SAFETY DATA SHEET

Creation Date 24-Jun-2009
Revision Date 21-Apr-2022
Revision Number 7

1. Identification

Product Name Potassium periodate
Cat No. AC198390000; AC198390025; AC198390050; AC198391000; AC198395000
CAS No 7790-21-8
Synonyms Periodic acid (HIO4), potassium salt.; Potassium metaperiodate
Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.

Details of the supplier of the safety data sheet

Company
Fisher Scientific Company Acros Organics
One Reagent Lane One Reagent Lane
Fair Lawn, NJ 07410 Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
For information US call: 001-800-ACROS-01 / Europe call: +32 14 57 52 11
Emergency Number US:001-201-796-7100 / Europe: +32 14 57 52 99
CHEMTREC Tel. No. US:001-800-424-9300 / Europe:001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxidizing solids Category 1</td>
<td></td>
</tr>
<tr>
<td>Skin Corrosion/Irritation Category 1 C</td>
<td></td>
</tr>
<tr>
<td>Serious Eye Damage/Eye Irritation Category 1</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure) Category 3</td>
<td></td>
</tr>
<tr>
<td>Target Organs - Respiratory system.</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity - (repeated exposure) Category 1</td>
<td></td>
</tr>
</tbody>
</table>

Label Elements

Signal Word
Danger

Hazard Statements
May cause fire or explosion: strong oxidizer
Causes severe skin burns and eye damage
May cause respiratory irritation
Causes damage to organs through prolonged or repeated exposure

**Precautionary Statements**

**Prevention**
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep/Store away from clothing/other combustible materials
Take any precaution to avoid mixing with combustibles
Wear fire/flame resistant/retardant clothing

**Response**
Immediately call a POISON CENTER or doctor/physician

**Inhalation**
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

**Skin**
Wash contaminated clothing before reuse
IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes
Rinse skin with water/shower

**Eyes**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

**Ingestion**
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

**Fire**
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion
In case of fire: Use CO2, dry chemical, or foam for extinction

**Storage**
Store locked up
Store in a well-ventilated place. Keep container tightly closed

**Disposal**
Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**
Very toxic to aquatic life

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### 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Periodic acid (HIO4), potassium salt</td>
<td>7790-21-8</td>
<td>&lt;=100</td>
</tr>
</tbody>
</table>

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### 4. First-aid measures

**General Advice**
Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
5. Fire-fighting measures

Suitable Extinguishing Media
CO₂, dry chemical, dry sand, alcohol-resistant foam.

Unsuitable Extinguishing Media
No information available

Flash Point
No information available
Method -
No information available

Autoignition Temperature
No information available

Explosion Limits
Upper
No data available
Lower
No data available

Oxidizing Properties
Oxidizer

Sensitivity to Mechanical Impact
No information available
Sensitivity to Static Discharge
No information available

Specific Hazards Arising from the Chemical
The product causes burns of eyes, skin and mucous membranes. Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.). Do not allow run-off from fire-fighting to enter drains or water courses.

Hazardous Combustion Products
Hydrogen iodide.

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>1</td>
<td>2</td>
<td>OX</td>
</tr>
</tbody>
</table>

6. Accidental release measures

Personal Precautions
Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing.

Environmental Precautions
Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.
Methods for Containment and Clean Up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

7. Handling and storage

Handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe dust. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from clothing and other combustible materials.

Storage.


8. Exposure controls / personal protection

Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Powder Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>White</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>5.5 0.5% aq.sol</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>582 °C / 1079.6 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>negligible</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Potassium periodate

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Autoignition Temperature: No information available
Decomposition Temperature: No information available
Viscosity: Not applicable
Molecular Formula: IO₄
Molecular Weight: 230

10. Stability and reactivity

Reactive Hazard: Yes
Stability: Oxidizer: Contact with combustible/organic material may cause fire. Hygroscopic.
Conditions to Avoid: Incompatible products. Excess heat. Combustible material. Avoid dust formation. Exposure to moist air or water.
Incompatible Materials: Strong oxidizing agents, Reducing Agent, Strong reducing agents, Combustible material, Amines, Finely powdered metals
Hazardous Decomposition Products: Hydrogen iodide
Hazardous Polymerization: Hazardous polymerization does not occur.
Hazardous Reactions: None under normal processing.

