SAFETY DATA SHEET
POTASSIUM IODIDE 10% w/v

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

1.1. Product identifier
Product name: POTASSIUM IODIDE 10% w/v
Product number: 1073

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses: General chemical reagent Laboratory chemicals
Uses advised against: None stated, but advisable to use only for intended purpose.

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: Skin Irrit. 2 - H315 Eye Irrit. 2 - H319
Environmental hazards: Not Classified

Human health: Irritating to eyes. May cause skin irritation.
Environmental: The product is not classed as environmentally hazardous.
Physicochemical: May corrode metal surfaces on prolonged or repeated contact.

2.2. Label elements
Pictogram
POTASSIUM IODIDE 10% w/v

Signal word
Warning

Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.

Precautionary statements
P264 Wash contaminated skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352 IF ON SKIN: Wash with plenty of 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.
P321 Specific treatment (see medical advice on this label).
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards
This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>POTASSIUM IODIDE</th>
<th>10-30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 7681-11-0</td>
<td>EC number: 231-659-4</td>
</tr>
</tbody>
</table>

Classification
Acute Tox. 4 - H302
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
STOT RE 1 - H372

2.3. Other hazards
This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

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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
CAUTION! First aid personnel must be aware of own risk during rescue! Always consider any dangers in the vicinity before approaching to treat the casualty. First aid personnel must protect themselves with all necessary personal protective equipment during the assistance of casualties. When breathing is difficult, properly trained personnel may assist the casualty by administering oxygen. Place unconscious person on the side in the recovery position and ensure breathing can take place. Never give anything by mouth to an unconscious person. If breathing has stopped perform CPR. Check airway for any blockages. If medical assistance is needed take as much detail as possible about the incident and hazardous materials involved with the casualty.

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. Get medical attention if any discomfort continues.

Ingestion
Rinse mouth thoroughly with water. Do not induce vomiting. Get medical attention.

Skin contact
Immediately remove contaminated clothing and wash before re-use. Rinse immediately with plenty of water. Get medical attention if any discomfort continues.

Eye contact
Promptly wash eyes with plenty of water or eye wash solution while lifting the eyelids. If possible remove any contact lenses and continue to wash. Get medical attention.
POTASSIUM IODIDE 10% w/v

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

General information The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation High concentrations of vapours may irritate the respiratory system.

Ingestion Small amounts will leave taste in mouth, larger amounts may cause nausea or vomiting. Larger amounts may irritate the digestive system.

Skin contact May irritate the skin. Prolonged exposure may cause skin conditions such as dryness or eczema.

Eye contact Irritating to eyes. May cause redness.

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

Notes for the doctor Have facilities in place to wash skin and eyes in case of exposure.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is non-combustible. Use fire-extinguishing media suitable for the surrounding fire. Water spray, dry powder, carbon dioxide or alcohol resistant foam.

Unsuitable extinguishing media Do not use water jet as this can spread the fire. Do not use carbon dioxide in enclosed spaces with insufficient ventilation.

5.2. Special hazards arising from the substance or mixture

Specific hazards In case of fire, toxic or irritating fumes or vapours may be formed. Iodine

Hazardous combustion products The product is not combustible but can decompose in the event of a fire.

5.3. Advice for firefighters

Protective actions during firefighting Evacuate and keep non-emergency personnel away from the fire area until it is properly extinguished with no danger of re-ignition. Be aware of dangers from other hazardous substances in the immediate area. Prevent run-off from entering drains and watercourses.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions The following is given as general advice, precautions and procedures should reflect the extent of a spillage and the situation. Have emergency procedures in place for treating spillages, evacuating the area and informing the emergency services if necessary. Spill control personnel should wear personal protective clothing and equipment as described in section 8 of this datasheet. Non-emergency personnel should be kept away from the area of spillage. Avoid generation and spreading of dusts during clean up operations. Avoid ingestion of the product, inhalation of dusts and contact with skin and eyes when treating spillages.

6.2. Environmental precautions
POTASSIUM IODIDE 10% w/v

Environmental precautions  Avoid unauthorised discharge to the environment. Do not discharge into drains or watercourses or onto the ground. Clean up any spillages immediately, prevent material from spreading and entering drains or sewage systems. If spillages to land cannot be treated safely or if contamination will occur the Environment Agency must be alerted immediately. Large spillages or uncontrolled discharge to water systems must be alerted to the Environmental Agency or other regulatory body. If the product has entered a foul drain or sewage system in significant amounts to cause a hazard then the local water treatment company must be informed.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up  Fit drain covers where they are available if the spillage is likely to enter the drainage system. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13. Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Flush contaminated area with plenty of water. Take care as floors and other surfaces may become slippery. Wash thoroughly after dealing with a spillage. If in doubt, consult with the local authority regarding discharge to drain. Collect with scoop or shovel if possible to do so safely, otherwise mix with sand or other inert material.

