

Safety Data Sheet

according to Regulation (EC) No 1907/2006

20847-66 Potassium Persulfate Powder Pillows

Revision date: 07.03.2019

Product code: 2084766

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

20847-66 Potassium Persulfate Powder Pillows

CAS No: 7727-21-1
Index No: 016-061-00-1
EC No: 231-781-8

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:

Oxidising solid: Ox. Sol. 3

Acute toxicity: Acute Tox. 4

Serious eye damage/eye irritation: Eye Irrit. 2

Specific target organ toxicity - single exposure: STOT SE 3

Skin corrosion/irritation: Skin Irrit. 2

Respiratory or skin sensitisation: Resp. Sens. 1

Respiratory or skin sensitisation: Skin Sens. 1

Hazard Statements:

May intensify fire; oxidiser.

Harmful if swallowed.

Causes serious eye irritation.

May cause respiratory irritation.

Causes skin irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

2.2. Label elements

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Regulation (EC) No. 1272/2008

Hazard components for labelling

dipotassium peroxodisulphate; potassium persulphate

Signal word: Danger

Pictograms:



Hazard statements

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H335	May cause respiratory irritation.

Precautionary statements

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: 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.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Additional advice on labelling

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

2.3. Other hazards

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

SECTION 3: Composition/information on ingredients

3.1. Substances

Hazardous components

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	GHS Classification	
7727-21-1	dipotassium peroxodisulphate; potassium persulphate	100 %
	231-781-8	
	016-061-00-1	
	Ox. Sol. 3, Acute Tox. 4, Eye Irrit. 2, STOT SE 3, Skin Irrit. 2, Resp. Sens. 1, Skin Sens. 1; H272 H302 H319 H335 H315 H334 H317	

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 all contaminated clothing immediately.

After inhalation

Move to fresh air.

After contact with skin

Wash off immediately with plenty of water. If symptoms persist, call a physician. Show this safety data sheet

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to the doctor in attendance.

After contact with eyes

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

After ingestion

Clean mouth with water and drink afterwards plenty of water. Call a physician immediately. Show this safety data sheet to the doctor in attendance. Do NOT induce vomiting.

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

Allergic reactions, sensitising effects, irritant effects

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

Dry powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water, Foam

5.2. Special hazards arising from the substance or mixture

Oxidising

Keep away from combustible material. Fire may liberate hazardous vapours. The following may develop in event of fire: sulfur oxides.

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

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. Avoid contact with skin, eyes and clothing.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Use mechanical handling equipment.

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, eyes and clothing.

Advice on protection against fire and explosion

Strong oxidizing agents

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.

Hints on joint storage

Keep away from combustible material.

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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 ³	fibres/ml	Category	Origin
7727-21-1	(OLD) Dipotassium peroxodisulphate (measured as [S208])	-	1		TWA (8 h)	OES

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 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

Respiratory protection

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:	solid
Colour:	white
Odour:	odourless

Test method

pH-Value (at 20 °C): 4,1 (5 % solution)

Changes in the physical state

Melting point:	100 °C	Decomposition temperature
Initial boiling point and boiling range:	not applicable	
Sublimation point:	not applicable	
Softening point:	not applicable	
Pour point:	not applicable	
Flash point:	not applicable	

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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: no data available

Gas: no data available

Decomposition temperature: approx. 100 °C

Oxidizing properties

Oxidising

Vapour pressure: not applicable

Vapour pressure: not applicable

Density (at 20 °C): 2,48 g/cm³Bulk density: approx. 1150 kg/m³

Water solubility: 52 g/L

(at 20 °C)

Solubility in other solvents

no data available

Partition coefficient: no data available

Viscosity / dynamic: not applicable

Viscosity / kinematic: not applicable

Flow time: not applicable

Vapour density: not applicable

Evaporation rate: not applicable

Solvent separation test: not applicable

Solvent content: not applicable

9.2. Other information

Solid content: no data available

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

Reactivity Hazard: Oxidizing agents

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Reacts with the following substances: Water, Metals, Heavy metals, Strong bases, Reducing agents, Acids

10.4. Conditions to avoid

No dangerous reaction known under conditions of normal use.

To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

Strong bases, Acids, Metals, Reducing agents, Combustible material

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10.6. Hazardous decomposition products

Sulphur oxides, nitrogen oxides (NO_x)

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No toxicology information is available.

