

Potassium Iodate

Safety Data Sheet 75433

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

Date of issue: 12/15/2004

Revision date: 09/23/2013

Supersedes: 11/09/2011

Version: 1.0

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

1.1. Product identifier

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
BIG no : 12071

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

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

1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
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 011-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Ox. Sol. 3 H272

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US)



GHS03

Signal word (GHS-US) : Warning
Hazard statements (GHS-US) : H272 - May intensify fire; oxidiser
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
P280 - Wear protective gloves, protective clothing, eye protection, face protection
P370+P378 - In case of fire: Use carbon dioxide (CO₂), powder, alcohol-resistant foam for extinction
P501 - Dispose of contents/container to comply with local, state and federal regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	GHS-US classification
Potassium Iodate (Main constituent)	(CAS No) 7758-05-6	100	Ox. Sol. 3, H272

Full text of H-phrases: see section 16

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3.2. Mixture

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. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Rinse mouth with water. 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	: AFTER INHALATION OF DUST: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
Symptoms/injuries after skin contact	: Slight irritation. ON CONTINUOUS EXPOSURE/CONTACT: Red skin.
Symptoms/injuries after eye contact	: Slight irritation.
Symptoms/injuries after ingestion	: Nausea. Abdominal pain. Diarrhoea.

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	: EXTINGUISHING MEDIA FOR SURROUNDING FIRES: All extinguishing media allowed.
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. Promotes combustion. Reactions involving a fire hazard: see "Reactivity Hazard".
Explosion hazard	: INDIRECT EXPLOSION HAZARD. Reactions with explosion hazards: see "Reactivity Hazard".
Reactivity	: On heating: oxidation resulting in increased fire or explosion risk and release of corrosive gases/vapours (hydrogen iodide). 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. Reacts violently with (some) metal powders.

5.3. Advice for firefighters

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. Do not move the load if exposed to heat. Dilute toxic gases with water spray. Take account of environmentally hazardous firefighting water. Use water moderately and if possible collect or contain it.
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. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.
Emergency procedures	: Mark the danger area. Prevent dust cloud formation. No naked flames. Keep containers closed. Wash contaminated clothes. 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

Protective equipment	: Equip cleanup crew with proper protection. Do not breathe dust.
Emergency procedures	: Ventilate area. If a major spill occurs, all personnel should be immediately evacuated and the area ventilated.

6.2. Environmental precautions

Prevent soil and water pollution. Prevent spreading in sewers.

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6.3. Methods and material for containment and cleaning up

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| 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. 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

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| Precautions for safe handling | : 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. Avoid raising dust. Use earthed equipment. 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. |
| 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

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| Incompatible products | : Strong reducing agents. |
| Heat and ignition sources | : KEEP SUBSTANCE AWAY FROM: heat sources. |
| Prohibitions on mixed storage | : KEEP SUBSTANCE AWAY FROM: combustible materials. reducing agents. organic materials. metal powders. water/moisture. |
| Storage area | : Store in a cool area. Store in a dry area. Keep out of direct sunlight. Keep container in a well-ventilated place. Fireproof storeroom. 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. |
| Packaging materials | : SUITABLE MATERIAL: No data available. MATERIAL TO AVOID: No data available. |

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

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| Appropriate engineering controls | : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation. |
| Materials for protective clothing | : GIVE GOOD RESISTANCE: nitrile rubber. |
| Hand protection | : Gloves. |
| Eye protection | : Safety glasses. In case of dust production: protective goggles. |
| Skin and body protection | : Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing. |
| Respiratory protection | : Dust production: dust mask with filter type P2. |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

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| Physical state | : Solid |
| Appearance | : Crystalline solid. Crystalline powder. |
| Molecular mass | : 214.02 g/mol |
| Colour | : White. |
| Odour | : Odourless. |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : 560 °C |
| Freezing point | : No data available |
| Boiling point | : Not applicable |
| Flash point | : Not applicable |
| Self ignition temperature | : No data available |

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Decomposition temperature	: > 560 °C
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 3.9
Density	: 3930 kg/m³
Solubility	: Moderately soluble in water. Water: 9.2 g/100ml
Log Pow	: -7.18 (Estimated value)
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: May intensify fire; oxidiser.
Explosive limits	: No data available

9.2. Other information

VOC content	: Not applicable
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SECTION 10: Stability and reactivity

10.1. Reactivity

On heating: oxidation resulting in increased fire or explosion risk and release of corrosive gases/vapours (hydrogen iodide). 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. Reacts violently with (some) metal powders.

