

# Safety Data Sheet

#36409596 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

| PRODUCT          | CAS NUMBER | FORMULA | VERSION | REVISION DATE |
|------------------|------------|---------|---------|---------------|
| Potassium iodide | 7681-11-0  | IK      | —       | 26 Feb 2025   |

## SECTION 1

### Identification

#### 1.1 Product identifier

Product name Potassium iodide

CAS number 7681-11-0

EC / EINECS number 231-659-4

Chemical formula IK

Molecular weight 166.002

SMILES [K+].[I-]

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

For research use only.

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

Molekula Limited  
1 Millennium Way, Newton Aycliffe  
Durham, DL5 6JW, United Kingdom  
info@molekula.com · +44 (0) 3302 000333

#### 1.4 Emergency telephone number

**0344 892 0111** — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

## SECTION 2

### Hazard identification

#### 2.1 Classification of the substance or mixture

Skin Irrit. 2; H315

Eye Irrit. 2; H319

STOT SE 3; H335

Repr. 1A or Repr. 1B; H360FD

STOT RE 1; H372

Aquatic Chronic 2; H411

## 2.2 Label elements



**DANGER**

| CODE | HAZARD STATEMENT |
|------|------------------|
|------|------------------|

|             |                             |
|-------------|-----------------------------|
| <b>H303</b> | May be harmful if swallowed |
|-------------|-----------------------------|

|             |                        |
|-------------|------------------------|
| <b>H315</b> | Causes skin irritation |
|-------------|------------------------|

|             |                               |
|-------------|-------------------------------|
| <b>H319</b> | Causes serious eye irritation |
|-------------|-------------------------------|

|             |                                  |
|-------------|----------------------------------|
| <b>H335</b> | May cause respiratory irritation |
|-------------|----------------------------------|

|               |                                                    |
|---------------|----------------------------------------------------|
| <b>H360FD</b> | May damage fertility. May damage the unborn child. |
|---------------|----------------------------------------------------|

|             |                                                                |
|-------------|----------------------------------------------------------------|
| <b>H372</b> | Causes damage to organs through prolonged or repeated exposure |
|-------------|----------------------------------------------------------------|

|             |                                                 |
|-------------|-------------------------------------------------|
| <b>H411</b> | Toxic to aquatic life with long lasting effects |
|-------------|-------------------------------------------------|

| CODE | PRECAUTIONARY STATEMENT |
|------|-------------------------|
|------|-------------------------|

|             |                                                 |
|-------------|-------------------------------------------------|
| <b>P260</b> | Do not breathe dust/fume/gas/mist/vapours/spray |
|-------------|-------------------------------------------------|

|             |                                              |
|-------------|----------------------------------------------|
| <b>P263</b> | Avoid contact during pregnancy/while nursing |
|-------------|----------------------------------------------|

|             |                                  |
|-------------|----------------------------------|
| <b>P273</b> | Avoid release to the environment |
|-------------|----------------------------------|

|                  |                                      |
|------------------|--------------------------------------|
| <b>P302+P352</b> | IF ON SKIN: Wash with soap and water |
|------------------|--------------------------------------|

|                  |                                                                                                 |
|------------------|-------------------------------------------------------------------------------------------------|
| <b>P304+P340</b> | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing |
|------------------|-------------------------------------------------------------------------------------------------|

|                       |                                                                                                                                  |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>P305+P351+P338</b> | IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing |
|-----------------------|----------------------------------------------------------------------------------------------------------------------------------|

## 2.3 Other hazards

Does not contain components considered to be persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

Does not contain components considered to have endocrine-disrupting properties.

Does not meet PBT or vPvB criteria under REACH Annex XIII.

## SECTION 3

**Composition / information on ingredients****3.1 Substances**

|                                                                 |                                                                                                                                            |
|-----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name</b>                                                     | Potassium iodide                                                                                                                           |
| <b>CAS number</b>                                               | 7681-11-0                                                                                                                                  |
| <b>EC number</b>                                                | 231-659-4                                                                                                                                  |
| <b>Concentration / purity</b>                                   | 100 % Potassium iodide (CAS 7681-11-0)                                                                                                     |
| <b>Classification according to Regulation (EC) No 1272/2008</b> | Skin Irrit. 2; H315<br>Eye Irrit. 2; H319<br>STOT SE 3; H335<br>Repr. 1A or Repr. 1B; H360FD<br>STOT RE 1; H372<br>Aquatic Chronic 2; H411 |
| <b>Hazard statements</b>                                        | H303, H315, H319, H335, H360FD, H372, H411                                                                                                 |
| <b>Acute toxicity estimate (ATE)</b>                            | <i>No data available</i>                                                                                                                   |
| <b>Impurities / stabilising additives</b>                       | None.                                                                                                                                      |

