

According to Regulation (EC) No 1907/2006

Potassium Bromate

Version number: 1
Issued: 2023-08-22



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

1.1. Product identifier

Trade name

Potassium Bromate

CAS number

7758-01-2

EC number

231-829-8

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

Relevant identified uses

Research and development.

Not suitable for use in

Not suitable for human consumption or veterinary purposes.

1.3. Details of the supplier of the safety data sheet

Supplier

Molekula Group

Street address

Molekula Ltd, Lingfield Way, Darlington,
DL1 4XX Darlington
United Kingdom

Telephone

+44 (0) 3302 000 333

Email

info@molekula.com

Web site

www.molekula.com

Contact person

Kevin Banks

Email address

+44 (0) 7769276927

1.4. Emergency telephone number

Poison center/Additional emergency number

0344 892 0111 - National Poisons Information Service (Newcastle Centre)

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Classification

Carcinogenicity, hazard category 1B
Acute toxicity, oral, hazard category 3
Oxidising solids, hazard category 1

Hazard statements

H271, H301, H350

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms



Signal word

Danger

Hazard statements

H271 May cause fire or explosion; strong oxidiser.
H301 Toxic if swallowed.
H350 May cause cancer.

Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 Keep away from clothing and other combustible materials.
P264 Wash skin 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 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.
P501 Dispose of contents/container to .

2.3. Other hazards

No data available

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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical name	CAS No. EC No. REACH No. Index No.	Concentration	Classification	H-pharse M factor acute M factor chronic	Note
potassium bromate	7758-01-2 231-829-8 01-2119518844-34 035-003-00-6	100%	Ox. Sol. 1, Acute Tox. 3 - oral, Carc. 1B	H271, H301, H350 - -	-

Molecular weight

167

Substance additional information

For the complete text of H- / EUH-statements mentioned in this section, see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

IF exposed or concerned: Get medical advice/attention. First aiders/ medical personnel need to protect themselves. Show this Safety Data Sheet (SDS) to medical personnel.

Inhalation

Toxic if inhaled. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If breathing stops, provide artificial respiration. For breathing difficulties oxygen may be necessary.

Skin contact

In case of skin contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Immediately call a POISON CENTER/doctor.

Eye contact

Remove contact lenses if present. Rinse eyes with water. Continue to rinse for at least 15 minutes and seek medical attention.

Ingestion

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.

Information for doctors

No data available.

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

The severity of the symptoms described will vary dependant of the concentration and the length of exposure. See section 11 for more detailed information on health effects and symptoms.

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Inhalation

Single exposure may cause the following adverse effects: Difficulty in breathing.

Skin contact

Single exposure may cause the following adverse effects:

Eye contact

Single exposure may cause the following adverse effects: Severe irritation.

Ingestion

Single exposure may cause the following adverse effects: Severe abdominal pain. May cause severe internal injury.

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

Treat symptomatically. No special treatment requirement.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.

Unsuitable extinguishing media

No specific fire fighting procedure given.

5.2. Special hazards arising from the substance or mixture

Specific hazards: Not combustible.

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Hydrogen bromide gas

Potassium oxides

fire-promoting effect due to release of oxygen

Ambient fire may liberate hazardous vapours.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Evacuate area. Avoid breathing gas, fume, vapours or spray. Cool containers exposed to heat with water spray and remove container, if no risk is involved.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid inhalation of vapours and spray mist and contact with skin and eyes. Provide adequate ventilation. For personal protection, see section 8.

6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

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6.3. Methods and material for containment and cleaning up

Collect spillage with shovel, broom or the like and reuse, if possible. Dispose of large amounts of spillage/waste according to agreement with local authorities.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Preventive handling precautions

Work under hood Do not inhale substance/mixture Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

General hygiene

Immediately change contaminated clothes. Remove contaminated clothing and launder thoroughly before re-use. Wash skin thoroughly after handling. For precautions see section 2.2.

7.2. Conditions for safe storage, including any incompatibilities

Store at room temperature. Store in a dry place. Store in a closed container. Store separately or together with other oxidising substances only. Due to their oxidation potential these products can raise the burning rate of combustible substances substantially and/or ignite combustible substances on contact with them.

Storage class 5.1A: Strongly oxidizing hazardous materials.

7.3. Specific end use(s)

No specific usage precautions noted.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No data available

8.2. Exposure controls

Eye / face protection

Wear eye protection.

Hand protection

Wear protective gloves. Recommended gloves: Nitrile.

Glove Thickness: 0.11mm

Breakthrough time: 8 hours

Always inspect gloves before use. If signs of wear and tear are noticed then the gloves should be replaced.

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. Wash contaminated skin thoroughly after handling.

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Other skin protection

Wash skin thoroughly after handling.

