

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**2211-20 Bromine Water**

Revision date: 07.02.2017

Product code: 221120

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

2211-20 Bromine Water

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

Water analysis

**1.3. Details of the supplier of the safety data sheet**

Company name: HACH LANGE GmbH  
Street: Willstätterstr. 11  
Place: D-40549 Düsseldorf  
Telephone: +49 (0)211 5288-383  
e-mail: SDS@hach.com  
Internet: www.de.hach.com  
Responsible Department: HACH LANGE Ltd.  
5, Pacific Way  
Salford Manchester M50 1DL - United Kingdom  
Tel. +44 (0) 161 872 1487 \* Fax +44 (0) 161 848 7324  
e-Mail: info-uk@hach.com

HACH LANGE Ltd.  
Unit 1, Chestnut Road Western Industrial Estate  
IRL-Dublin 12  
Tel. +353 (0)1 4602522  
e-Mail: info-ie@hach.com

**1.4. Emergency telephone number:**

Poison Control Center Mainz: Tel: +49 (0) 6131 19240 - 24 hour emergency service -

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

Harmful if inhaled.

Causes skin irritation.

Causes serious eye damage.

**2.2. Label elements****Regulation (EC) No. 1272/2008****Hazard components for labelling**

bromine

**Signal word:** Danger**Pictograms:**

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#### Hazard statements

- H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H332 Harmful if inhaled.

#### Precautionary statements

- P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P312 Call a POISON CENTER/doctor if you feel unwell.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P302+P352 IF ON SKIN: Wash with plenty of water.  
 P332+P313 If skin irritation occurs: Get medical advice/attention.

#### Additional advice on labelling

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008.

#### 2.3. Other hazards

no data available

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7732-18-5	Water			> 95,0 %
	231-791-2			
7726-95-6	bromine			1,0 - 5,0 %
	231-778-1	035-001-00-5		
	Acute Tox. 2, Skin Corr. 1A, Aquatic Acute 1; H330 H314 H400			

Full text of H and EUH statements: see section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

- Take off contaminated clothing and shoes immediately.  
 Show this safety data sheet to the doctor in attendance.

##### After inhalation

- Move to fresh air.  
 If symptoms persist, call a physician.

##### After contact with skin

- Wash off immediately with plenty of water for at least 15 minutes.  
 If skin irritation persists, call a physician.

##### After contact with eyes

- In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

##### After ingestion

- Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Obtain medical attention.

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

Irritation and corrosion, Nausea, Vomiting

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

Treat symptomatically.

### **SECTION 5: Firefighting measures**

#### **5.1. Extinguishing media**

##### **Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

##### **Unsuitable extinguishing media**

None known.

#### **5.2. Special hazards arising from the substance or mixture**

Fire may liberate hazardous vapours.

#### **5.3. Advice for firefighters**

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.  
In the event of fire, wear self-contained breathing apparatus.

#### **Additional information**

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

### **SECTION 6: Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Only qualified personnel equipped with suitable protective equipment may intervene. Immediately evacuate personnel to safe areas.  
Do not breathe vapours, mist or gas.

#### **6.2. Environmental precautions**

Do not flush into surface water or sanitary sewer system.

#### **6.3. Methods and material for containment and cleaning up**

Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local/national regulations (see section 13).  
Soak up with inert absorbent material.  
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

#### **6.4. Reference to other sections**

13. Disposal considerations

### **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

Use only in well-ventilated areas.  
Avoid contact with skin and eyes.  
Do not breathe vapours/dust.

##### **Advice on protection against fire and explosion**

None known.  
See also section 5

##### **Further information on handling**

Observe label precautions.

#### **7.2. Conditions for safe storage, including any incompatibilities**

##### **Requirements for storage rooms and vessels**

Keep container tightly closed in a dry and well-ventilated place.

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#### Hints on joint storage

Do not store near acids.

#### Further information on storage conditions

Keep locked up or in an area accessible only to qualified or authorised persons.

#### 7.3. Specific end use(s)

Laboratory chemicals

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7726-95-6	Bromine	0.1	0.66		TWA (8 h)	WEL
		0.2	1.3		STEL (15 min)	WEL

#### Additional advice on limit values

None known.

#### 8.2. Exposure controls

##### Appropriate engineering controls

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

##### Protective and hygiene measures

The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Wash hands before breaks and at the end of workday.

##### Eye/face protection

Safety glasses with side-shields

##### Hand protection

Use barrier skin cream.

Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.

In full contact: Gloves material: Viton, Layer thickness: 0.70 mm, Breakthrough time: &gt;480 min. In splash contact: Glove material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: &gt; 30 min

##### Skin protection

Avoid contact with skin, eyes and clothing.