11. Toxicological information

Acute Toxicity

Product Information: No acute toxicity information is available for this product
Component Information: No information available
Toxicologically Synergistic Products: No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation: Irritating to eyes, respiratory system and skin
Sensitization: No information available
Carcinogenicity: The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
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<tbody>
<tr>
<td>Periodic acid (HIO₄), potassium salt</td>
<td>7790-21-8</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects: No information available
Reproductive Effects: No information available.
Developmental Effects: No information available.
Teratogenicity: No information available.
STOT - single exposure: Respiratory system
STOT - repeated exposure: None known

Aspiration hazard: No information available

Symptoms / effects, both acute and delayed: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation

Endocrine Disruptor Information: No information available
Other Adverse Effects
The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity
Very toxic to aquatic organisms. The product contains following substances which are hazardous for the environment.

Persistence and Degradability
Soluble in water. Persistence is unlikely based on information available. Insoluble in water.

Bioaccumulation/Accumulation
No information available.

Mobility
Will likely be mobile in the environment due to its water solubility. Is not likely mobile in the environment due its low water solubility.

13. Disposal considerations

Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT
UN-No UN3085
Proper Shipping Name OXIDIZING SOLID, CORROSIVE, N.O.S.
Technical Name Periodic acid (HIO4), potassium salt
Hazard Class 5.1
Subsidiary Hazard Class 8
Packing Group I

TDG
UN-No UN3085
Proper Shipping Name OXIDIZING SOLID, CORROSIVE, N.O.S.
Hazard Class 5.1
Subsidiary Hazard Class 8
Packing Group I

IATA
UN-No UN3085
Proper Shipping Name OXIDIZING SOLID, CORROSIVE, N.O.S.
Hazard Class 5.1
Subsidiary Hazard Class 8
Packing Group I

IMDG/IMO
UN-No UN3085
Proper Shipping Name OXIDIZING SOLID, CORROSIVE, N.O.S.
Hazard Class 5.1
Subsidiary Hazard Class 8
Packing Group I

15. Regulatory information

United States of America Inventory

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>TSCA</th>
<th>TSCA Inventory notification - Active-Inactive</th>
<th>TSCA - EPA Regulatory Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Periodic acid (HIO4), potassium salt</td>
<td>7790-21-8</td>
<td>X</td>
<td>ACTIVE</td>
<td>-</td>
</tr>
</tbody>
</table>

Legend:
TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)
X - Listed
'-' - Not Listed
Potassium periodate  

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TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)  
Not applicable

TSCA 12(b) - Notices of Export  
Not applicable

International Inventories
Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>PICCS</th>
<th>ENCS</th>
<th>ISHL</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
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<td>X</td>
<td>-</td>
<td>232-196-0</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>KE-29179</td>
</tr>
</tbody>
</table>

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

U.S. Federal Regulations

SARA 313  
Not applicable

SARA 311/312 Hazard Categories  
See section 2 for more information

CWA (Clean Water Act)  
Not applicable

Clean Air Act  
Not applicable

OSHA - Occupational Safety and Health Administration  
Not applicable

CERCLA  
Not applicable

California Proposition 65  
This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations  
Not applicable

U.S. Department of Transportation
Reportable Quantity (RQ):  
N
DOT Marine Pollutant  
N
DOT Severe Marine Pollutant  
N

U.S. Department of Homeland Security  
This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade  
No information available

Authorisation/Restrictions according to EU REACH  
Not applicable

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<td>-</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

Safety, health and environmental regulations/legislation specific for the substance or mixture
<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No</th>
<th>OECD HPV</th>
<th>Persistent Organic Pollutant</th>
<th>Ozone Depletion Potential</th>
<th>Restriction of Hazardous Substances (RoHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Periodic acid (HIO₄), potassium salt</td>
<td>7790-21-8</td>
<td>Not applicable</td>
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<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### 16. Other information

Prepared By: Regulatory Affairs  
Thermo Fisher Scientific  
Email: EMSDS.RA@thermofisher.com

Creation Date: 24-Jun-2009  
Revision Date: 21-Apr-2022  
Print Date: 21-Apr-2022  
Revision Summary: This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer  
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of SDS