



## 1199 Bromine

### 1. Identification of the substance/preparation and of the company or firm

#### 1.1 Identification of the substance or preparation

Name:

Bromine

**Synonym:**

**REACH Registration Number:** A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) N° 1907/2006, the annual tonnage does not require a registration, the registration is envisaged for a later registration deadline or it is a mixture.

#### 1.2 Use of the substance/preparation:

For laboratory utilisation, analysis, research and fine chemistry.

#### 1.3 Identification of the company or firm:

PANREAC QUIMICA S.L.U.

C/Garraf 2

Polígono Pla de la Bruguera

E-08211 Castellar del Vallès

(Barcelona) Spain

Tel. (+34) 937 489 400

e-mail: [product.safety@panreac.com](mailto:product.safety@panreac.com)

#### 1.4 Emergency telephone:

Single telephone number for emergency calls: 112 (EU)

Tel.: (+34) 937 489 499

### 2. Identification of dangers

Classification of the substance or the mixture.

**Classification Regulation (CE) n° 1272/2008.**

Acute Tox. 2

Skin Corr. 1A

Aquatic Acute 1

#### Hazard Pictograms



## Signal word

Danger

### Hazard statements

H330 Fatal if inhaled.

H314 Causes severe skin burns and eye damage.

H400 Very toxic to aquatic life.

### Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash...thoroughly after handling.

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

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P501 Dispose of contents/container according to Directive 94/62/CE or 2008/98/CE.

### Classification (67/548/CEE or 1999/45/CE).

<b>N</b>	Dangerous for the environment	R50
<b>C</b>	Corrosive	R35
<b>T+</b>	Very toxic	R26

For the full text of the R-phrases mentioned in this section, see section 16.

## 3. Component Composition/Information

Name: Bromine

Formula: Br<sub>2</sub> M.= 159,82 CAS [7726-95-6]

EC number (EINECS): 231-778-1

EC index number: 035-001-00-5

## 4. First aid

### 4.1 General indications:

Never provide drink or induce vomiting in the event of loss of consciousness.

### 4.2 Inhaling:

Take the person out into the fresh air. In the event of suffocation, proceed immediately to provide artificial respiration. Seek immediate medical assistance.

### 4.3 Contact with the skin:

Wash with plenty of water. Remove contaminated clothing. Neutralize with sodium bicarbonate. Seek immediate medical assistance.

### 4.4 Eyes:

Wash with plenty of water (for at least 15 minutes), keeping eyelids open. Seek immediate medical assistance.

### 4.5 Swallowing:

Drink large amounts of water. Avoid vomiting (there is a risk of perforation). Seek immediate medical assistance.

## **5. Fire-fighting means**

### **5.1 Suitable fire-extinguishing means:**

As appropriate to the environment.

### **5.2 Fire-fighting means which must NOT be used:**

No specific data.

### **5.3 Special risks:**

Incombustible. In the event of fire, toxic fumes may form.

### **5.4 Protective equipment:**

Suitable clothing and footwear.

## **6. Measures to be taken in the event of accidental spillage**

### **6.1 Individual precautions:**

No special indications.

### **6.2 Precautions for care of the environment:**

Do not allow it to enter the drainage system. Avoid pollution of the soil, water supplies and drains.

### **6.3 Methods for collection/cleaning:**

Neutralize with aqueous solution of sodium thiosulphate. Collect up with absorbent materials (Panreac General Absorbent, Kieselguhr, etc.) or, if none available, dry sand or earth, and deposit in waste containers for subsequent elimination in accordance with current legislation. Clean any remains with plenty of water.

## **7. Handling and storage**

### **7.1 Handling:**

No special indications.

### **7.2 Storage:**

Well sealed containers. In well ventilated premises. Away from light. Room temperature. Restricted access, only authorized to technicians.

## **8. Staff exposure/protection controls**

### **8.1 Technical protective measures:**

Ensure good ventilation and renewal of the air in the premises.

### **8.2 Exposure limit control:**

VLA-EC: 0,2 ppm - 1,4 mg/m<sup>3</sup>

VLA-ED: 0,1 ppm - 0,7 mg/m<sup>3</sup>

### **8.3 Respiratory protection:**

Use suitable breathing equipment. Filter B. Filter P.

### **8.4 Hand protection:**

Use suitable gloves

### **8.5 Eye protection:**

Use suitable goggles.

### **8.6 Individual hygiene measures:**

Remove contaminated clothing. Use complete protective equipment. Wash hands and face before breaks and when the job is done. Do not eat, drink or smoke in the workplace.

### **8.7 Environmental exposure controls:**

Fulfill the commitments under local environmental protection legislation.

## **9. Physical and chemical properties**

Appearance: liquid

Colour: Red-brown

Granulometry: N/A

Odour: Characteristic.

pH:

N/A

Melting point/freezing point: -7,25 °C

Initial boiling point and boiling range: 58,78 °C

Flash point:

N/A

Flammability (solid, gas):

N/A

Upper/lower flammability or explosive limits:

N/A

Vapour pressure: 233 hPa (20 °C)

Vapour density: N/A

Relative density: (20/20) 3,1

Solubility: 42 g/l in water 20 °C

Partition coefficient: n-octanol/water:

N/A

Auto-ignition temperature:

N/A

Decomposition temperature: N/A

Viscosity: N/A

## **10. Stability and reactivity**

### **10.1 Conditions which should be avoided:**

The product is chemically stable under standard ambient conditions (room temperature).

