SECTION 1: Identification

1.1. Identification

Product form : Substance
Substance name : Potassium Iodate
CAS-No. : 7758-05-6
Product code : LC19590
Formula : KIO3
Synonyms : iodic acid, potassium salt / potassium iodine oxide / potassium triiodate

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Pharmaceutical product: component
Veterinary medicine
Laboratory chemical
Food industry: Flavouring agent

Recommended use : Laboratory chemicals
Restrictions on use : Not for food, drug or household use

1.3. Supplier

LabChem, Inc.
1010 Jackson's Pointe Ct.
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or +1-703-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification
Oxidizing solids Category 3 H272 May intensify fire; oxidizer
Acute toxicity (oral) Category 4 H302 Harmful if swallowed
Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling
Hazard pictograms (GHS US) :

Signal word (GHS US) : Warning
Hazard statements (GHS US) : H272 - May intensify fire; oxidizer
H302 - Harmful if swallowed

Precautionary statements (GHS US) : P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking.
P220 - Keep/Store away from clothing, combustible materials
P221 - Take any precaution to avoid mixing with combustibles
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 - If swallowed, rinse mouth
P370+P378 - In case of fire: Use carbon dioxide (CO2), powder, alcohol-resistant foam to extinguish
P501 - Dispose of contents/container to comply with local, state and federal regulations.
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2.3. Other hazards which do not result in classification
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Substance</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mono-constituent</td>
<td>Potassium Iodate (Main constituent)</td>
<td>(CAS-No.) 7758-05-6</td>
<td>100</td>
<td>Ox. Sol. 3, H272 Acute Tox. 4 (Oral), H302</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general

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

First-aid measures after skin contact
Wash immediately with lots of water. Do not apply (chemical) neutralizing agents without medical advice. Soap may be used. Take victim to a doctor if irritation persists.

First-aid measures after eye contact
Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply (chemical) neutralizing agents without medical advice.

First-aid measures after ingestion
Rinse mouth with water. Do not apply (chemical) neutralizing agents without medical advice. 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. Take the container/vomit to the doctor/hospital.

4.2. Most important symptoms and effects (acute and delayed)

Potential Adverse human health effects and symptoms
Causes skin irritation. Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). May cause respiratory irritation. Causes serious eye irritation.

Symptoms/effects after inhalation
AFTER INHALATION OF DUST: Irritation of the respiratory tract. Irritation of the nasal mucous membranes.

Symptoms/effects after skin contact
Tingling/irritation of the skin.

Symptoms/effects after eye contact
Irritation of the eye tissue.

Symptoms/effects after ingestion

Chronic symptoms
No effects known.

4.3. Immediate medical attention and special treatment, if necessary
No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media

Unsuitable extinguishing media
Foam. Foam.

5.2. Specific hazards arising from the chemical

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

Explosion hazard
INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".

5.3. Special protective equipment and precautions for fire-fighters

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

Firefighting instructions
Cool tanks/drums with water spray/remove them into safety. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.
### SECTION 6: Accidental release measures

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

**6.1.1. For non-emergency personnel**

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency procedures</td>
<td>In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.</td>
</tr>
<tr>
<td>Measures in case of dust release</td>
<td></td>
</tr>
</tbody>
</table>

**6.1.2. For emergency responders**

<table>
<thead>
<tr>
<th>Protective equipment</th>
<th>Equip cleanup crew with proper protection. Do not breathe dust.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency procedures</td>
<td>Ventilate area. If a major spill occurs, all personnel should be immediately evacuated and the area ventilated.</td>
</tr>
</tbody>
</table>

#### 6.2. Environmental precautions

Prevent spreading in sewers.

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

**For containment**

- Contain released substance, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill. Knock down/dilute dust cloud with water spray.

**Methods for cleaning up**

- Stop dust cloud by covering with sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. 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**

- Avoid raising dust. Use earthed equipment. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed.

**Hygiene measures**

- Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

**Incompatible products**

- Strong reducing agents.

