

article number: **1E24** Version: **2.0 en** Replaces version of: 2020-08-20 Version: (1)

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

1.1 Product identifier

Identification of the substance

volumetric standard solution, 1/12 mol KBrO₃/l 1E24

Article number

not relevant (mixture)

Registration number (REACH)

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

Relevant identified uses:

Uses advised against:

Laboratory chemical Laboratory and analytical use

Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

Bromide bromate solution 0,25 mol Br₂/I - 0,5 N

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone:+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data :Department Health, Safety and Environment sheet:

e-mail (competent person):

sicherheit@carlroth.de

1.4 Emergency telephone number

| Name | Street | Postal code/city | Telephone | Website |
|--|-----------|----------------------|--------------|---------|
| National Poisons Information Service City Hospital | Dudley Rd | B187QH Birmingham | 844 892 0111 | |

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

| Section | Hazard class | Cat- egory | Hazard class and category | Hazard statement |
|---------|-----------------|---------------|------------------------------|---------------------|
| 3.6 | Carcinogenicity | 1B | Carc. 1B | H350 |

For full text of abbreviations: see SECTION 16

date of compilation: 2020-08-20 Revision: 2022-02-18

according to Regulation (EC) No. 1907/2006 (REACH)



Bromide bromate solution 0,25 mol $Br_2/l - 0,5$ N volumetric standard solution, 1/12 mol KBrO₃/l

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2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Signal word Danger

Pictograms

GHS08



Hazard statements

H350 May cause cancer

Precautionary statements

Precautionary statements - prevention

| P201 | Obtain special instructions before use |
|------|---|
| P202 | Do not handle until all safety precautions have been read and understood |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection |

Precautionary statements - response

P308+P313 IF exposed or concerned: Get medical advice/attention

Precautionary statements - storage

P405 Store locked up

For professional users only

Hazardous ingredients for labelling:

Potassium bromate

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

Symbol(s)



| H350 | May cause cancer. |
|-----------------------------------|---|
| P202 P280 P308+P313 P405 | Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. IF exposed or concerned: Get medical advice/attention. Store locked up. |
| contains: | Potassium bromate |

2.3 Other hazards

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

according to Regulation (EC) No. 1907/2006 (REACH)



Bromide bromate solution 0,25 mol Br₂/l - 0,5 N volumetric standard solution, 1/12 mol KBrO₃/l

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SECTION 3: Composition/information on ingredients

3.1 **Substances**

not relevant (mixture)

3.2 **Mixtures**

Description of the mixture

| Name of sub- stance | Identifier | Wt% | Classification acc. to GHS | Pictograms | Notes |
|------------------------|---|-----|---|-------------|--------------------|
| Potassium bromide | CAS No 7758-02-3 EC No 231-830-3 | < 5 | Eye Irrit. 2 / H319 | (! > | |
| | REACH Reg. No 01-2119962195- 33-xxxx | | | | |
| Potassium bromate | CAS No 7758-01-2 EC No 231-829-8 Index No 035-003-00-6 REACH Reg. No 01-2119518844- 34-xxxx | < 5 | Ox. Sol. 1 / H271 Acute Tox. 3 / H301 Carc. 1B / H350 | | GHS-HC IARC: 2B |

Notes

GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/ 2008/EC, Annex VI) IARC group 2B: possibly carcinogenic to humans (International Agency for Research on Cancer)

IARC: 2B:

| Name of sub- stance | Identifier | Specific Conc. Limits | M-Factors | ATE | Exposure route |
|------------------------|--------------------------|-----------------------|-----------|-----------------------------------|-------------------|
| Potassium bromate | CAS No 7758-01-2 | - | - | 157 ^{mg} / _{kg} | oral |
| | EC No 231-829-8 | | | | |
| | Index No 035-003-00-6 | | | | |

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 **Description of first aid measures**



General notes

Take off contaminated clothing.



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Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

4.2 Most important symptoms and effects, both acute and delayed

Gastrointestinal complaints, Diarrhoea

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Non-combustible.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

6.2 Environmental precautions

Keep away from drains, surface and ground water.