Respiratory protection

Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided.

Environmental exposure controls

Avoid discharge into drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Solid

Colour

White / off-white.

Odour

Odourless.

Melting point / freezing point

409 - 413 °C

Boiling point or initial boiling point and boiling range

> 425 °C

Flammability

This product is not flammable.

Lower and upper explosion limit

No data available

Flash point

No data available

Auto-ignition temperature

No data available

Decomposition temperature

370 °C

pH

5 - 9

Kinematic viscosity

No data available

Solubility

No data available

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Partition coefficient n-octanol/water

No data available

Vapour pressure

No data available

Density and/or relative density

3.13 g/cm³

Relative vapour density

No data available

Particle characteristics

No data available

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal temperature conditions. Stable under the prescribed storage conditions.

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10.3. Possibility of hazardous reactions

Risk of explosion with:
ammonium compounds
arsenic
bromates
organic combustible substances
Phosphorus.
Powdered metal.
Sulphides
Sulphur.
Carbon.

Risk of ignition or formation of inflammable gases or vapours with:
nonmetallic halides
Reducing Agents.
non-metals
semi-metals

Exothermic reaction with:
Selenium

Generates dangerous gases or fumes in contact with:
Acids.

Violent reactions possible with:
sulphuric acid
Cyanides

10.4. Conditions to avoid

There are no known conditions that are likely to result in a hazardous situation.

10.5. Incompatible materials

There are no known reactivity hazards associated with this product.

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

Product / Substance name CAS / EC no.	Dose descriptor	Value / Dose	Exposure route	Test animals
potassium bromate 7758-01-2 / 231-829-8	LD50	157 mg/kg	Oral	Rat

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**Skin corrosion/irritation**

Product / Substance name CAS / EC no.	Result	Method / Guideline
potassium bromate 7758-01-2 / 231-829-8	non-corrosive	In vitro study

Serious eye damage/irritation

Product / Substance name CAS / EC no.	Result	Duration of exposure	Method / Guideline
potassium bromate 7758-01-2 / 231-829-8	slight irritation	240 minutes	In vitro study

Respiratory or skin sensitisation

Product / Substance name CAS / EC no.	Result	Species	Method / Guideline
potassium bromate 7758-01-2 / 231-829-8	Negative.	Mouse	Local Lymph Node Assay

Germ cell mutagenicity

Product / Substance name CAS / EC no.	Result	Metabolic activation / Exposure	Species	Method / Guideline
potassium bromate 7758-01-2 / 231-829-8	Positive results were obtained in some in vitro tests.	with and without metabolic activation	Salmonella typhimurium	Ames test

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2. Information on other hazards

No data available

SECTION 12: Ecological information**12.1. Toxicity****Acute algae toxicity**

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Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
potassium bromate 7758-01-2 / 231-829-8	NOEC	31.6 mg/l	72 hours	Desmodesmus subspicatus (green algae)
potassium bromate 7758-01-2 / 231-829-8	ErC50	>100 mg/l	72 hours	Desmodesmus subspicatus (green algae)

Acute crustacean toxicity

Product / Substance name CAS / EC no.	Measurement type	Value / Result	Duration of exposure	Species
potassium bromate 7758-01-2 / 231-829-8	EC50	>100 mg/l	48 hours	Daphnia magna

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal considerations

Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

14.1. UN number

1484

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14.2. UN proper shipping name

ADR / RID / ADN proper shipping name

POTASSIUM BROMATE

IMDG proper shipping name

POTASSIUM BROMATE

IATA proper shipping name

Potassium bromate

14.3. Transport hazard class(es)

Label

ADR/RID/ADN



5.1

IMDG



5.1

IATA



5.1

ADR / RID Class

5.1

ADR / RID Classification code

O2

ADR / RID hazard identification number

50

IMDG Class

5.1

IATA Class

5.1

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ADN Class

5.1

ADN Class Code

O2

14.4. Packing group

ADR / RID / ADN: II

IMDG: II

IATA: II

14.5. Environmental hazards

IMDG EmS

F-H, S-Q

14.6. Special precautions for user

Tunnel restriction code: E

Transport category: 2

14.7. Maritime transport in bulk according to IMO instruments

IBC Instruction: IBC08

SECTION 15: Regulatory information

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

EU regulations

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National regulations

REACH Potassium Bromate

Directive: 2012/18/EU: ACUTE TOXIC OXIDISING LIQUIDS AND SOLIDS

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Phrase meaning

Carc. 1B - Carcinogenicity, hazard category 1B

Acute Tox. 3 - oral - Acute toxicity, oral, hazard category 3

Ox. Sol. 1 - Oxidising solids, hazard category 1

H271 May cause fire or explosion; strong oxidiser.

H301 Toxic if swallowed.

H350 May cause cancer.