6.4. Reference to other sections

Reference to other sections  Refer to sections 8 and 13 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions  Avoid spilling the product. Do not eat, drink or smoke when handling. Wash at the end of each work shift, before eating, drinking, smoking and using the toilet. Do not mix with incompatible substances or mixtures. Remove contaminated clothing/footwear/equipment before entering eating areas or places that would expose others to the product. Do not use in areas close to drainage systems unless measures are in place to prevent access of product. Ensure emergency procedures are in place to treat spillages and cope with other situations such as evacuation. Avoid ingestion, inhalation and contact with skin and eyes.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions  Store in a stable situation to avoid spillages. It is advisable to store in a bunded area or use other protective measures such as a sump pallet or storage tray. Store away from heat, direct sunlight and moisture. Avoid extreme temperatures, advisable to store between 5 and 30 C. Do not leave storage containers exposed to the atmosphere as this may result in loss of contents or contamination. If the substance is transferred to other containers ensure the packaging material is compatible. Consult with the packaging manufacturer or supplier.

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.

Usage description  Use product under conditions described in this datasheet. Avoid exposure of operators and others who may be affected by its use. Avoid overuse of the product which would create waste and potential spillages. Always use recommended personal protective equipment. Only use the product for its intended use in a safe manner, do not use for other purposes.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Biological limit values  No information available.
POTASSIUM IODIDE 10% w/v

DNEL

- Workers - Inhalation; Long term systemic effects: 0.661 mg/m³
- Workers - Dermal; Long term systemic effects: 0.375 mg/kg
- General population - Inhalation; Long term systemic effects: 0.163 mg/m³
- General population - Dermal; Long term systemic effects: 0.1875 mg/kg
- General population - Oral; Long term systemic effects: 0.09375 mg/kg

Refers to potassium iodide.

PNEC

- Fresh water; 2.26 mg/l
- Marine water; 0.226 mg/l
- Intermittent release; 2.26 mg/l
- STP; 14.76 mg/l
- Sediment (Freshwater); 3.93 mg/kg
- Sediment (Marine water); 3.93 mg/kg
- Soil; 0.004 mg/kg

Refers to potassium iodide.

POTASSIUM IODIDE (CAS: 7681-11-0)

DNEL

- Workers - Inhalation; Long term systemic effects: 0.07 mg/m³
- Workers - Dermal; Long term systemic effects: 1 mg/kg/day
- General population - Inhalation; Long term systemic effects: 0.035 mg/m³
- General population - Dermal; Long term systemic effects: 1 mg/kg
- General population - Oral; Long term systemic effects: 0.01 mg/kg/day

PNEC

- Fresh water; 0.007 mg/l
- Intermittent release; 0.075 mg/l
- Sediment (Freshwater); 0.007 mg/kg

8.2. Exposure controls

Protective equipment

Provide adequate ventilation and appropriate extraction to avoid occupational exposure. If vapours or mists are generated, work in a fume cupboard.

Eye/face protection

Wear approved chemical safety goggles conforming to EN 166.

Hand protection

Use full length gloves. Butyl rubber. Nitrile rubber. Polyvinyl chloride (PVC). Gloves should conform to EN 374 (Chemical and Micro-organisms hazards). 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. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. Gloves showing signs of degradation should be changed to avoid skin contamination. Gloves should have a breakthrough time sufficient for the amount of handling but allow dexterity for safe movement and handling. When removing used gloves apply proper technique by avoiding skin contact with the outer surface. When packages of the product are being handled during storage or transport it is advisable to wear protective gloves to prevent damage to the skin.

Other skin and body protection

Wear suitable protective clothing during transport, handling and storage operations connected with the product. Protective clothing should conform to the general requirements of EN 340:2003. Also consider EN 13034:2005; EN 14605:2005; EN 943:2002 dependent upon the situation resulting in exposure. When treating spillages it is recommended to wear protective boots. Safety footwear should conform to standards EN 344 - 347. Consult with the supplier as to the compatibility of protective clothing and footwear. Wear rubber or plastic apron and full length gauntlets if handling large amounts. Provide eyewash station and safety shower. If there is a risk of splashing then wear a face shield.
POTASSIUM IODIDE 10% w/v

**Hygiene measures**
Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove contaminated clothing and wash before reuse. Remove contaminated clothing when entering eating areas or other places that could lead to contamination of others with the product. When using do not eat, drink or smoke.

**Respiratory protection**
Wear suitable respiratory protection when vapours or mists are generated and there is inadequate ventilation or extraction. When a particulate respirator is used it is recommended to use at least Type P2, preferably P3. When the concentration of atmospheric vapour is high enough to cause eye irritation wear full face respiratory equipment. Consult with the supplier as to the compatibility of the equipment with the chemical of concern. CAUTION: Air purifying respirators do not protect the user in oxygen deficient atmospheres, use air supplied system. Respiratory protection should conform to the following standards. BS EN 136: Full face masks. BS EN 140: Half-face masks. BS EN 143: Particulates. Powered air respirators should meet requirements of EN146 and EN12941. Airline fed respirators should meet the requirements of EN 270 and EN1835. Respiratory protection should be maintained in a proper condition and inspected at the frequency specified by current legislation.