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6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid exposure. Avoid: Aerosol or mist formation.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

| Relevant DNELs | Relevant DNELs of components of the mixture | | | | | | | | |
|------------------------|---|---------------|---------------------|--|-------------------|-------------------------------|--|--|--|
| Name of sub- stance | CAS No | End- point | Threshol d level | Protection goal, route of exposure | Used in | Exposure time | | | |
| Potassium bromide | 7758-02-3 | DNEL | 4,75 mg/ m³ | human, inhalat- ory | worker (industry) | chronic - systemic effects | | | |
| Potassium bromide | 7758-02-3 | DNEL | 95 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects | | | |
| Potassium bromide | 7758-02-3 | DNEL | 95 mg/kg bw/day | human, dermal | worker (industry) | acute - systemic effects | | | |



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| Relevant PNECs of components of the mixture | | | | | | | | |
|---|-----------|---------------|-----------------------------------|----------------------------|---------------------------------|---------------------------------|--|--|
| Name of sub- stance | CAS No | End- point | Threshol d level | Organism | Environmental compartment | Exposure time | | |
| Potassium bromide | 7758-02-3 | PNEC | 0,52 ^{mg} / _l | aquatic organ- isms | freshwater | short-term (single instance) | | |
| Potassium bromide | 7758-02-3 | PNEC | 41 ^{mg} / _l | aquatic organ- isms | marine water | short-term (single instance) | | |
| Potassium bromide | 7758-02-3 | PNEC | 100 ^{mg} / _l | aquatic organ- isms | sewage treatment plant (STP) | short-term (single instance) | | |
| Potassium bromide | 7758-02-3 | PNEC | 3,2 ^{mg} / _{kg} | terrestrial organ- isms | soil | short-term (single instance) | | |

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection.

Skin protection



hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a consider-able reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

• type of material

NBR (Nitrile rubber)

• material thickness

>0,11 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

• other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.



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Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. P2 (filters at least 94 % of airborne particles, colour code: White).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| Physical state | liquid |
|--|---|
| Colour | colourless |
| Odour | odourless |
| Melting point/freezing point | not determined |
| Boiling point or initial boiling point and boiling range | 100 °C at 1.013 hPa |
| Flammability | non-combustible |
| Lower and upper explosion limit | not determined |
| Flash point | not determined |
| Auto-ignition temperature | not determined |
| Decomposition temperature | not relevant |
| pH (value) | 7 (20 °C) |
| Kinematic viscosity | not determined |
| Solubility(ies) | |
| Water solubility | miscible in any proportion |
| Partition coefficient | |
| Partition coefficient n-octanol/water (log value): | not relevant (inorganic) |
| | |
| Vapour pressure | 23 hPa at 20 °C |
| Density and/or relative density | |
| Density | 1,038 ^g / _{cm³} at 20 °C |
| Relative vapour density | information on this property is not available |
| | |
| Particle characteristics | not relevant (liquid) |
| | |

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Bromide bromate solution 0,25 mol $Br_2/l - 0,5$ N volumetric standard solution, 1/12 mol KBrO₃/l

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Other safety parameters

Oxidising properties

9.2 Other information

Information with regard to physical hazard classes:

Other safety characteristics:

Miscibility

none

hazard classes acc. to GHS (physical hazards): not relevant

completely miscible with water

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

UV-radiation/sunlight.

10.5 Incompatible materials There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Shall not be classified as acutely toxic.

| Acute toxicity estimate (ATE) of components of the mixture | | | | | | |
|---|--|--|--|--|--|--|
| Name of substance CAS No Exposure route ATE | | | | | | |
| Potassium bromate 7758-01-2 oral 157 ^{mg} / _{kg} | | | | | | |



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| Acute toxicity of components of the mixture | | | | | | | | |
|---|-----------|-------------------|----------|--------------------------------------|---------|--|--|--|
| Name of substance | CAS No | Exposure route | Endpoint | Value | Species | | | |
| Potassium bromide | 7758-02-3 | oral | LD50 | >2.000 ^{mg} / _{kg} | rat | | | |
| Potassium bromide | 7758-02-3 | dermal | LD50 | >2.000 ^{mg} / _{kg} | rabbit | | | |
| Potassium bromate | 7758-01-2 | oral | LD50 | 157 ^{mg} / _{kg} | rat | | | |

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

May cause cancer.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

diarrhoea, gastrointestinal complaints

• If in eyes

Data are not available.

• If inhaled

Data are not available.

• If on skin

Data are not available.

• Other information

Other adverse effects: Liver and kidney damage

11.2 Endocrine disrupting properties

None of the ingredients are listed.

according to Regulation (EC) No. 1907/2006 (REACH)



Bromide bromate solution 0,25 mol Br_2/l - 0,5 N volumetric standard solution, 1/12 mol KBrO₃/l