Acute toxicity

No data is available on the product itself.

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
7727-21-1	dipotassium peroxodisulphate; potassium persulphate					
	oral	LD50 mg/kg	802	Rat	GESTIS	

Irritation and corrosivity

The product causes irritation of eyes, skin and mucous membranes.

Sensitising effects

May cause sensitisation by skin contact.

May cause sensitisation by inhalation.

Carcinogenic/mutagenic/toxic effects for reproduction

Contains no ingredient listed as a carcinogen

Contains no ingredient listed as a mutagen

Contains no ingredient listed as toxic to reproduction

STOT-single exposure

H335 - May cause respiratory irritation.

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

Acute fish toxicity = *Poecilia reticulata* LC50: 100 mg/l/96h

Toxicity to daphnia = *Daphnia magna* EC50: 357 mg/l/24h

Toxicity to bacteria = *Pseudomonas putida* EC50: 36 mg/l

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7727-21-1	dipotassium peroxodisulphate; potassium persulphate					
	Acute fish toxicity	LC50	100 mg/l	96 h	<i>Poecilia reticulata</i>	Hommel

12.2. Persistence and degradability

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

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12.3. Bioaccumulative potential

No data is available on the product itself.

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 known effect.

Further information

Do not flush into surface water or sanitary sewer system.

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

SECTION 14: Transport information

Land transport (ADR/RID)

<u>14.1. UN number:</u>	UN 1492
<u>14.2. UN proper shipping name:</u>	POTASSIUM PERSULPHATE
<u>14.3. Transport hazard class(es):</u>	5.1
<u>14.4. Packing group:</u>	III
Hazard label:	5.1



Classification code:	O2
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	3
Hazard No:	50
Tunnel restriction code:	E

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

<u>14.1. UN number:</u>	UN 1492
<u>14.2. UN proper shipping name:</u>	POTASSIUM PERSULPHATE
<u>14.3. Transport hazard class(es):</u>	5.1

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14.4. Packing group: III
Hazard label: 5.1



Marine pollutant: --
Special Provisions: -
Limited quantity: 5 kg
Excepted quantity: E1
EmS: F-A, S-Q

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1492
14.2. UN proper shipping name: POTASSIUM PERSULPHATE
14.3. Transport hazard class(es): 5.1
14.4. Packing group: III
Hazard label: 5.1



Special Provisions: A803
Limited quantity Passenger: 10 kg
Passenger LQ: Y546
Excepted quantity: E1
IATA-packing instructions - Passenger: 559
IATA-max. quantity - Passenger: 25 kg
IATA-packing instructions - Cargo: 563
IATA-max. quantity - Cargo: 100 kg

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

Other applicable information

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit, Hazard Class: 9, UN Number 3316, Package group II, EMS Code: F-A, S-P
These transport data apply to the entire pack

SECTION 15: Regulatory information

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

EU regulatory information

Additional information

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

National regulatory information

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Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

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

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Changes

Revision: 07.03.2019

Safety datasheet sections which have been updated: 14, 15

Revision: 18.01.2018

Safety datasheet sections which have been updated: 8

Revision: 15.01.2018

Safety datasheet sections which have been updated: 2, 9, 11

Revision: 6.03.2017

Safety datasheet sections which have been updated: 2

Revision: 12.12.2016

Safety datasheet sections which have been updated: 2, 4, 8, 11

Relevant H and EUH statements (number and full text)

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

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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Product code: 2106046

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

21060-46 PhosVer3 Phosphate Reagent

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:

Skin corrosion/irritation: Skin Corr. 1A

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

Causes severe skin burns and eye damage.

Causes serious eye damage.

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

Potassium disulfate

Signal word: Danger**Pictograms:****Hazard statements**

H314

Causes severe skin burns and eye damage.

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Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340	IF INHALED: Remove person to fresh air and keep 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.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P363	Wash contaminated clothing before reuse.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P310	Immediately call a POISON CENTER/doctor.

Additional advice on labelling

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

2.3. Other hazards

None known.

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]			
7790-62-7	Potassium disulfate			75-85 %
	232-216-8			
	Skin Corr. 1A, Eye Dam. 1; H314 H318			
50-81-7	Ascorbic acid			15-25 %
	200-066-2			
7631-95-0	Sodium molybdate			1-10 %
	231-551-7			
	Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2; H332 H302 H319			

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. Consult a physician after significant exposure.

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

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

After ingestion

Do NOT induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Call a physician immediately. Show this safety data sheet to the doctor in attendance.

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

Irritation and corrosion

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

The following may develop in event of fire: sulfur oxides., Carbon monoxide, Carbon dioxide (CO₂), Sodium oxides

5.3. Advice for firefighters

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

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. Do not breathe vapours/dust. Avoid contact with skin and eyes.

Advice on protection against fire and explosion

None known.

Further information on handling

Observe label precautions.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep at temperatures between 10 and 25 °C.

Hints on joint storage

None known.

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Further information on storage conditions

None known.

7.3. Specific end use(s)

Reagent for analysis

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.2. Exposure controls

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 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: >480 min. In splash contact: Glove

material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: > 30 min

Consult your supplier if the material is to be used for special applications such as in the food industry or for hygiene, medical or surgical end-use.

Skin protection

Avoid contact with skin, eyes and clothing.

Respiratory protection

Provide adequate ventilation.

Environmental exposure controls

Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	solid
Colour:	white
Odour:	odourless
pH-Value (at 20 °C):	1,5 (5 % solution)

Changes in the physical state

Melting point:	105 °C
Initial boiling point and boiling range:	no data available
Sublimation point:	no data available
Softening point:	no data available
Pour point:	no data available
:	no data available
Flash point:	not applicable

Flammability

Solid:	not applicable
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Gas: not applicable

Explosive properties

not applicable

Lower explosion limits: no data available

Upper explosion limits: no data available

Ignition temperature: no data available

Auto-ignition temperature

Solid: no data available

Gas: no data available

Decomposition temperature: no data available

Oxidizing properties

no data available

Vapour pressure: no data available

Vapour pressure: no data available

Density (at 20 °C): 2,22 g/cm³

Bulk density: no data available

Water solubility: soluble

(at 20 °C)

Solubility in other solvents

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**

None known.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Oxidizing agents

Bases

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10.6. Hazardous decomposition products

 Decomposition products: Carbon dioxide (CO₂), Carbon monoxide, Sulphur oxides

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

No data is available on the product itself.

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
50-81-7	Ascorbic acid					
	oral	LD50 mg/kg	11900	rat	RTECS	
7631-95-0	Sodium molybdate					
	oral	LD50 mg/kg	4233	rat		
	dermal	LD50 mg/kg	>2000	rat		
	inhalation vapour	ATE	11 mg/l			
	inhalation (4 h) aerosol	LC50	2,08 mg/l	rat		

Irritation and corrosivity

Causes skin and eye burns.

Sensitising effects

There is no data available for this product.

Carcinogenic/mutagenic/toxic effects for reproduction

Contains no ingredient listed as a carcinogen

STOT-repeated exposure

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

Specific effects in experiment on an animal

No data is available on the product itself.

Potassium disulfate LD50/oral/rat = 2340 mg/kg

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
7631-95-0	Sodium molybdate						
	Acute fish toxicity	LC50 mg/l	7600	96 h	Oncorhynchus mykiss (rainbow trout)		
	Acute crustacea toxicity	EC50	330 mg/l	48 h	Daphnia magna (Water flea)		

12.2. Persistence and degradability

no data available

Safety Data Sheet

according to Regulation (EC) No 1907/2006

21060-46 PhosVer3 Phosphate Reagent

Revision date: 20.11.2017

Product code: 2106046

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12.3. Bioaccumulative potential

no data available

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****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

Contaminated packaging

Dispose of as unused product.

The hazard and precautionary statements displayed on the label also apply to any residues left in the container.

