# Potassium iodide

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue: 11/11/2016

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

### 1.1. Product identifier

| | | |
|---|---|---|
| Product form | : | Substance |
| Substance name | : | Potassium iodide |
| EC no | : | 231-659-4 |
| CAS No | : | 7681-11-0 |
| Type of product | : | Pure substance, Hygroscopic substance. Preventive measures apply to the substance in dry state only |
| Formula | : | KI |
| Chemical structure | : |  |
| Synonyms | : | antistrumin / asmofug E / ceoidodin / hydriocic acid, potassium / iodic acid, potassium salt / iodostin / jodid / K1-N / kali iodide / KI-N / knollide / NSC 77362 / pherajod / potassium iodide, briquettes / potassium monoiodide / potide / reagent A - chlorine (test kit) / Thyro-Block / thyrojod |

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

#### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemical
Photographic chemical
Food industry: auxiliary substance
Reagent
Pharmaceutical product: component
Veterinary medicine

#### 1.2.2. Uses advised against

No additional information available

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

ISOLAB GmbH
Bahnhofstrasse 10, D-97877
Wertheim - Germany
T +49 93 42 912 355 - F +49 93 42 912 357
prodsafe@isolab.de

### 1.4. Emergency telephone number

| Country | Organisation/Company | Address | Emergency number | Comment |
|---|---|---|---|---|
| Germany | Giftnotruf der Charité<br>CBF, Haus VIII (Wirtschaftgebäude), UG | Hindenburgdamm 30<br>12203 Berlin | +49 (0) 30 19240 | |

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Not classified

**Adverse physicochemical, human health and environmental effects**

No additional information available

### 2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

No labelling applicable

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---|---|
| Potassium iodide | (CAS No) 7681-11-0<br>(EC no) 231-659-4 | ≤ 100 | Not classified |

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

First-aid measures after inhalation : Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

First-aid measures after eye contact : Rinse with water. Take victim to an ophthalmologist if irritation persists.

First-aid measures after ingestion : Rinse mouth with water. Immediately after ingestion: give lots of water to drink. Give milk to drink. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

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

Symptoms/injuries after inhalation : No effects known.

Symptoms/injuries after skin contact : Slight irritation.

Symptoms/injuries after eye contact : Slight irritation.

Symptoms/injuries after ingestion : No effects known.

Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Body temperature rise. Gastrointestinal complaints. Feeling of weakness. Loss of weight. Sleeplessness. Skin rash/inflammation. Irritation of the nasal mucous membranes. Runny nose. Respiratory difficulties. Possible oedema of the upper respiratory tract. Possible inflammation of the respiratory tract. Possible laryngeal spasm/oedema. Increased salivation. Inflammation/affection of the gums. Inflammation/damage of the eye tissue. Lacrimation. Thyroid enlargement/affection. Enlargement of the lymph glands.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Adapt extinguishing media to the environment.

Unsuitable extinguishing media : No unsuitable extinguishing media known.

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

Fire hazard : DIRECT FIRE HAZARD. Non combustible. INDIRECT FIRE HAZARD. Reactions involving a fire hazard: see "Reactivity Hazard".

Explosion hazard : DIRECT EXPLOSION HAZARD. No data available on direct explosion hazard. INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".

### 5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions : No specific fire-fighting instructions required.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Reactivity hazard: compressed air/oxygen apparatus. See "Material-Handling" to select protective clothing.

Emergency procedures : Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes. In case of hazardous reactions: keep upwind. In case of reactivity hazard: consider evacuation.

Measures in case of dust release : In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

No additional information available

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

For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Knock down/dilute dust cloud with water spray. If reacting: dilute toxic gas/vapour with water spray. Take account of toxic/corrosive precipitation water.

Methods for cleaning up : Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. See "Material-handling" for suitable container materials. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use. Avoid raising dust. Keep away from naked flames/heat. Observe normal hygiene standards. Keep container tightly closed. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

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

Storage temperature : 15 - 30 °C

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. metals. water/moisture.

Storage area : Store in a cool area. Store in a dry area. Store in a dark area. Limited time of storage. Store only in a limited quantity. May be stored under argon. Keep locked up. Meet the legal requirements. Store at room temperature.

Special rules on packaging : SPECIAL REQUIREMENTS: hermetical. watertight. dry. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

Packaging materials : SUITABLE MATERIAL: cardboard. stainless steel. plastics. glass. MATERIAL TO AVOID: aluminium. copper. tin. nickel. bronze.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| **Potassium iodide (7681-11-0)** | | |
|---|---|---|
| Belgium | Limit value (mg/m³) | 0.1 mg/m³ (Iode et iodures (vapeur et aérosol); Belgium; Time-weighted average exposure limit 8 h) |
| Belgium | Limit value (ppm) | 0.01 ppm (Iode et iodures (vapeur et aérosol); Belgium; Time-weighted average exposure limit 8 h) |
| USA - ACGIH | ACGIH TWA (ppm) | 0.01 ppm (Iodides; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value; Inhalable fraction and vapor) |