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11.3 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

| Aquatic toxicity (acute) of components of the mixture | | | | | | | | |
|---|-----------|----------|-----------------------------------|-----------------------|------------------|--|--|--|
| Name of sub- stance | CAS No | Endpoint | Value | Species | Exposure time | | | |
| Potassium bromide | 7758-02-3 | LC50 | >440 ^{mg} / _l | fish | 96 h | | | |
| Potassium bromide | 7758-02-3 | EC50 | >100 ^{mg} / _l | aquatic invertebrates | 48 h | | | |
| Potassium bromide | 7758-02-3 | ErC50 | >440 ^{mg} / _l | algae | 72 h | | | |
| Potassium bromate | 7758-01-2 | EC50 | >100 ^{mg} / _l | aquatic invertebrates | 48 h | | | |
| Potassium bromate | 7758-01-2 | ErC50 | >100 ^{mg} / _l | algae | 72 h | | | |

| Aquatic toxicity (chronic) of components of the mixture | | | | | |
|---|-----------|----------|-----------------------------------|-----------------------|------------------|
| Name of sub- stance | CAS No | Endpoint | Value | Species | Exposure time |
| Potassium bromide | 7758-02-3 | EC50 | 20,8 ^{mg} / _l | aquatic invertebrates | 21 d |

Biodegradation

The methods for determining the biological degradability are not applicable to inorganic substances.

12.2 Process of degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

| Bioaccumulative potential of components of the mixture | | | | | |
|--|-----------|------|---------|----------|--|
| Name of substance | CAS No | BCF | Log KOW | BOD5/COD | |
| Potassium bromide | 7758-02-3 | 0,23 | | | |

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Endocrine disrupting properties None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

according to Regulation (EC) No. 1907/2006 (REACH)



Bromide bromate solution 0,25 mol $Br_2/l - 0,5$ N volumetric standard solution, 1/12 mol KBrO₃/l

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SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Waste catalogue ordinance (Germany).

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

SECTION 14: Transport information

- 14.1 UN number or ID number
- 14.2 UN proper shipping name
- 14.3 Transport hazard class(es)
- 14.4 Packing group
- 14.5 Environmental hazards
- 14.6 Special precautions for user

There is no additional information.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information

Not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG) - Additional information Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information Not subject to ICAO-IATA.

not subject to transport regulations

not assigned

none

not assigned

non-environmentally hazardous acc. to the dangerous goods regulations

according to Regulation (EC) No. 1907/2006 (REACH)



Bromide bromate solution 0,25 mol Br₂/l - 0,5 N volumetric standard solution, 1/12 mol KBrO₃/l

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SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

| Dangerous substances with restrictions (REACH, Annex XVII) | | | | |
|--|--|--------|-------------|----|
| Name of substance | Name acc. to inventory | CAS No | Restriction | Νο |
| Bromide bromate solution | this product meets the criteria for classification in accordance with Reg- ulation No 1272/2008/EC | | R3 | 3 |
| Potassium bromate | carcinogenic | | R28-30 | 28 |

Legend

R3

R28-30 1. Shall not be placed on the market, or used,

- as substances, - as constituents of other substances, or,

- in mixtures

for supply to the general public when the individual concentration in the substance or mixture is equal to or greater than:

- either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation (EC) No 1272/2008, or, - the relevant concentration specified in Directive 1999/45/EC where no specific concentration limit is set out in Part 3 of Annex VI to Regulation (EC) No 1272/2008.

Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of such substances and mixtures is marked visibly, legibly and indelibly as follows: 'Restricted to professional users'.

2. By way of derogation, paragraph 1 shall not apply to:
 (a) medicinal or veterinary products as defined by Directive 2001/82/EC and Directive 2001/83/EC;
 (b) cosmetic products as defined by Directive 76/768/EEC;

(c) the following fuels and oil products:

motor fuels which are covered by Directive 98/70/EC - mineral oil products intended for use as fuel in mobile or fixed combustion plants,

(d) artists' paints covered by Directive 1999/45/EC;
(e) the substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2. Where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date;
(f) devices covered by Regulation (EU) 2017/745.

1. Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,

tricks and jokes,
 games for one or more participants, or any article intended to be used as such, even with ornamental aspects,

 Articles not complying with paragraph 1 shall not be placed on the market.
 Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they

a can be used as fuel in decorative oil lamps for supply to the general public, and
present an aspiration hazard and are labelled with H304.
4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation

(CEN). 5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met

ments are met: (a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage"; (b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: 'Just a sip of grill lighter fluid may lead to life threatening lung damage'; (c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.';

List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list

None of the ingredients are listed.



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| Seveso | Seveso Directive | | | | | |
|-------------------------|---------------------------------------|---|-------|--|--|--|
| 2012/18/EU (Seveso III) | | | | | | |
| Νο | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the ap- plication of lower and upper-tier re- quirements | Notes | | | |
| | not assigned | | | | | |

Deco-Paint Directive

| VOC content | 0 % 0 ^g / _l |
|-------------|--------------------------------------|
|-------------|--------------------------------------|

Industrial Emissions Directive (IED)

| VOC content | 0 % |
|--|-------------------------------|
| VOC content (Water content was discounted) | 0 ^g / _l |

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

Water Framework Directive (WFD)

| List of pollutants (WFD) | | | | |
|--------------------------|--|--------|-----------|---------|
| Name of substance | Name acc. to inventory | CAS No | Listed in | Remarks |
| Potassium bromate | Substances and preparations, or the breakdown products of such, which have been proved to pos- sess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine- related functions in or via the aquatic environment | | a) | |
| Potassium bromate | Metals and their compounds | | a) | |
| Potassium bromide | Metals and their compounds | | a) | |

Legend

A) Indicative list of the main pollutants

Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

Regulation on drug precursors

none of the ingredients are listed

Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed



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Regulation concerning the export and import of hazardous chemicals (PIC)

none of the ingredients are listed

Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

| Country | Inventory | Status | |
|---------|------------|--------------------------------|--|
| AU | AICS | all ingredients are listed | |
| CA | DSL | all ingredients are listed | |
| CN | IECSC | all ingredients are listed | |
| EU | ECSI | all ingredients are listed | |
| EU | REACH Reg. | all ingredients are listed | |
| JP | CSCL-ENCS | all ingredients are listed | |
| JP | ISHA-ENCS | not all ingredients are listed | |
| KR | KECI | all ingredients are listed | |
| MX | INSQ | all ingredients are listed | |
| NZ | NZIoC | all ingredients are listed | |
| PH | PICCS | all ingredients are listed | |
| TR | CICR | not all ingredients are listed | |
| TW | TCSI | all ingredients are listed | |
| US | TSCA | all ingredients are listed | |

Legend

AICSAustralian Inventory of Chemical SubstancesCICRChemical Inventory and Control RegulationCSCL-ENCSList of Existing and New Chemical Substances (CSCL-ENCS)DSLDomestic Substances List (DSL)ECSIEC Substance Inventory (EINECS, ELINCS, NLP)IECSCInventory of Existing Chemical SubstancesISHA-ENCSInventory of Chemical SubstancesISHA-ENCSInventory of Existing and New Chemical Substances (ISHA-ENCS)KECIKorea Existing Chemicals InventoryNZIOCNew Zealand Inventory of Chemicals and Chemical Substances (PICCS)REACH Reg.REACH registered substancesTCSITaiwan Chemical Substance InventoryTSCAToxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

according to Regulation (EC) No. 1907/2006 (REACH)



Bromide bromate solution 0,25 mol $Br_{\rm 2}/l$ - 0,5 N volumetric standard solution, 1/12 mol KBrO_{\rm 3}/l

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SECTION 16: Other information

Indication of changes (revised safety data sheet)

Alignment to regulation: Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU

Restructuring: section 9, section 14

| Section | Former entry (text/value) | Actual entry (text/value) | Safety- relev- ant |
|---------|---|---|--------------------------|
| 2.1 | | Classification according to Regulation (EC) No 1272/2008 (CLP): change in the listing (table) | yes |
| 2.3 | Other hazards: There is no additional information. | Other hazards | yes |
| 2.3 | | Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB. | yes |

Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations |
|------------|---|
| Acute Tox. | Acute toxicity |
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de naviga- tion intérieures (European Agreement concerning the International Carriage of Dangerous Goods by In- land Waterways) |
| ADR | Accord relatif au transport international des marchandises dangereuses par route (Agreement concern- ing the International Carriage of Dangerous Goods by Road) |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BOD | Biochemical Oxygen Demand |
| Carc. | Carcinogenicity |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances) |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |
| COD | Chemical oxygen demand |
| DGR | Dangerous Goods Regulations (see IATA/DGR) |
| DNEL | Derived No-Effect Level |
| EC50 | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval |
| EC No | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identi- fier of substances commercially available within the EU (European Union) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| ErC50 | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control |
| Eye Dam. | Seriously damaging to the eye |

according to Regulation (EC) No. 1907/2006 (REACH)



Bromide bromate solution 0,25 mol $Br_2/I - 0,5 N$ volumetric standard solution, 1/12 mol KBrO₃/I

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| Abbr. | Descriptions of used abbreviations |
|------------|--|
| Eye Irrit. | Irritant to the eye |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Na- tions |
| IARC | International Agency for Research on Cancer |
| ΙΑΤΑ | International Air Transport Association |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Dangerous Goods Code |
| index No | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 |
| LC50 | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval |
| LD50 | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval |
| log KOW | n-Octanol/water |
| NLP | No-Longer Polymer |
| Ox. Sol. | Oxidising solid |
| РВТ | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| REACH | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| RID | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail) |
| SVHC | Substance of Very High Concern |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and very Bioaccumulative |

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).



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List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text | |
|------|---|--|
| H271 | May cause fire or explosion; strong oxidiser. | |
| H301 | Toxic if swallowed. | |
| H319 | Causes serious eye irritation. | |
| H350 | May cause cancer. | |

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.