1. Identification

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Potassium bromate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cat No.</td>
<td>P207-250; P207-500; S80133</td>
</tr>
<tr>
<td>Synonyms</td>
<td>Bromic acid, potassium salt.</td>
</tr>
<tr>
<td>Recommended Use</td>
<td>Laboratory chemicals.</td>
</tr>
<tr>
<td>Uses advised against</td>
<td>No Information available</td>
</tr>
</tbody>
</table>

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>Class</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxidizing solids</td>
<td>1</td>
</tr>
<tr>
<td>Acute oral toxicity</td>
<td>3</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>2</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>3</td>
</tr>
<tr>
<td>Target Organs - Respiratory system, Central nervous system (CNS).</td>
<td></td>
</tr>
<tr>
<td>Specific target organ toxicity - (repeated exposure)</td>
<td>2</td>
</tr>
<tr>
<td>Target Organs - Kidney.</td>
<td></td>
</tr>
</tbody>
</table>

**Label Elements**

**Signal Word**
Danger

**Hazard Statements**
May cause fire or explosion; strong oxidizer
Potassium bromate

Revision Date 04-Aug-2014

Toxic if swallowed
Suspected of causing cancer
May cause respiratory irritation
May cause drowsiness or dizziness
May cause damage to organs through prolonged or repeated exposure

Precautionary Statements
Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
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
IF exposed or concerned: Get medical attention/advice
Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Skin
IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes
Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Rinse mouth
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)
None identified
Other hazards
WARNING! This product contains a chemical known in the State of California to cause cancer.

3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium bromate</td>
<td>7758-01-2</td>
<td>&gt;95</td>
</tr>
</tbody>
</table>

4. First-aid measures

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
Inhalation: Move to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with a respiratory medical device. Obtain medical attention.

Ingestion: Do not induce vomiting. Call a physician or Poison Control Center immediately.

Most important symptoms/effects: No information available.

Notes to Physician: Treat symptomatically.

5. Fire-fighting measures

Suitable Extinguishing Media: Flooding quantities of water. Cool closed containers exposed to fire with water spray.

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

Sensitivity to Mechanical Impact: No information available

Sensitivity to Static Discharge: No information available

Specific Hazards Arising from the Chemical:
Oxidizer: Contact with combustible/organic material may cause fire. Containers may explode when heated. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products: Hydrogen halides

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.

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>3</td>
<td>OX</td>
</tr>
</tbody>
</table>

6. Accidental release measures

Personal Precautions: Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation.

Environmental Precautions: Avoid release to the environment.

Methods for Containment and Clean Up:
Keep combustibles (wood, paper, oil, etc) away from spilled material. Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

7. Handling and storage

Handling:
Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing. Avoid ingestion and inhalation. Keep away from clothing and other combustible materials.

Storage:
Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Do not store near combustible materials.

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.
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>5-9</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>350 °C / 662 °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>No information available</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>Upper</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Relative Density</td>
<td>3.270</td>
</tr>
<tr>
<td>Solubility</td>
<td>No information available</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No information available</td>
</tr>
<tr>
<td>Molecular Formula</td>
<td>Br K O3</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>167.01</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactive Hazard</td>
<td>Yes</td>
</tr>
<tr>
<td>Stability</td>
<td>Oxidizer: Contact with combustible/organic material may cause fire.</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Incompatible products. Excess heat. Combustible material.</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>Strong reducing agents, Organic materials, Powdered metals, Combustible material</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Hydrogen halides</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Hazardous polymerization does not occur.</td>
</tr>
<tr>
<td>Hazardous Reactions</td>
<td>None under normal processing.</td>
</tr>
</tbody>
</table>

11. Toxicological information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Toxicity</td>
<td>No acute toxicity information is available for this product</td>
</tr>
<tr>
<td>Product Information</td>
<td>No information available</td>
</tr>
<tr>
<td>Component Information</td>
<td>No information available</td>
</tr>
<tr>
<td>Toxicologically Synergistic Products</td>
<td>No information available</td>
</tr>
<tr>
<td>Delayed and immediate effects as well as chronic effects from short and long-term exposure</td>
<td></td>
</tr>
<tr>
<td>Irritation</td>
<td>May cause irritation to mucous membranes and respiratory tract</td>
</tr>
<tr>
<td>Sensitization</td>
<td>No information available</td>
</tr>
</tbody>
</table>
Potassium bromate

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>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium bromate</td>
<td>7758-01-2</td>
<td>Group 2B</td>
<td>Not listed</td>
<td>Not listed</td>
<td>X</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects

Not mutagenic in AMES Test

Reproductive Effects

No information available.

Developmental Effects

No information available.

Teratogenicity

No information available.

STOT - single exposure

Respiratory system Central nervous system (CNS)

STOT - repeated exposure

Kidney

Aspiration hazard

No information available

Symptoms / effects, both acute and delayed

No information available

Endocrine Disruptor Information

No information available

Other Adverse Effects

See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity

Do not empty into drains.

Persistence and Degradability

No information available

Bioaccumulation/ Accumulation

No information available.

Mobility

No information available.

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: UN1484
Proper Shipping Name: POTASSIUM BROMATE
Hazard Class: 5.1
Packing Group: II

TDG

UN-No: UN1484
Proper Shipping Name: POTASSIUM BROMATE
Hazard Class: 5.1
Packing Group: II

IATA

UN-No: UN1484
Proper Shipping Name: Potassium bromate
Hazard Class: 5.1
Packing Group: II

IMDG/IMO

UN-No: UN1484
Proper Shipping Name: Potassium bromate
Hazard Class: 5.1
Packing Group: II

15. Regulatory information
Potassium bromate

Revision Date 04-Aug-2014

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium bromate</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>231-829-8</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Legend:

X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium bromate</td>
<td>7758-01-2</td>
<td>&gt;95</td>
<td>0.1</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazardous Categorization

- Acute Health Hazard: Yes
- Chronic Health Hazard: Yes
- Fire Hazard: Yes
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: Yes

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 contains the following Proposition 65 chemicals:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>California Prop. 65</th>
<th>Prop 65 NSRL</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium bromate</td>
<td>7758-01-2</td>
<td>Carcinogen</td>
<td>1 µg/day</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

State Right-to-Know

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium bromate</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

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

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR

WHMIS Hazard Class
- C Oxidizing materials
- D1B Toxic materials
- D2A Very toxic materials

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

Creation Date
15-Nov-2010
Revision Date
04-Aug-2014
Print Date
04-Aug-2014
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 on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS