

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product identifier: Sodium Bromate

CAS: 7789-38-0

Relevant identified uses of the substance or mixture and uses advised against:

Relevant uses: Chemical industry. For professional users/industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

GB CLP Regulation: Classification of this product has been carried out in accordance with GB CLP Regulation.
Acute Tox. 4: Acute toxicity if swallowed, Category 4, H302
Eye Irrit. 2: Eye irritation, Category 2, H319
Ox. Sol. 2: Oxidising Solid, Category 2, H272
Skin Irrit. 2: Skin irritation, Category 2, H315
STOT SE 3: Respiratory tract toxicity, single exposure, Category 3, H335

Label elements:

GB CLP Regulation: Danger



Hazard statements: Acute Tox. 4: H302 - Harmful if swallowed.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Ox. Sol. 2: H272 - May intensify fire, oxidiser.
Skin Irrit. 2: H315 - Causes skin irritation.
STOT SE 3: H335 - May cause respiratory irritation.

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Precautionary statements:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220: Keep or store away from combustible materials.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/ protective clothing/ respiratory protection/ eye protection/ protective footwear.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P370+P378: In case of fire: Use large quantities of water to extinguish the fire.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P501: Dispose of the contents and/or its container in line with regulations on dangerous waste or packaging and waste packaging respectively.

Other hazards: Product fails to meet PBT/vPvB criteria.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance:

Chemical description: Chemical substance

Components:

In accordance with Annex II of The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020, the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 7789-38-0	Sodium bromate	75 - <100 %
	Acute Tox. 4: H302; Eye Irrit. 2: H319; Ox. Sol. 2: H272;	
	Skin Irrit. 2: H315; STOT SE 3: H335 - Danger	

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

Mixture: Non-applicable.

4. FIRST AID MEASURES

Description of first aid measures: The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation: Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

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- By skin contact:** Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.
- By eye contact:** Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS of the product.
- By ingestion/aspiration:** Request medical assistance immediately, showing the SDS of this product. Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. In the case of loss of consciousness do not administer anything orally unless supervised by a doctor. Rinse out the mouth and throat, as they may have been affected during ingestion. Keep the person affected at rest.

Most important symptoms and effects, both acute and delayed: Acute and delayed effects are indicated in sections 2 and 11.

Indication of any immediate medical attention and special treatment needed: Non-applicable.

5. FIRE-FIGHTING MEASURES

Extinguishing media:

Suitable extinguishing media: Use preferably water.

Unsuitable extinguishing media: Chemical extinguishers or foam.

Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit).

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel: MAY INTENSIFY FIRE, OXIDISER. Sweep up and shovel product or other means and place in container for reuse (preferred) or disposal. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

For emergency responders: Wear protective equipment. Keep unprotected persons away. See section 8.

Environmental precautions: This product is not classified as hazardous to the environment. Keep product away from drains, surface and underground water.

Methods and material for containment and cleaning up:

It is recommended: Sweep up and shovel product or collect by other means and place in container for reuse (preferred) or disposal.

Reference to other sections: See sections 8 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling:

General precautions for safe use: Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

Technical recommendations for the prevention of fires and explosions:

AVOID ANY IGNITION SOURCE, as well as combustible and/or inflammable material. Devices and systems must comply with the essential safety and health requirements and, with the minimum requirements for improving the health and safety protection of workers. Consult section 10 for conditions and materials that should be avoided.

Technical recommendations on general occupational hygiene:

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

Technical recommendations to prevent environmental risks:

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

Conditions for safe storage, including any incompatibilities:

Technical measures for storage: Minimum Temp.: 2 °C
Maximum Temp.: 35 °C
Maximum time: 24 Months

General conditions for storage: Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5.

Specific end use(s): Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:**Substances whose occupational exposure limits have to be monitored in the workplace:**

Nuisance dust:	Inhalable dust 10 mg/m ³ // Respirable dust 4 mg/m ³
DNEL (Workers):	Non-applicable
DNEL (General population):	Non-applicable
PNEC:	Non-applicable

Exposure controls:**Individual protection measures, such as personal protective equipment:**

As a preventative measure it is recommended to use basic Personal Protective Equipment, with the corresponding <<UKCA marking>>. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

Respiratory protection:**Pictogram**

Mandatory respiratory tract protection

**PPE**

Filter mask for gases, vapours and particles

Remarks

Replace when an increase in resistance to breathing is observed and/or a smell or taste of the contaminant is detected.

Specific protection for the hands:**Pictogram**

Mandatory hand protection

**PPE**

Protective gloves against minor risks

Remarks

Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420:2004+A1:2010 and EN ISO 374-1:2016+ A1:2018

Eye and face protection:**Pictogram**

Mandatory face protection

**PPE**

Panoramic glasses against splash/projections.

Remarks

Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

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Body protection:

Pictogram

Mandatory complete body protection



PPE

Antistatic and fireproof protective clothing

Remarks

Limited protection against flames.

Mandatory foot protection



Safety footwear with antistatic and heat resistant properties

Replace boots at any sign of deterioration.

