

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**1461142 Barium reference standard solution 1000 +/- 10 mg/L**

Revision date: 05.03.2018

Product code: 1461142

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

1461142 Barium reference standard solution 1000 +/- 10 mg/L

**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**

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

**2.2. Label elements****Additional advice on labelling**

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

**2.3. Other hazards**

None known.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures**

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#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7732-18-5	Water			> 99 %
	231-791-2			
10361-37-2	barium chloride			< 1,0 %
	233-788-1	056-004-00-8		
	Acute Tox. 3, Acute Tox. 4; H301 H332			

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.  
If skin irritation persists, call a physician.

###### After contact with eyes

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

###### After ingestion

Induce vomiting if person is conscious. Call a physician immediately. Show this safety data sheet to the doctor in attendance.

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

Acute intoxication by inhalation or ingestion of water soluble barium salts causes vomiting, diarrhoea, convulsive tremors and muscular paralysis.

##### 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.  
Water, Carbon dioxide (CO<sub>2</sub>), Alcohol-resistant foam Dry powder,

###### Unsuitable extinguishing media

None known.

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

Fire may liberate hazardous vapours. (Carbon monoxide, Carbon dioxide (CO<sub>2</sub>))

##### 5.3. Advice for firefighters

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.  
In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

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**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).

**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**

Store at room temperature in the original container. Protect from light, moisture and damage.

**Hints on joint storage**

None known.

**Further information on storage conditions**

Keep in a dry, cool and well-ventilated place.

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

Reagent for analysis

**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
-	Barium compounds, soluble (as Ba)	-	0.5		TWA (8 h)	WEL

**Additional advice on limit values**

None known.

**8.2. Exposure controls**

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#### Appropriate engineering controls

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

#### 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 after work.

#### 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: >480 min. In splash contact: Glove material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: > 30 min

#### Skin protection

Avoid contact with skin, eyes and clothing.

#### Respiratory protection

Ensure adequate ventilation.

Breathing apparatus only if aerosol or dust is formed.

Recommended Filter type: ABEK-filter

#### Environmental exposure controls

Do not flush into surface water or sanitary sewer system.

## SECTION 9: Physical and chemical properties

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

Physical state:	liquid
Colour:	colourless
Odour:	odourless
pH-Value (at 20 °C):	4,8 - 5,8

#### Changes in the physical state

Melting point:	not applicable
Initial boiling point and boiling range:	100 °C
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not applicable
:	no data available
Flash point:	not applicable

#### Flammability

Solid:	no data available
Gas:	no data available

#### Explosive properties

not applicable

Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	no data available

#### Auto-ignition temperature

Solid:	not applicable
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Gas:	not applicable
Decomposition temperature:	no data available
<b>Oxidizing properties</b>	
no data available	
Vapour pressure:	no data available
Vapour pressure:	no data available
Density (at 20 °C):	0,990 g/cm <sup>3</sup>
Bulk density:	no data available
Water solubility: (at 20 °C)	soluble
<b>Solubility in other solvents</b>	
no data available	
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:	no data available
no data available	

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

No dangerous reaction known under conditions of normal use.

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

None known.

**10.4. Conditions to avoid**

To avoid thermal decomposition, do not overheat.

**10.5. Incompatible materials**

None known.

**10.6. Hazardous decomposition products**

None known.

**Further information**

Stable under recommended storage conditions.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Toxicokinetics, metabolism and distribution**

No toxicology information is available.

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**Acute toxicity**

No data is available on the product itself.

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
10361-37-2	barium chloride					
	oral	LD50 118 mg/kg	Rat	IUCLID		
	inhalation vapour	ATE 11 mg/l				
	inhalation aerosol	ATE 1,5 mg/l				

**Irritation and corrosivity**

No known effect.

**Sensitising effects**

No known effect.

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

No known effect.

**STOT-single exposure**

Not Rated

**STOT-repeated exposure**

Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).

**Aspiration hazard**

No aspiration toxicity classification

**Specific effects in experiment on an animal**

No data is available on the product itself.

**Additional information on tests**

No known effect.

**Practical experience**
**Observations relevant to classification**

Acute intoxication by inhalation or ingestion of water soluble barium salts causes vomiting, diarrhoea, convulsive tremors and muscular paralysis.

**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 data is available on the product itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
10361-37-2	barium chloride					
	Acute fish toxicity	LC50 870 mg/l	96 h	Leuciscus idus	IUCLID	
	Acute crustacea toxicity	EC50 21,9 mg/l	48 h	Daphnia magna	IUCLID	

**12.2. Persistence and degradability**

The methods for determining biodegradability are not applicable to inorganic substances.

**12.3. Bioaccumulative potential**

no data available

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#### 12.4. Mobility in soil

no data available

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

no data available

#### 12.6. Other adverse effects

no data available

#### **Further information**

no data available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### **Disposal recommendations**

In accordance with local and national regulations.

##### **List of Wastes Code - 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

##### **List of Wastes Code - 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

##### **Contaminated packaging**

Dispose of as unused product.

### SECTION 14: Transport information

#### **Land transport (ADR/RID)**

##### **Other applicable information (land transport)**

Not subject to transport regulations.

#### **Inland waterways transport (ADN)**

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

Not tested

#### **Marine transport (IMDG)**

##### **Other applicable information (marine transport)**

Not subject to transport regulations.

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

##### **Other applicable information (air transport)**

Not subject to transport regulations.

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

#### 14.6. Special precautions for user

not applicable

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

not applicable

### SECTION 15: Regulatory information

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

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#### National regulatory information

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).  
Water hazard class (D): 1 - slightly hazardous to water

#### 15.2. Chemical safety assessment

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

#### SECTION 16: Other information

##### Changes

Revision: 05.03.2018

Safety datasheet sections which have been updated: 11

Revision: 27.12.2013

Safety datasheet sections which have been updated: 1-16

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

H301 Toxic if swallowed.

H332 Harmful if inhaled.

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