingestion	May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.
Skin contact	Redness. Irritating to skin.
Eye contact	Irritating to eyes.
Route of entry	Ingestion Inhalation Skin and/or eye contact
Target organs	No specific target organs known.

IODINE 0.05M

IODINE

Acute toxicity - oral

Notes (oral LD₅₀) Acute Tox. 4 - H302 Harmful if swallowed.

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

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

Species Rabbit

Notes (dermal LD₅₀) Acute Tox. 4 - H312 Harmful in contact with skin. LD₅₀ 1425 mg/kg/day, Dermal, Rabbit

ATE dermal (mg/kg) 1,425.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 4.588

Species Rat

Notes (inhalation LC₅₀) Acute Tox. 4 - H332 Harmful if inhaled. >4.588 (4 hour) mg/l, Inhalation, Rat

ATE inhalation (dusts/mists mg/l) 4.588

Skin corrosion/irritation

Animal data Irritating.

Serious eye damage/irritation

Serious eye damage/irritation 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.

IARC carcinogenicity None of the ingredients are listed or exempt.

Reproductive toxicity

Reproductive toxicity - fertility - NOAEL 10 mg/kg, Oral, Rat F1

Reproductive toxicity - development Developmental toxicity: - NOAEL: 10 mg/kg, Oral, Rat

Specific target organ toxicity - single exposure

IODINE 0.05M

STOT - single exposure	STOT SE 3 - H335 May cause respiratory irritation.
Target organs	Respiratory system, lungs
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	STOT RE 1 - H372 Causes damage to organs through prolonged or repeated exposure. NOAEL 10 mg/kg, Oral, Rat
<u>Aspiration hazard</u>	
Aspiration hazard	Based on available data the classification criteria are not met.
<u>General information</u>	
General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	A single exposure may cause the following adverse effects: Headache. May cause respiratory irritation.
Ingestion	May cause discomfort if swallowed. Stomach pain. Nausea, vomiting.
Skin contact	Irritating to skin.
Eye contact	Irritating to eyes.
Route of entry	Ingestion Inhalation Skin and/or eye contact
Target organs	Respiratory system, lungs

SECTION 12: Ecological Information

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

POTASSIUM IODIDE

Ecotoxicity Not regarded as dangerous for the environment. However, large or frequent spills may have hazardous effects on the environment.

IODINE

Ecotoxicity Very toxic to aquatic organisms.

12.1. Toxicity

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

POTASSIUM IODIDE

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

Acute toxicity - fish LC₅₀, 96 hours: 3780 mg/l, Onchorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 7.5 mg/l, Daphnia magna

Acute toxicity - aquatic plants Toxicity threshold, 7 day: 2370 mg/l, Scenedesmus Quadricauda

IODINE

IODINE 0.05M

Toxicity	Aquatic Acute 1 - H400 Very toxic to aquatic life.
<u>Acute aquatic toxicity</u>	
LE(C)₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC ₅₀ , 96 hours: 1.67 mg/l, Onchorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	LC ₅₀ , 48 hours: 0.59 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 0.13 mg/l, Desmodismus subspicatus
Acute toxicity - microorganisms	EC ₅₀ , 3 hours: 280 mg/l, Activated sludge

12.2. Persistence and degradability

Persistence and degradability The product contains inorganic substances which are not biodegradable.

POTASSIUM IODIDE

Persistence and degradability	The degradability of the product is not known.
Stability (hydrolysis)	Scientifically unjustified.
Biodegradation	Scientifically unjustified.

IODINE

Persistence and degradability	The product is not biodegradable.
Phototransformation	Air - DT ₅₀ : 14 minutes
Biodegradation	Technically not feasible.

12.3. Bioaccumulative potential

Bioaccumulative potential	No data available on bioaccumulation.
Partition coefficient	Not determined.

POTASSIUM IODIDE

Bioaccumulative potential	No data available on bioaccumulation.
Partition coefficient	Scientifically unjustified.

IODINE

Bioaccumulative potential	Scientifically unjustified.
Partition coefficient	log Pow: 2.49 @ 20°C

12.4. Mobility in soil

Mobility The product is water-soluble and may spread in water systems. The product contains volatile substances which may spread in the atmosphere.

IODINE 0.05M**POTASSIUM IODIDE**

Mobility	The product is water-soluble and may spread in water systems.
Adsorption/desorption coefficient	Scientifically unjustified.

IODINE

Mobility	The product is partly soluble in water and may spread in the aquatic environment. The product contains volatile substances which may spread in the atmosphere. The product contains substances which may accumulate in sediment.
Adsorption/desorption coefficient	Soil - : $K_d > 0.13 < 7.7 @ 25^\circ\text{C}$
Henry's law constant	0.033 Pa m ³ /mol @ 20°C

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.
-------------------------------------------	-------------------------------------------------------------------------

POTASSIUM IODIDE

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

IODINE

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

12.6. Other adverse effects

Other adverse effects	None known.
------------------------------	-------------

POTASSIUM IODIDE

Other adverse effects	None known.
------------------------------	-------------

IODINE

Other adverse effects	None known. Will affect drinking water supplies.
------------------------------	--------------------------------------------------

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

General information	The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.
----------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

IODINE 0.05M

Disposal methods Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID). Not regulated.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

Transport labels

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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

Transport in bulk according to Not applicable.

**Annex II of MARPOL 73/78
and the IBC Code**

SECTION 15: Regulatory information

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

National regulations Health and Safety at Work etc. Act 1974 (as amended).
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"].
EH40/2005 Workplace exposure limits.

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Guidance ECHA Guidance on the Compilation of Safety Datasheets

IODINE 0.05M

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

None of the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

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.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 IATA: International Air Transport Association.
 ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
 IMDG: International Maritime Dangerous Goods.
 CAS: Chemical Abstracts Service.
 ATE: Acute Toxicity Estimate.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 EC₅₀: 50% of maximal Effective Concentration.
 PBT: Persistent, Bioaccumulative and Toxic substance.
 vPvB: Very Persistent and Very Bioaccumulative.

Classification abbreviations and acronyms

STOT RE = Specific target organ toxicity-repeated exposure

General information

This datasheet is not intended to be a replacement for a full risk assessment, these should always be carried out by competent persons.

Key literature references and sources for data

Source: European Chemicals Agency, <http://echa.europa.eu/>

Classification procedures according to Regulation (EC) 1272/2008

STOT RE 2 - H373: : Calculation method.

Training advice

Only trained personnel should use this material.

Revision comments

Revised classification.

Revision date

19/09/2017

Revision

2

Supersedes date

09/01/2012

SDS number

10694

Risk phrases in full

Not classified.
 R20/21 Harmful by inhalation and in contact with skin.
 R50 Very toxic to aquatic organisms.

IODINE 0.05M

Hazard statements in full

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 through prolonged or repeated exposure.
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.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.