Additional emergency measures:

Emergency measure

Emergency shower



Standards

ANSI Z358-1, ISO 3864-1:2011,
ISO 3864-4:2011

Emergency measure

Eyewash stations



Standards

DIN 12 899, ISO 3864-1:2011,
ISO 3864-4:2011

Environmental exposure controls: In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Solid
Appearance:	Crystals
Colour:	White
Odour:	Odourless
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	Non-applicable *
Vapour pressure at 20 °C:	Non-applicable *
Vapour pressure at 50 °C:	Non-applicable *
Evaporation rate at 20 °C:	Non-applicable *

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Product description:

Density at 20 °C:	3230 kg/m ³
Relative density at 20 °C:	3.23
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	364 kg/m ³
Solubility properties:	Soluble
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	381 °C

Flammability:

Flash Point:	Non-applicable
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	Non-applicable *
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

Explosive (Solid):

Lower explosive limit:	Non-applicable *
Upper explosive limit:	Non-applicable *

Particle characteristics:

Median equivalent diameter:	Non-applicable *
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Other information:

Information with regard to physical hazard classes:

Explosive properties:	Non-applicable *
Oxidising properties:	H272 May intensify fire, oxidiser.
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *
Aerosols-total percentage (by mass) of flammable components:	Non-applicable *

Other safety characteristics:

Surface tension at 20 °C:	Non-applicable *
Refraction index:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

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10. STABILITY AND REACTIVITY

Reactivity: No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

Chemical stability: Chemically stable under the indicated conditions of storage, handling and use.

Possibility of hazardous reactions: Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Not applicable	Avoid direct impact	Avoid alkalis or strong bases

Hazardous decomposition products: See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products.

Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Dangerous health implications: In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

- Acute toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for inhalation. For more information see section 3.
- Corrosivity/Irritability: Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

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D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
- IARC: Non-applicable
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

F- Specific target organ toxicity (STOT) - single exposure:

Causes irritation in respiratory passages, which is normally reversible and limited to the upper respiratory passages.

G- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

H- Aspiration hazard: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

Other information: Non-applicable

Product-specific toxicological information:

	Acute toxicity	Genus
LD50 oral	301 mg/kg	Rat

Specific toxicology information on the substances:

Identification	Acute toxicity	Genus
Sodium bromate	LD50 oral 301 mg/kg	Rat
CAS: 7789-38-0	LD50 dermal >5000 mg/kg	
	LC50 inhalation >5 mg/L	

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12. ECOLOGICAL INFORMATION

Toxicity: Not available.
Persistence and degradability: Not available.
Bioaccumulative potential: Not available.
Mobility in soil: Not available.
Results of PBT and vPvB assessment: Product fails to meet PBT/vPvB criteria.
Other adverse effects: Not described.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Code	Description	Waste class
	It is not possible to assign a specific code, as it depends on the intended use by the user	Dangerous

Type of waste: HP2 Oxidising, HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity, HP6 Acute Toxicity, HP4 Irritant — skin irritation and eye damage.

Waste management (disposal and evaluation): Consult the authorized waste service manager on the assessment and disposal operations in accordance The Waste Regulations 2011, 2011 No. 988. As under 15 01 of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of UK REACH the provisions related to waste management are stated:

UK legislation: The Waste Regulations 2011.

14. TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2021 and RID 2021:

UN number: UN1494
UN proper shipping name: SODIUM BROMATE
Transport hazard class(es): 5.1
Labels: 5.1



Packing group: II
Environmental hazards: No
Special precautions for user:
Tunnel restriction code: E
Physico-Chemical properties: See section 9
Limited quantities: 1 kg

Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

[cont...]

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Transport of dangerous goods by sea:

With regard to IMDG 40-20:

UN number: UN1494
UN proper shipping name: SODIUM BROMATE
Transport hazard class(es): 5.1
Labels: 5.1



Packing group: II
Marine pollutant: No
Special precautions for user:
Special regulations: Non-applicable
EmS Codes: F-H, S-Q
Physico-Chemical properties: See section 9
Limited quantities: 1 kg
Segregation group: SGG3

Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2022:

UN number: UN1494
UN proper shipping name: SODIUM BROMATE
Transport hazard class(es): 5.1
Labels: 5.1



Packing group: II
Environmental hazards: No
Special precautions for user:
Physico-Chemical properties: See section 9

Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable.

15. REGULATORY INFORMATION

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

Substances listed in UK candidate list of substances of very high concern (SVHCs): Non-applicable.

Substances listed in UK REACH Authorisation List (Annex 14): Non-applicable.

The Control of Major Accident Hazards Regulations 2015:

Section	Description	Lower-tier requirements	Upper-tier requirements
P8	OXIDISING LIQUIDS AND SOLIDS	50	200

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Note: The regulatory information given above only indicates the principal regulations specifically Applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Legislation related to safety data sheets: This safety data sheet has been designed in accordance with ANNEX II-The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.

Texts of the legislative phrases mentioned in section 2:

H272: May intensify fire, oxidiser.
H302: Harmful if swallowed.
H315: Causes skin irritation.
H335: May cause respiratory irritation.
H319: Causes serious eye irritation.

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

Legal disclaimer:

The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.