SECTION 14: Transport information**Land transport (ADR/RID)****14.1. UN number:**

UN 1759

14.2. UN proper shipping name:

CORROSIVE SOLID, N.O.S. (Potassium disulfate)

14.3. Transport hazard class(es):

8

14.4. Packing group:

II

Hazard label:

8



Classification code:

C10

Special Provisions:

274

Limited quantity:

1 kg

Excepted quantity:

E2

Transport category:

2

Hazard No:

80

Tunnel restriction code:

E

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21060-46 PhosVer3 Phosphate Reagent

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Product code: 2106046

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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)

14.1. UN number: UN 1759
14.2. UN proper shipping name: CORROSIVE SOLID, N.O.S.
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8



Special Provisions: 274
Limited quantity: 1 kg
Excepted quantity: E2
EmS: F-A, S-B

Other applicable information (marine transport)

Not subject to transport regulations.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN 1759
14.2. UN proper shipping name: CORROSIVE SOLID, N.O.S.
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8



Special Provisions: A3 A803
Limited quantity Passenger: 5 kg
Passenger LQ: Y844
Excepted quantity: E2
IATA-packing instructions - Passenger: 859
IATA-max. quantity - Passenger: 15 kg
IATA-packing instructions - Cargo: 863
IATA-max. quantity - Cargo: 50 kg

Other applicable information (air transport)

Not subject to transport regulations.

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

21060-46 PhosVer3 Phosphate Reagent

Revision date: 20.11.2017

Product code: 2106046

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15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**National regulatory information**

Water contaminating class (D): 2 - clearly 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: 20.11.2017

Safety datasheet sections which have been updated: 2, 4, 10, 11, 14

Revision: 29.07.2014

Safety datasheet sections which have been updated: 2 (P-Codes)

Revision: 03.12.2013

Safety datasheet sections which have been updated: 9

Revision: 12.11.2012

Safety datasheet sections which have been updated: 2-15

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Skin Corr. 1A; H314	Calculation method
Eye Dam. 1; H318	Calculation method

Relevant H and EUH statements (number and full text)

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.

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.

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

27429-00 Phosphate Acid Reagent Vials

Revision date: 22.05.2017

Product code: 2742900

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

1.1. Product identifier

27429-00 Phosphate Acid Reagent Vials

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:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Hazard Statements:

Causes skin irritation.

Causes serious eye irritation.

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

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

sulphuric acid ... %

Signal word: Warning

Pictograms:



Hazard statements

H315

Causes skin irritation.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

27429-00 Phosphate Acid Reagent Vials

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Product code: 2742900

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H319 Causes serious eye irritation.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P264 Wash thoroughly after handling.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P337+P313 If eye irritation persists: 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

None known.

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			90-100 %
	231-791-2			
7664-93-9	sulphuric acid ... %			1-10 %
	231-639-5			
	Met. Corr. 1, Skin Corr. 1A; H290 H314			

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 all contaminated clothing immediately.
 Show this safety data sheet to the doctor in attendance.

After inhalation

Move to fresh air.

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

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

After ingestion

Do NOT induce vomiting. Drink 1 or 2 glasses of water.
 Never give anything by mouth to an unconscious person.
 Consult a physician.

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

Primary irritation

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

Treat symptomatically.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

27429-00 Phosphate Acid Reagent Vials

Revision date: 22.05.2017

Product code: 2742900

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

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

5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

Fire may liberate hazardous vapours.

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

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.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Neutralise with the following product(s): Cover with dry sodium carbonate. pH 6-9

Flush into sewer with plenty of water.

6.4. Reference to other sections

13. Disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes. Do not breathe vapours or spray mist. Use only in well-ventilated areas.

Further information on handling

Observe label precautions.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep at temperatures between 10 and 25 °C.

Hints on joint storage

Protect against Bases, Oxidizing agents, Metals

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 ³	fibres/ml	Category	Origin
7664-93-9	Sulphuric acid (mist)	-	0.05		TWA (8 h)	WEL

Safety Data Sheet

according to Regulation (EC) No 1907/2006

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Additional advice on limit values

None known.

8.2. Exposure controls

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

Wash hands before breaks and at the end of workday.

Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing

Eye/face protection

Safety glasses with side-shields conforming to EN166

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

The exact break through time can be obtained from the protective glove producer and this has to be observed.

Skin protection

Lab coat

Respiratory protection

Even in case of a full release, due to the small amount of substances present, it is not expected that exposure limits will be reached. However it is the duty of the user to verify this and follow given exposure limits at the workplace.