## SECTION 4

**First-aid measures****4.1 Description of first aid measures**

|                     |                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.                                                                                                                                                                                                                                                                         |
| <b>Skin contact</b> | Take off immediately all contaminated clothing. Rinse skin with water/shower. Contact a physician if discomfort continues.                                                                                                                                                                                                                                                      |
| <b>Eye contact</b>  | Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention                                                                                                                                                                                                                                                   |
| <b>Ingestion</b>    | IF SWALLOWED: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only if the persons are fully conscious and awake). Administer activated charcoal (20 - 40g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise. |

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel. First aiders/ medical personnel need to protect themselves.

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

See Section 11.

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

*No data available*

## SECTION 5

### Fire-fighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media** Alcohol-resistant foam, carbon dioxide, dry powder or water fog. Water spray

**Unsuitable extinguishing media** None known

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

Hydrogen iodide

Potassium oxides

Not combustible.

Fire may cause evolution of hydrogen iodide

Ambient fire may liberate hazardous vapours.

#### 5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## SECTION 6

### Accidental release measures

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

Avoid breathing dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. For personal protection, see section 8.

#### 6.2 Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

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

Collect spillage with shovel, broom or the like.

#### 6.4 Reference to other sections

*For specific precautions, see Section 8 and Section 13.*

## SECTION 7

### Handling & storage

#### 7.1 Precautions for safe handling

Wear protective clothing, gloves, eye and face protection. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

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

**Storage temperature** Ambient

**Conditions for safe storage (incompatibilities)** Hygroscopic. Store under inert gas.

### 7.3 Specific end use(s)

See Section 1.2.

## SECTION 8

### Exposure controls / personal protection

#### 8.1 Control parameters

**Occupational exposure limits (OEL / WEL)** *No data available*

**DNEC/PNEC data** *No data available*

#### 8.2 Exposure controls

|                                        |                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eye / face protection</b>           | Safety glasses<br>Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.                                                                                                                                                                                                  |
| <b>Skin / hand protection</b>          | Nitrile gloves Thickness: 0.11mm. Breakthrough time: 480mins.<br>For personal protection standards, see Section 16.                                                                                                                                                                                                         |
| <b>Respiratory protection</b>          | Full-face respirator<br>Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387. |
| <b>Other protection</b>                | <i>No data available</i>                                                                                                                                                                                                                                                                                                    |
| <b>Environmental exposure controls</b> | <i>No data available</i>                                                                                                                                                                                                                                                                                                    |

## SECTION 9

### Physical & chemical properties

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

|                                        |                                                       |
|----------------------------------------|-------------------------------------------------------|
| <b>Appearance / physical state</b>     | Solid<br><b>DERIVED FROM: LITERATURE</b>              |
| <b>Colour</b>                          | White to off-white<br><b>DERIVED FROM: LITERATURE</b> |
| <b>Odour</b>                           | Not known<br><b>DERIVED FROM: LITERATURE</b>          |
| <b>Melting / freezing point</b>        | 680°C<br><b>DERIVED FROM: LITERATURE</b>              |
| <b>Boiling point</b>                   | 1330°C<br><b>DERIVED FROM: LITERATURE</b>             |
| <b>Flammability</b>                    | <i>No data available</i>                              |
| <b>Lower and upper explosion limit</b> | <i>No data available</i>                              |
| <b>Flash point</b>                     | <i>Not applicable</i>                                 |

|                                                          |                                                    |
|----------------------------------------------------------|----------------------------------------------------|
| <b>Auto-ignition temperature</b>                         | -<br>DERIVED FROM: LITERATURE                      |
| <b>Decomposition temperature</b>                         | No data available                                  |
| <b>pH</b>                                                | c. 6.9 @ 50 g/l (20°C)<br>DERIVED FROM: LITERATURE |
| <b>Acidity</b>                                           | Neutral<br>DERIVED FROM: LITERATURE                |
| <b>Kinematic viscosity</b>                               | No data available                                  |
| <b>Solubility</b>                                        | No data available                                  |
| <b>Partition coefficient n-octanol/water (log value)</b> | -<br>DERIVED FROM: LITERATURE                      |
| <b>Vapour pressure</b>                                   | C. 1 hPa @ 745°C<br>DERIVED FROM: LITERATURE       |
| <b>Density (g/mL)</b>                                    | 3.13 g/mL<br>DERIVED FROM: LITERATURE              |
| <b>Relative vapour density</b>                           | No data available                                  |
| <b>Particle characteristics</b>                          | No data available                                  |