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 vapour.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: AFTER INHALATION OF DUST: Dry/sore throat. Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.
Symptoms/injuries after skin contact	: Slight irritation. ON CONTINUOUS EXPOSURE/CONTACT: Red skin.
Symptoms/injuries after eye contact	: Slight irritation.
Symptoms/injuries after ingestion	: Nausea. Abdominal pain. Diarrhoea.

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Severe water pollutant (surface water). Ground water pollutant. No data available on ecotoxicity.

12.2. Persistence and degradability

Potassium Iodate (7758-05-6)	
Persistence and degradability	Biodegradability: not applicable. Biodegradability in soil: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Potassium Iodate (7758-05-6)	
Log Pow	-7.18 (Estimated value)
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Remove waste in accordance with local and/or national regulations. Precipitate/make insoluble. Remove to an authorized dump (Class I). Treat using the best available techniques before discharge into drains or the aquatic environment.

Additional information : LWCA (the Netherlands): KGA category 06. Hazardous waste according to Directive 2008/98/EC.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

UN-No.(DOT) : 1479
DOT NA no. UN1479

14.2. UN proper shipping name

DOT Proper Shipping Name : Oxidizing solid, n.o.s.
Potassium Iodate
Department of Transportation (DOT) Hazard Classes : 5.1 - Class 5.1 - Oxidizer 49 CFR 173.128
Hazard labels (DOT) : 5.1 - Oxidizing substances



DOT Symbols : G - Identifies PSN requiring a technical name
Packing group (DOT) : III - Minor Danger

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DOT Special Provisions (49 CFR 172.102)	: 62 - Oxygen generators (see §171.8 of this subchapter) are not authorized for transportation under this entry. IB8 - 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, 13H5, 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. T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2) TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.
DOT Packaging Exceptions (49 CFR 173.xxx)	: 152
DOT Packaging Non Bulk (49 CFR 173.xxx)	: 213
DOT Packaging Bulk (49 CFR 173.xxx)	: 240

14.3. Additional information

Other information	: No supplementary information available.
State during transport (ADR-RID)	: as solid.

Overland transport

Packing group (ADR)	: II
Class (ADR)	: 5.1 - Oxidizing substances
Hazard identification number (Kemler No.)	: 50
Classification code (ADR)	: O2
Danger labels (ADR)	: 5.1 - Oxidizing substances



Orange plates	:
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Tunnel restriction code	: E
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Transport by sea

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
EmS-No. (1)	: F-A
EmS-No. (2)	: S-Q

Air transport

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	: 25 kg
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	: 100 kg

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

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15.2. International regulations

CANADA

Potassium Iodate (7758-05-6)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification	Class C - Oxidizing Material
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EU-Regulations

No additional information available

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

Ox. Sol. 2 H272

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

O; R8

Full text of R-phrases: see section 16

15.2.2. National regulations

Potassium Iodate (7758-05-6)

Not listed on the Canadian Ingredient Disclosure List

15.3. US State regulations

No additional information available

SECTION 16: Other information

Full text of H-phrases: see section 16:

Ox. Sol. 3	Oxidising Solids, Category 3
H272	May intensify fire; oxidiser

NFPA health hazard

: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

NFPA fire hazard

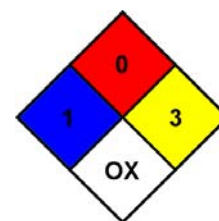
: 0 - Materials that will not burn.

NFPA reactivity

: 3 - Capable of detonation or explosive reaction, but requires a strong initiating source or must be heated under confinement before initiation, or reacts explosively with water.

NFPA specific hazard

: OX - This denotes an oxidizer, a chemical which can greatly increase the rate of combustion/fire.



HMIS III Rating

Health

: 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability

: 0 Minimal Hazard

Physical

: 3 Serious Hazard

Personal Protection

: F

SDS US (GHS HazCom 2012)

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