### **10.2 Matter which should be avoided:**

Alcohols. Aldehydes. Aluminium. Amides. Amines. Ammonia. Azides. Carbides. Ketones. Nitrogen compounds. Organic compounds. Organic compounds. Reducing agents. Ethers. Phenols. Fluorine. Phosphides. Halogen oxides Halogen halides. Unsaturated hydrocarbons. Hydrides. Lithium silicide. Metals. Alkaline metals. Metalloids. Non-metals. Alkaline oxides. Ozone. Metallic salts.

### **10.3 Hazardous decomposition products:**

No specific data.

### **10.4 Complementary information:**

No specific data.

## **11. Toxicological information**

### **11.1 Acute toxicity:**

LD L0 oral man : 14 mg/kg  
LD50 oral rat : 2.600 mg/kg  
LC L0 inh man : 1000 ppm  
LC50 inh mus : 750 ppm 9 min  
LC50 inh rat : 2700 mg/m<sup>3</sup>

### **11.2 Dangerous effects for health:**

If inhaled: Burns in the mucosae. Can cause pulmonary oedema pneumonia. Can cause breathing difficulties Has latent effects. Upon contact with the skin: burns necrosis Penetration of the product causes injuries which are hard to cure. If swallowed: Burns in the mucosae. Through contact with the eyes: burns Systemic effects: After a period of latency: If fumes inhaled: cyanosis cardiovascular failure respiratory paralysis

## **12. Environmental information**

### **12.1 Toxicity:**

12.1.1 - EC50 test (mg/l):

Fish > 10 mg/l

Classification:

Highly toxic

Crustaceans (Daphnia magna) EC100 10 mg/l

Classification: Extr. toxic

12.1.2. - Receptor medium:

Risk for the water environment

High

Risk for the land environment

Medium

12.1.3. - Observations:

### **12.2 Persistence and Degradability :**

12.2.1 - Test:

12.2.2. - Biotic degradation classification:

BOD5/COD

Biodegradability

12.2.3. - Abiotic degradation depending on pH:

12.2.4. - Observations:

### **12.3 Bioaccumulative potential:**

12.3.1. - Test:

12.3.2. - Bioaccumulation:

Risk

12.3.3. - Observations:

### **12.4 Mobility in soil :**

Data not available.

### **12.5 Assessment PBT and MPMB :**

Data not available.

### **12.6 Other possible effects on the environment:**

Do not allow it to enter soils or water channels.

## **13. Considerations regarding elimination**

### **13.1 Substance or preparation:**

In the European Union, there are no homogeneous standards established for elimination of chemical waste, which is waste of a special nature, and treatment and elimination of same is subject to the domestic legislation in each country.

In view of this, in each case, you should contact the competent authority or those companies legally authorized for elimination of waste.

2001/573/EC: Council Decision of 23 July 2001 amending Commission Decision 2000/532/EC as regards the list of wastes. Council Directive 91/156/EEC of 18 March 1991 amending Directive 75/442/EEC on waste.

.

### **13.2 Contaminated containers:**

Contaminated containers and packaging of dangerous substances or preparations must be treated in the same manner as the actual products contained in them.

European Parliament and Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste.

.

## **14. Information concerning transport**

Overland (ADR):

Technical name: BROMINE

UN 1744 Class: 8 6.1 PELIG.M.AMB Packaging group: I (C/D)

By sea (IMDG):

Technical name: BROMINE

UN 1744 Class: 8 6.1 PELIG.M.AMB Packaging group: I

By air (ICAI-IATA):

Technical name: Bromine

UN 1744 Class: 8 6.1 PELIG.M.AMB Packaging group: -

Packaging instructions: CAO P PAX P

## **15. Regulatory information**

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

## **16. Other information**

### **Other precautionary statements**

P284 Wear respiratory protection.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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.

P310 Immediately call a POISON CENTER or doctor/physician.

P320 Specific treatment is urgent (see on this label).

P321 Specific treatment (see on this label).

P338 Remove contact lenses, if present and easy to do. Continue rinsing.

P363 Wash contaminated clothing before reuse.

P391 Collect spillage.

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

P405 Store locked up.

## **Labelling (65/548/CEE or 1999/45/CE)**

R-phrase(s):     **R50** Very toxic to aquatic organisms.  
                      **R35** Causes severe burns.  
                      **R26** Very toxic by inhalation.

S-phrase(s):     **S61** Avoid release to the environment. Refer to special instructions/safety data sheets.  
                      **S45** In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
                      **S26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
                      **S7/9** Keep container tightly closed and in a well-ventilated place.

Review number and date: 4 15.09.2011

Date published: 15.09.2011

In respect of the previous review, changes have been made to the following sections: 15

The information included in this Safety Data Sheet is based on our most up-to-date knowledge, and is solely intended to inform regarding aspects of safety; the properties and characteristics indicated herein are not guaranteed.