## 9.2 Other information

No data available

## SECTION 10

### Stability & reactivity

#### 10.1 Reactivity

No data available

#### 10.2 Chemical stability

Stable under the prescribed storage conditions

#### 10.3 Possibility of hazardous reactions

No data available

#### 10.4 Conditions to avoid

Risk of explosion with:

Alkali metals

Ammonia

halogen-halogen compounds

hydrogen peroxide

Perchloryl fluoride

Exothermic reaction with:

Oxidizing agents

Risk of ignition or formation of inflammable gases or vapours with: Fluorine

#### 10.5 Incompatible materials

No data available

## 10.6 Hazardous decomposition products

See section 5

### SECTION 11

## Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

**Acute toxicity (LD50 / LC50)** LD50 (Oral): 2779 mg/kg (Rat)

**Skin corrosion / irritation** *Not applicable*

**Eye corrosion / irritation** *Not applicable*

**Respiratory / skin sensitisation** *Not applicable*

**Carcinogenicity** May damage the unborn child.  
May damage fertility.

**Mutagenicity** *Not applicable*

**Reproductive toxicity** *Not applicable*

**STOT (single / repeated exposure)** Oral - May cause damage to organs through prolonged or repeated exposure.  
- Thyroid  
Oral - May cause damage to organs through prolonged or repeated exposure.  
- Liver.

**Aspiration hazard** Not classified

### 11.2 Information on other hazards

*No data available*

### SECTION 12

## Ecological information

### 12.1 Toxicity

static test LC50 - Oncorhynchus mykiss (rainbow trout) - 3,780 mg/l - 96 h (OECD Test Guideline 203)

static test EC50 - Daphnia magna (Water flea) - 7.5 mg/l - 48 h (OECD Test Guideline 202)

flow-through test NOEC - Danio rerio (zebra fish) - 9.8 mg/l - 30 d (OECD Test Guideline 210) Remarks: (ECHA)

### 12.2 Persistence and degradability

*Not applicable*

### 12.3 Bioaccumulative potential

*Not applicable*

### 12.4 Mobility in soil

*Not applicable*

## 12.5 Results of PBT and vPvB assessment

*Not applicable*

## 12.6 Endocrine disrupting properties

*See Section 11.2.*

## 12.7 Other adverse effects

*No data available*

## SECTION 13

### Disposal considerations

#### 13.1 Waste treatment methods

Dispose of in accordance with local/national regulations

## SECTION 14

### Transport information

#### 14.1 UN number or ID number

UN3077

#### 14.2 UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

#### 14.3 Transport hazard class(es)

9



#### 14.4 Packing group

III

#### 14.5 Environmental hazards

Yes.

#### 14.6 Special precautions for user

**Special precautions for user** Handle in accordance with good industrial hygiene and safety practice

**Transport category** 3

**Tunnel code** -

**Packing instruction (ADR)** P002

**Packing instruction (IMDG)** P002

#### 14.7 Maritime transport in bulk according to IMO instruments

*No data available*

## SECTION 15

### Regulatory information

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

|                                                |                   |
|------------------------------------------------|-------------------|
| Substance-specific regulations (e.g. licences) | No data available |
|------------------------------------------------|-------------------|

|            |      |
|------------|------|
| REACH code | Y110 |
|------------|------|

|                   |                |
|-------------------|----------------|
| ECHA notification | Not applicable |
|-------------------|----------------|

#### 15.2 Chemical safety assessment

Not applicable

## SECTION 16

### Other information

|                                    |                                                        |
|------------------------------------|--------------------------------------------------------|
| Revision notes / other information | Eye/Face protection complies with EN ISO 16321-1:2022. |
|------------------------------------|--------------------------------------------------------|

This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as "No data available" carry no recorded value; fields shown as "Not applicable" were assessed as not relevant to this substance. For queries, contact Molekula at [info@molekula.com](mailto:info@molekula.com).