##### Respiratory protection

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	orange
Odour:	odourless
pH-Value (at 20 °C):	2,6

#### Changes in the physical state

Melting point:	not applicable
Initial boiling point and boiling range:	100 °C

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Sublimation point: not applicable  
Softening point: not applicable  
Pour point: not applicable  
Flash point: not applicable

**Flammability**

Solid: not applicable  
Gas: not applicable

**Explosive properties**

not applicable

Lower explosion limits: not applicable  
Upper explosion limits: not applicable  
Ignition temperature: not applicable

**Auto-ignition temperature**

Solid: not applicable  
Gas: not applicable

Decomposition temperature: not applicable

**Oxidizing properties**

not applicable

Vapour pressure: no data available

Vapour pressure: no data available

Density (at 20 °C): 1,009 g/cm<sup>3</sup>

Bulk density: not applicable

Water solubility:  
(at 20 °C) soluble**Solubility in other solvents**

soluble

Partition coefficient: no data available

Viscosity / dynamic: no data available

Viscosity / kinematic: no data available

Flow time: no data available

Vapour density: no data available

Evaporation rate: no data available

Solvent separation test: no data available

Solvent content: no data available

**9.2. Other information**

Solid content: not applicable

**SECTION 10: Stability and reactivity****10.1. Reactivity**

None known.

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

Hazardous polymerisation does not occur.

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**10.4. Conditions to avoid**

Extremes of temperature and direct sunlight.

**10.5. Incompatible materials**

None known.

**10.6. Hazardous decomposition products**

To avoid thermal decomposition, do not overheat.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute toxicity**

No toxicology information is available.

**ATEmix calculated**

ATE (inhalation vapour) 16,17 mg/l; ATE (inhalation aerosol) 1,617 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7726-95-6	bromine				
	inhalation vapour	ATE 0,5 mg/l			
	inhalation aerosol	ATE 0,05 mg/l			

**Irritation and corrosivity**H318 - Causes serious eye damage.  
May cause skin irritation.**Sensitising effects**

No known effect.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Contains no ingredient listed as a carcinogen

**STOT-single exposure**

The substance or mixture is not classified as specific target organ toxicant, single exposure.

**STOT-repeated exposure**

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

**Aspiration hazard**

No aspiration toxicity classification

**Specific effects in experiment on an animal**

No toxicology information is available.

**Further information**

Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

**SECTION 12: Ecological information****12.1. Toxicity**No information on ecology is available.  
Do not flush into surface water or sanitary sewer system.**12.2. Persistence and degradability**

No data is available on the product itself.

**12.3. Bioaccumulative potential**

No data is available on the product itself.

**12.4. Mobility in soil**

no data available

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#### 12.5. Results of PBT and vPvB assessment

no data available

#### 12.6. Other adverse effects

No known effect.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Advice on disposal

In accordance with local and national regulations.

##### Waste disposal number of waste from residues/unused products

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

##### Waste disposal number of used product

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

##### Waste disposal number of contaminated packaging

160506 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals; hazardous waste

### SECTION 14: Transport information

#### Land transport (ADR/RID)

<u>14.1. UN number:</u>	UN 3264
<u>14.2. UN proper shipping name:</u>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
<u>14.3. Transport hazard class(es):</u>	8
<u>14.4. Packing group:</u>	III
Hazard label:	8



Classification code:	C1
Limited quantity:	LQ7
Hazard No:	80

#### Other applicable information (land transport)

: 274  
Transport Category:: 3  
: E

#### Inland waterways transport (ADN)

##### Other applicable information (inland waterways transport)

Not tested

#### Marine transport (IMDG)

<u>14.1. UN number:</u>	UN 3264
<u>14.2. UN proper shipping name:</u>	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (5% Bromine in water)
<u>14.3. Transport hazard class(es):</u>	8
<u>14.4. Packing group:</u>	III

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Hazard label: 8



Marine pollutant: •  
Limited quantity: 5 L  
EmS: F-A, S-B

#### Other applicable information (marine transport)

: 223, 274, 944

#### Air transport (ICAO-TI/IATA-DGR)

**14.1. UN number:** UN 3264  
**14.2. UN proper shipping name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (5% Bromine in water)  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III  
Hazard label: 8



Limited quantity Passenger: 1 L  
IATA-packing instructions - Passenger: 818  
IATA-max. quantity - Passenger: 5 L  
IATA-packing instructions - Cargo: 820  
IATA-max. quantity - Cargo: 60 L

#### Other applicable information (air transport)

Danger: Y818

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

#### 14.6. Special precautions for user

no data available

#### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not relevant

## SECTION 15: Regulatory information

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

#### National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

### 15.2. Chemical safety assessment

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

## SECTION 16: Other information

#### Changes

Revision: 7.02.2017  
Safety datasheet sections which have been updated: 2, 11  
Revision: 16.06.2015  
Safety datasheet sections which have been updated: 2, 11



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**Relevant H and EUH statements (number and full text)**

H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.

**Further Information**

The information is based on present level of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*