**Heat-ignition**

- KEEP SUBSTANCE AWAY FROM: heat sources.

**Prohibitions on mixed storage**


**Storage area**

- Store in a cool area. Store in a dry area. Keep out of direct sunlight. Keep container in a well-ventilated place. Keep only in the original container. Meet the legal requirements.

**Special rules on packaging**

- SPECIAL REQUIREMENTS: closing. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

**Potassium Iodate (7758-05-6)**

No additional information available
**Potassium Iodate**

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### 8.2. Appropriate engineering controls

**Appropriate engineering controls**

Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

### 8.3. Individual protection measures/Personal protective equipment

**Personal protective equipment:**


**Materials for protective clothing:**

GIVE EXCELLENT RESISTANCE: nitrile rubber

**Hand protection:**

Protective gloves against chemicals (EN 374)

**Eye protection:**

Face shield (EN 166). In case of dust production: protective goggles (EN 166)

**Skin and body protection:**

Protective clothing (EN 14605 or EN 13034). In case of dust production: head/neck protection. In case of dust production: dustproof clothing (EN 13982)

**Respiratory protection:**

Dust production: dust mask with filter type P2

**Personal protective equipment symbol(s):**

---

### 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>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Crystalline solid. Crystalline powder.</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>6.07 (1 %, 26 °C)</td>
</tr>
<tr>
<td>Melting point</td>
<td>560 °C (975 hPa)</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>735 °C (Calculated)</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable (solid)</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>0 hPa (25 °C, Calculated)</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative density</td>
<td>3.52 (25 °C)</td>
</tr>
<tr>
<td>Specific gravity / density</td>
<td>3520 kg/m³ (25 °C)</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>214.02 g/mol</td>
</tr>
<tr>
<td>Solubility</td>
<td>Moderately soluble in water.</td>
</tr>
<tr>
<td>Water: 7 g/100ml (25 °C)</td>
<td></td>
</tr>
<tr>
<td>Ethanol: 25 °C, insoluble</td>
<td></td>
</tr>
<tr>
<td>Log Pow</td>
<td>-1 (Experimental value, Equivalent or similar to OECD 107, 25 °C)</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not classified</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>&gt; 560 °C</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
</tbody>
</table>
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Viscosity, dynamic : Not applicable (solid)
Explosion limits : No data available
Explosive properties : No data available
Oxidizing properties : May intensify fire; oxidiser.

9.2. Other information
VOC content : Not applicable (inorganic)

SECTION 10: Stability and reactivity

10.1. Reactivity
Violent exothermic reaction with organic material and with combustible materials: risk of spontaneous ignition. Violent exothermic reaction with (strong) reducers: (increased) risk of fire/explosion. Violent to explosive reaction with (some) metal powders. Decomposes on exposure to temperature rise: oxidation which increases fire hazard.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
Not available.

10.4. Conditions to avoid
High temperature. Incompatible materials.

10.5. Incompatible materials
Strong reducing agents.

10.6. Hazardous decomposition products
Iodine vapor.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Potassium Iodate (7758-05-6)

<table>
<thead>
<tr>
<th>LD50 oral rat</th>
<th>1200 mg/kg body weight (Rat, Experimental value, Oral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 dermal rat</td>
<td>&gt; 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 14 day(s))</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>1200 mg/kg body weight</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>pH: 6.07 (1 %, 26 °C)</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Not classified</td>
</tr>
<tr>
<td>pH: 6.07 (1 %, 26 °C)</td>
<td></td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Likely routes of exposure : Inhalation. Skin and eye contact.

Potential Adverse human health effects and symptoms : Causes skin irritation. Practically non-toxic in contact with skin (LD50 skin > 2000 mg/kg). May cause respiratory irritation. Causes serious eye irritation.

Symptoms/effects after inhalation : AFTER INHALATION OF DUST: Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
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### Symptoms/effects after skin contact
- Tingling/irritation of the skin.