**SECTION 9: Physical and Chemical Properties**

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Colour</strong></td>
<td>Colourless to pale yellow</td>
</tr>
<tr>
<td><strong>Odour</strong></td>
<td>Odourless</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Melting point</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Initial boiling point and range</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Upper/lower flammability or explosive limits</strong></td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Vapour pressure</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Relative density</strong></td>
<td>~ 1.05 @ 20°C</td>
</tr>
<tr>
<td><strong>Solubility(ies)</strong></td>
<td>Miscible with water.</td>
</tr>
<tr>
<td><strong>Partition coefficient</strong></td>
<td>log Pow: -0.958 @ 25°C</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td>Not considered to be explosive.</td>
</tr>
<tr>
<td><strong>Oxidising properties</strong></td>
<td>Does not meet the criteria for classification as oxidising.</td>
</tr>
</tbody>
</table>

9.2. Other information
None.

**SECTION 10: Stability and reactivity**

10.1. Reactivity
Reactivity
Can react to form other iodides or iodine.

10.2. Chemical stability
Stability
Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions
POTASSIUM IODIDE 10% w/v

Possibility of hazardous reactions

Produces metallic mercury on reaction with mercurous chloride. Liberates iodine in presence of acids.

10.4. Conditions to avoid

Conditions to avoid

Avoid heat, direct sunlight and moisture. Avoid freezing. Avoid storage with incompatible materials. Avoid storage in an unstable manner or in a situation that would result in exposure to the product.

10.5. Incompatible materials

Materials to avoid


10.6. Hazardous decomposition products

Hazardous decomposition products

See section 5 for thermal decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 5,000.0

Acute toxicity - dermal

ATE dermal (mg/kg) 11,000.0

Skin corrosion/irritation

Animal data

Potassium Iodide is classed as irritating to skin.

Serious eye damage/irritation

Moderately irritating.

Skin sensitisation

Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro

Negative.

Inhalation

May cause respiratory irritation.

Ingestion

Nausea, vomiting.

Skin contact

Irritating to skin.

Eye contact

Irritating to eyes.

SECTION 12: Ecological Information

Ecotoxicity

Although not classified as environmentally hazardous, harmful effects cannot be excluded in the event of improper handling or disposal.

12.1. Toxicity

Toxicity

The following information refers to potassium iodide as a substance.

Acute toxicity - fish

LC₅₀, 96 hours: 100 mg/l, Brachydanio rerio (Zebra Fish)

Refers to potassium iodide

Acute toxicity - aquatic invertebrates

LC₅₀, 24 hours: 226 mg/l, Freshwater invertebrates
POTASSIUM IODIDE 10% w/v

Chronic toxicity - fish early life stage  Not available.
Chronic toxicity - aquatic invertebrates  Not available.

12.2. Persistence and degradability
Stability (hydrolysis)  Scientifically unjustified.
Biodegradation  Scientifically unjustified.

12.3. Bioaccumulative potential
Bioaccumulative potential  BCF: 2.268 L/Kg, Freshwater fish
Partition coefficient  log Pow: -0.958 @ 25°C

12.4. Mobility in soil
Mobility  Potassium iodide is likely to remain in the aqueous phase and move through the soil with water.
Adsorption/desorption coefficient  Water - : Koc = 13.22 L/Kg @ °C

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

12.6. Other adverse effects
Will affect drinking water supplies. May effect germination and growth rates of plants if soil contamination occurs.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
General information  Any waste material is classed as hazardous waste, it should only be disposed of through licenced waste handlers and treatment sites. Do not allow unauthorised disposal to the environment. If operators are exposed to vapours during the disposal process then suitable respiratory protection should be worn. All other personal protective equipment as described in section 8 should be worn.
Disposal methods  Uncleaned empty containers should be treated as hazardous waste. Avoid unauthorised disposal. Do not dump illegally onto land or into water. When dealing with waste always consider the waste management hierarchy of Prevention, Preparation for re-use, Recycling, Recovery and Disposal. It is advisable to minimise waste at source if possible, then re-use, recover or recycle wherever possible before considering waste disposal options.

SECTION 14: Transport information

General  Not regulated.

14.1. UN number
Not applicable.

14.2. UN proper shipping name
Not classified.

14.3. Transport hazard class(es)
POTASSIUM IODIDE 10% w/v

Not classified.

Transport labels
No transport warning sign required.

14.4. Packing group
Not classified.

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user
Not applicable.

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 applicable.

SECTION 15: Regulatory information

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

National regulations
Industry - Dermal; Long term systemic effects 22 mg/kg/day

EU legislation

Guidance
Approved Classification and Labelling Guide (CHIP 4)
Industry - Dermal; Long term systemic effects 22 mg/kg/day
ECHA Guidance on the compilation of safety data sheets 2014.

15.2. Chemical safety assessment
Information from the manufacturer of the raw material has not been received regarding Chemical Safety Assessments, Exposure Scenarios or a Chemical Safety Report.

SECTION 16: Other information

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

Revision comments
Revised classification.

Revision date
08/06/2015

Revision
1

Supersedes date
23/09/2008

SDS number
10853

Risk phrases in full
Not classified.
POTASSIUM IODIDE 10% w/v

Hazard statements in full

H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.