

**Barium hydroxide solution 0,05 mol/l - 0,1 N volumetric standard solution**

article number: **N054**  
Version: **1.0 en**

date of compilation: 05.08.2021

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

### 1.1 Product identifier

Identification of the substance

**Barium hydroxide solution** 0,05 mol/l - 0,1 N  
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Registration number (REACH)

not relevant (mixture)

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

Relevant identified uses:

Laboratory chemical  
Laboratory and analytical use

Uses advised against:

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

### 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](mailto:sicherheit@carlroth.de)

**Website:** [www.carlroth.de](http://www.carlroth.de)

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

**e-mail (competent person):**

[sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

### 1.4 Emergency telephone number

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

### 2.2 Label elements

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

not required

### 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.

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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
barium hydroxide	CAS No 17194-00-2  EC No 241-234-5	0,86	Acute Tox. 4 / H302 Acute Tox. 4 / H332 Skin Corr. 1B / H314 Eye Dam. 1 / H318	 	

Name of sub-stance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
barium hydroxide	CAS No 17194-00-2  EC No 241-234-5	-	-	308 mg/kg 1,5 mg/l/4h	oral inhalation: dust/ mist

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.

##### Following inhalation

Provide fresh air.

##### Following skin contact

Rinse skin with water/shower.

##### Following eye contact

Rinse cautiously with water for several minutes.

##### Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

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

Symptoms and effects are not known to date.

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

none

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## 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 (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

None.

### 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

No special measures are necessary.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water.

### 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

Wipe up with absorbent material (e.g. cloth, fleece).

#### 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.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

No special measures are necessary.

#### Advice on general occupational hygiene

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)

Data are not available.

### 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.

#### • type of material

NBR (Nitrile rubber)

#### • material thickness

>0,11 mm

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• **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.

**Respiratory protection**



Respiratory protection necessary at: Aerosol or mist formation.

**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	0 °C
Boiling point or initial boiling point and boiling range	100 °C
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)	not determined
Kinematic viscosity	not determined
<u>Solubility(ies)</u>	
Water solubility	miscible in any proportion
<u>Partition coefficient</u>	
Partition coefficient n-octanol/water (log value):	this information is not available
Vapour pressure	23 hPa
Density	1,01 g/cm <sup>3</sup>

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Relative vapour density	information on this property is not available
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Particle characteristics	not relevant (liquid)
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Other safety parameters

Oxidising properties	none
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**9.2 Other information**

Information with regard to physical hazard classes:	hazard classes acc. to GHS (physical hazards): not relevant
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Other safety characteristics:

Miscibility	completely miscible with water
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## 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**

**Violent reaction with:** strong oxidiser

**10.4 Conditions to avoid**

There are no specific conditions known which have to be avoided.

**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)**

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

**Acute toxicity**

Shall not be classified as acutely toxic.

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**Acute toxicity estimate (ATE) of components of the mixture**

Name of substance	CAS No	Exposure route	ATE
barium hydroxide	17194-00-2	oral	308 mg/kg
barium hydroxide	17194-00-2	inhalation: dust/mist	1,5 mg/l/4h

**Acute toxicity of components of the mixture**

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
barium hydroxide	17194-00-2	oral	LD50	308 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**

Shall not be classified as carcinogenic.

**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**

Data are not available.

**• If in eyes**

Data are not available.

**• If inhaled**

Data are not available.

**• If on skin**

Data are not available.

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• **Other information**

Health effects are not known.

**11.2 Endocrine disrupting properties**

None of the ingredients are listed.

**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.

**Biodegradation**

Data are not available.

**12.2 Process of degradability**

Data are not available.

**12.3 Bioaccumulative potential**

Data are not available.

**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.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**



Consult the appropriate local waste disposal expert about waste disposal.

**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.



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## SECTION 14: Transport information

- 14.1 UN number or ID number** not subject to transport regulations
- 14.2 UN proper shipping name** not assigned
- 14.3 Transport hazard class(es)** none
- 14.4 Packing group** not assigned
- 14.5 Environmental hazards** non-environmentally hazardous acc. to the dangerous goods regulations
- 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.

## SECTION 15: Regulatory information

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

**Relevant provisions of the European Union (EU)**

**Restrictions according to REACH, Annex XVII**

none of the ingredients are listed

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

None of the ingredients are listed. (Or Concentration of the substance in a mixture: <0.1 % Mass concentration)

**Seveso Directive**

2012/18/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
	not assigned		

**Deco-Paint Directive**

VOC content	0 %
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**Industrial Emissions Directive (IED)**

<b>VOC content</b>	0 %
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**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)**

<b>List of pollutants (WFD)</b>				
<b>Name of substance</b>	<b>Name acc. to inventory</b>	<b>CAS No</b>	<b>Listed in</b>	<b>Remarks</b>
barium hydroxide	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

**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

**National inventories**

<b>Country</b>	<b>Inventory</b>	<b>Status</b>
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
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

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Country	Inventory	Status
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed

### Legend

AICS	Australian Inventory of Chemical Substances
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

## 15.2 Chemical Safety Assessment

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

## SECTION 16: Other information

### 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 navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
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
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	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

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Abbr.	Descriptions of used abbreviations
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
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
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.

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

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

Code	Text
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H332	Harmful if inhaled.

### Disclaimer

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