### Symptoms/effects after eye contact
- Irritation of the eye tissue.

### Symptoms/effects after ingestion

### Chronic symptoms
- No effects known.

#### SECTION 12: Ecological information

12.1 Toxicity

Ecology - general
- Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.

Ecology - air
- Not included in the list of substances which may contribute to the greenhouse effect (IPCC).
- Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014).
- Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).

Ecology - water
- Slightly harmful to crustacea. Slightly harmful to fishes. Groundwater pollutant.

<table>
<thead>
<tr>
<th>Potassium Iodate (7758-05-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LC50 fish 1</strong></td>
</tr>
<tr>
<td><strong>EC50 Daphnia 1</strong></td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability

Potassium Iodate (7758-05-6)
- Biodegradability: not applicable.
- Chemical oxygen demand (COD): Not applicable (inorganic)
- ThOD: Not applicable (inorganic)

12.3 Bioaccumulative potential

Potassium Iodate (7758-05-6)
- Log Pow: -1 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
- Bioaccumulative potential: Not bioaccumulative.

12.4 Mobility in soil

Potassium Iodate (7758-05-6)
- Surface tension: No data available in the literature
- Log Koc: 1.503 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
- Ecology - soil: Highly mobile in soil.

12.5 Other adverse effects

No additional information available

#### SECTION 13: Disposal considerations

13.1 Disposal methods

Waste disposal recommendations
- Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals.

Additional information

#### SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description
- UN1479 Oxidizing solid, n.o.s., 5.1, III

UN-No.(DOT)
- UN1479

Proper Shipping Name (DOT)
- Oxidizing solid, n.o.s.
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<table>
<thead>
<tr>
<th>Transport hazard class(es) (DOT)</th>
<th>5.1 - Class 5.1 - Oxidizer 49 CFR 173.128</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing group (DOT)</td>
<td>III - Minor Danger</td>
</tr>
<tr>
<td>Hazard labels (DOT)</td>
<td>5.1 - Oxidizer</td>
</tr>
</tbody>
</table>

### DOT Packaging Non Bulk (49 CFR 173.xxx)

- 213

### DOT Packaging Bulk (49 CFR 173.xxx)

- 240

### DOT Symbols

- G - Identifies PSN requiring a technical name

### DOT Special Provisions (49 CFR 172.102)

- 62 - Oxygen generators (see §171.8 of this subchapter) are not authorized for transportation under this entry.
  - IBB - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).
  - IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.

### DOT Packaging Exceptions (49 CFR 173.xxx)

- 152

### DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)

- 25 kg

### DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)

- 100 kg

### DOT Vessel Stowage Location

- B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

### DOT Vessel Stowage Other

- 56 - Stow “separated from” ammonium compounds, 58 - Stow “separated from” cyanides, 106 - Stow “separated from” powdered metal

### Other information

- No supplementary information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

- **Potassium Iodate (7758-05-6)**
  - Listed on the United States TSCA (Toxic Substances Control Act) inventory
  - SARA Section 311/312 Hazard Classes: Reactive hazard
  - All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

### 15.2. International regulations

#### CANADA

- **Potassium Iodate (7758-05-6)**
  - Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations

- No additional information available

### National regulations

- No additional information available

### 15.3. US State regulations
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California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 11/19/2020

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>H272</th>
<th>May intensify fire; oxidizer</th>
</tr>
</thead>
<tbody>
<tr>
<td>H302</td>
<td>Harmful if swallowed</td>
</tr>
</tbody>
</table>

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.

NFPA specific hazard : OX - Materials that posses oxidizing properties.

Hazard Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 3 Serious Hazard - Materials that may form explosive mixtures with water and are capable of detonation or explosive reaction in the presence of a strong initiating source. Materials may polymerize, decompose, self-react, or undergo other chemical change at normal temperature and pressure with moderate risk of explosion

Personal protection : F

F - Safety glasses, Gloves, Synthetic apron, Dust respirator

SDS US LabChem

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