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):	< 1

Changes in the physical state

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

Flammability

Solid:	not applicable
Gas:	not applicable

Explosive properties

not applicable

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

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Product code: 2742900

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Auto-ignition temperature

Solid: no data available
Gas: no data available

Decomposition temperature: no data available

Oxidizing properties

no data available

Vapour pressure: no data available

Vapour pressure: no data available

Density (at 20 °C): 1,035 g/cm³

Bulk density: no data available

Water solubility:
(at 20 °C) no data available

Solubility in other solvents

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

H290 - May be corrosive to metals.

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

Corrosive to metals

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Reacts with the following substances: Bases, Oxidizing agents, Reducing agents

10.4. Conditions to avoid

Extremes of temperature and direct sunlight. Decomposes on heating.

10.5. Incompatible materials

Bases, Oxidizing agents

10.6. Hazardous decomposition products

Decomposition products: Sulphur oxides

Further information

Stable under recommended storage conditions.

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

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Product code: 2742900

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Acute toxicity

Based on available data, the classification criteria are not met.
No data is available on the product itself.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7664-93-9	sulphuric acid ... %				
	oral	LD50 mg/kg	2140	rat	

Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.
The product causes burns of eyes, skin and mucous membranes.

Sensitising effects

Based on available data, the classification criteria are not met.
No known effect.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.
Contains no ingredient listed as a carcinogen

STOT-single exposure

Based on available data, the classification criteria are not met.
The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure

Based on available data, the classification criteria are not met.
The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Based on available data, the classification criteria are not met.
No aspiration toxicity classification

Specific effects in experiment on an animal

no data available

Additional information on tests

no data available

Practical experience**Observations relevant to classification**

no data available

Other observations

no data 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 data is available on the product itself.

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

No information available.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

27429-00 Phosphate Acid Reagent Vials

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Product code: 2742900

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12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available.

Further information

No information available.

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
Tunnel restriction code:	E

Other applicable information (land transport)

Special Provisions: 274
Excepted Quantities: E1
Transport Category:: 3

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

Safety Data Sheet

according to Regulation (EC) No 1907/2006

27429-00 Phosphate Acid Reagent Vials

Revision date: 22.05.2017

Product code: 2742900

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14.1. UN number: UN 3264
14.2. UN proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (<10% Sulphuric acid solution)
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8



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

Other applicable information (marine transport)

Special Provisions: 223, 274, 944
Excepted Quantities: E1

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. (<10% Sulphuric acid solution)
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)

Excepted Quantities: E1
Passenger-LQ: Y818
Special Provisions: A3

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

EmS: F-A S-B

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.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

27429-00 Phosphate Acid Reagent Vials

Revision date: 22.05.2017

Product code: 2742900

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SECTION 16: Other information

Changes

Revision: 22.05.2017

Safety datasheet sections which have been updated: 2, 9, 11

Revision: 12.11.2012

Safety datasheet sections which have been updated: 2, 3, 8, 14, 15

Revision: 02.12.2013

Safety datasheet sections which have been updated: 9

Relevant H and EUH statements (number and full text)

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

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.

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

Safety Data Sheet

according to Regulation (EC) No 1907/2006

27430-42 Sodium Hydroxide, 1,54N

Revision date: 14.02.2018

Product code: 2743042

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

27430-42 Sodium Hydroxide, 1,54N

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:

Skin corrosion/irritation: Skin Corr. 1B

Serious eye damage/eye irritation: Eye Irrit. 2

Hazard Statements:

Causes severe skin burns and eye damage.

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

sodium hydroxide; caustic soda

Signal word: Danger**Pictograms:****Hazard statements**

H314 Causes severe skin burns and eye damage.

Precautionary statements

P264 Wash thoroughly after handling.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

27430-42 Sodium Hydroxide, 1,54N

Revision date: 14.02.2018

Product code: 2743042

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P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P310	Immediately call a POISON CENTER/doctor.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Additional advice on labelling

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

2.3. Other hazards

None known.

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			> 90 %
	231-791-2			
1310-73-2	sodium hydroxide; caustic soda			1-10 %
	215-185-5	011-002-00-6		
	Skin Corr. 1A; H314			

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 all contaminated clothing 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. Consult a physician.

After contact with eyes

Rinse immediately with plenty of water for at least 15 minutes. Call a physician immediately.

After ingestion

Do NOT induce vomiting. Drink 1 or 2 glasses of water.
Never give anything by mouth to an unconscious person.
Call a physician immediately.