### 8.2. Exposure controls

**Materials for protective clothing:**

GIVE GOOD RESISTANCE: natural rubber. neoprene. nitrile rubber. PVC. plastics

**Hand protection:**

Gloves

**Eye protection:**

Safety glassess

**Skin and body protection:**

Protective clothing

**Respiratory protection:**

Dust production: dust mask with filter type P3

## SECTION 9: Physical and chemical properties

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

| | | |
|---|---|---|
| Physical state | : | Solid |
| Appearance | : | Crystalline solid. Crystalline powder. Grains. Little spheres. |
| Molecular mass | : | 166.01 g/mol |
| Colour | : | Colourless to white. On exposure to air: yellow to brown. |
| Odour | : | Odourless. |
| Odour threshold | : | No data available |
| pH | : | 6.0 - 9.0 (50 g/l, $H_2O$, 20 °C) |
| pH solution | : | 5 % |
| Relative evaporation rate (butylacetate=1) | : | No data available |
| Melting point | : | 685 °C (975 hPa) |
| Freezing point | : | No data available |
| Boiling point | : | 1325 °C (1013 hPa) |
| Flash point | : | Not applicable |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Flammability (solid, gas) | : | No data available |
| Vapour pressure | : | < 0.01 hPa (20 °C) |
| Relative vapour density at 20 °C | : | No data available |
| Relative density | : | 3.13 g/cm$^3$ |
| Density | : | 3130 kg/m³ |
| Solubility | : | Soluble in water. Soluble in glycerol. Soluble in ammonia.<br>Water: 143 g/100ml<br>Ethanol: 2 g/100ml<br>Acetone: 1.3 g/100ml |
| Log Pow | : | No data available |
| Viscosity, kinematic | : | No data available |
| Viscosity, dynamic | : | No data available |
| Explosive properties | : | No data available |
| Oxidising properties | : | No data available |
| Explosive limits | : | No data available |

### 9.2. Other information

| | | |
|---|---|---|
| VOC content | : | Not applicable |
| Other properties | : | Hygroscopic. |

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

On burning: release of harmful/irritant gases/vapours (iodine). Decomposes slowly on exposure to light and on exposure to air: release of harmful/irritant gases/vapours (iodine). Reacts violently on exposure to (strong) acids: release of corrosive products (hydrogen iodide). Reacts violently with (strong) oxidizers: release of harmful/irritant gases/vapours (iodine).

### 10.2. Chemical stability

Unstable on exposure to light. Unstable on exposure to air. Hygroscopic.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

| **Potassium iodide (7681-11-0)** | |
|---|---|
| LD50 oral rat | 2779 mg/kg (Rat) |
| LD50 dermal rabbit | 3160 mg/kg (Rabbit) |

Skin corrosion/irritation : Not classified
pH: 6.0 - 9.0 (5.0 %)

Serious eye damage/irritation : Not classified
pH: 6.0 - 9.0 (5.0 %)

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water : Mild water pollutant (surface water). Ground water pollutant. Not harmful to fishes (LC50(96h) >1000 mg/l). Slightly harmful to invertebrates (Daphnia) (EC50 (48h): 100 - 1000 mg/l). Not harmful to algae (EC50 (72h) >1000 mg/l).

| **Potassium iodide (7681-11-0)** | |
|---|---|
| LC50 fish 1 | 1788.85 mg/l (LC50; 96 h) |
| EC50 Daphnia 1 | 483.68 mg/l (LC50; 48 h) |

### 12.2. Persistence and degradability

| **Potassium iodide (7681-11-0)** | |
|---|---|
| Persistence and degradability | Biodegradability: not applicable. |
| Biochemical oxygen demand (BOD) | Not applicable |
| Chemical oxygen demand (COD) | Not applicable |
| ThOD | Not applicable |

### 12.3. Bioaccumulative potential

| Potassium iodide (7681-11-0) | |
|---|---|
| Bioaccumulative potential | Not bioaccumulative. |

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Recycle/reuse. Precipitate/make insoluble. Remove to an authorized dump (Class I). Treat using the best available techniques before discharge into drains or the aquatic environment. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

Additional information : LWCA (the Netherlands): KGA category 05. Can be considered as non hazardous waste according to Directive 2008/98/EC.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IMDG | IATA | ADN | RID |
|---|---|---|---|---|
| **14.1. UN number** | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| **14.2. UN proper shipping name** | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| **14.3. Transport hazard class(es)** | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| **14.4. Packing group** | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| **14.5. Environmental hazards** | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| No supplementary information available | | | | |

### 14.6. Special precautions for user

**- Overland transport**

Not applicable

**- Transport by sea**

Not applicable

**- Air transport**

Not applicable

**- Inland waterway transport**

Not applicable

**- Rail transport**

Not applicable

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

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Potassium iodide is not on the REACH Candidate List

Potassium iodide is not on the REACH Annex XIV List

VOC content : Not applicable

#### 15.1.2. National regulations

**Germany**

VwVwS Annex reference : Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 3; ID No. 2660)

WGK remark : Classification water polluting based on the R-phrases in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 3)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

**Netherlands**

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Abbreviations and acronyms:

| | |
|---|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| CLP | Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008 |
| EC50 | Median effective concentration |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| PBT | Persistent Bioaccumulative Toxic |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006 |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| vPvB | Very Persistent and Very Bioaccumulative |

Data sources : 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*