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

No known effect.

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

Treat symptomatically.

Safety Data Sheet

according to Regulation (EC) No 1907/2006

27430-42 Sodium Hydroxide, 1,54N

Revision date: 14.02.2018

Product code: 2743042

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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

The product itself does not burn.

Fire may liberate hazardous vapours.

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

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.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste.

6.4. Reference to other sections

13. Disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes. Do not breathe vapours or spray mist. Use only in well-ventilated areas.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep at temperatures between 10 and 25 °C. Keep container tightly closed in a dry and well-ventilated place.

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)

Reagent for analysis

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
1310-73-2	Sodium hydroxide	-	2		STEL (15 min)	WEL

Safety Data Sheet

according to Regulation (EC) No 1907/2006

27430-42 Sodium Hydroxide, 1,54N

Revision date: 14.02.2018

Product code: 2743042

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Additional advice on limit values

None known.

8.2. Exposure controls**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

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: >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, especially in confined areas.

Breathing apparatus only if aerosol or dust is formed.

Recommended Filter type: ABEK-filter

Environmental exposure controls

Should not be released into the environment.

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):	> 13

Changes in the physical state

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

Auto-ignition temperature

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Solid:	no data available
Gas:	no data available
Decomposition temperature:	no data available
Oxidizing properties	
no data available	
Vapour pressure:	no data available
Vapour pressure:	no data available
Density (at 20 °C):	1,165 g/cm ³
Bulk density:	no data available
Water solubility:	soluble
Solubility in other solvents	
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

Toxic gases may be released if in contact with the following: Metals, Light metals

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Reacts with the following substances: Strong acids, Aluminium, Zinc. Halogenated hydrocarbons

10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

10.5. Incompatible materials

Metals, Light metals

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicokinetics, metabolism and distribution

No toxicology information is available.

Acute toxicity

No data is available on the product itself.

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Irritation and corrosivity

The product causes burns of eyes, skin and mucous membranes.

Sensitising effects

No known effect.

Carcinogenic/mutagenic/toxic effects for reproduction

Contains no ingredient listed as a carcinogen

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 data is available on the product itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
1310-73-2	sodium hydroxide; caustic soda					
	Acute fish toxicity	LC50 mg/l	45,4	96 h Onchorhynchus mykiss		

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

No information available.

Further information

Do not flush into surface water or sanitary sewer system.

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

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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

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number: UN1824
14.2. UN proper shipping name: SODIUM HYDROXIDE SOLUTION
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8



Classification code: C5
Limited quantity: 1 L
Transport category: 2
Hazard No: 80
Tunnel restriction code: E

Other applicable information (land transport)

Excepted Quantities: E2

Inland waterways transport (ADN)**Other applicable information (inland waterways transport)**

Not tested

Marine transport (IMDG)

14.1. UN number: UN1824
14.2. UN proper shipping name: SODIUM HYDROXIDE SOLUTION
14.3. Transport hazard class(es): 8
14.4. Packing group: II
Hazard label: 8



Marine pollutant: --
Special Provisions: -
Limited quantity: 1 L
EmS: F-A, S-B

Other applicable information (marine transport)

Excepted Quantities: E2

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: UN1824
14.2. UN proper shipping name: SODIUM HYDROXIDE SOLUTION

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14.3. Transport hazard class(es): 8**14.4. Packing group:** II

Hazard label: 8



Special Provisions: A3 A803

Limited quantity Passenger: 0.5 L

IATA-packing instructions - Passenger: 851

IATA-max. quantity - Passenger: 1 L

IATA-packing instructions - Cargo: 855

IATA-max. quantity - Cargo: 30 L

Other applicable information (air transport)

Excepted Quantities: E2

Passenger-LQ: Y840

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

EmS: F-A S-B

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

Not relevant

Other applicable information

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper

Shipping Name: Chemical Kit, Hazard Class: 9, UN Number 3316, Package group II, EMS Code: F-A, S-P

These transport data apply to the entire pack

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulatory information**

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Water contaminating class (D): -- not 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: 14.02.2018

Safety datasheet sections which have been updated: 4, 12, 13

Revision: 02.12.2013

Relevant H and EUH statements (number and full text)

H314 Causes severe skin burns and eye damage.

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.)