

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**27896-10 TOC MR/HR Indicator Ampules**

Revision date: 27.04.2018

Product code: 2789610

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

27896-10 TOC MR/HR Indicator Ampules

**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	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7732-18-5	Water			> 90 %
	231-791-2			
10102-17-7	Sodium thiosulfate			< 1 %
	231-867-5			

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.

**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.

**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.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. The product itself does not burn.

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

Fire may liberate hazardous vapours.

**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.

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#### **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 (e.g. sand, silica gel, acid binder, universal binder, sawdust).

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

13. Disposal considerations

## SECTION 7: Handling and storage

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

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

Use only in well-ventilated areas.

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

See also section 5

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

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

Keep in a dry, cool place.

#### **Hints on joint storage**

None known.

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

Reagent for analysis

## SECTION 8: Exposure controls/personal protection

### **8.1. Control parameters**

#### **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: &gt;480 min. In splash contact: Glove

material: nitrile rubber, Layer thickness 0,20 mm, Breakthrough time: &gt; 30 min

#### **Skin protection**

Remove and wash contaminated clothing before re-use.

#### **Respiratory protection**

Breathing apparatus only if aerosol or dust is formed. Recommended Filter type: ABEK-filter

#### **Environmental exposure controls**

Do not let product enter drains.

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**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	blue
Odour:	odourless
pH-Value (at 20 °C):	10

**Changes in the physical state**

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

**Auto-ignition temperature**

Solid:	not applicable
Gas:	not applicable

Decomposition temperature:	no data available
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**Oxidizing properties**

not applicable

Vapour pressure:	no data available
Vapour pressure:	no data available

Density:	1,0 g/cm <sup>3</sup>
Bulk density:	not applicable
Water solubility: (at 20 °C)	completely 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

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Solvent content: no data available

#### 9.2. Other information

Solid content: not applicable

no data available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

See also section 10.3

#### 10.2. Chemical stability

Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

#### 10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

#### 10.5. Incompatible materials

None known.

#### 10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

#### Further information

None known.

### 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	
10102-17-7	Sodium thiosulfate					
	oral	LD50 >5000 mg/kg	rat	RTECS		

##### Irritation and corrosivity

No known effect.

##### Sensitising effects

Contains no substance or substances classified as sensitising.

##### Carcinogenic/mutagenic/toxic effects for reproduction

Contains no ingredient listed as a carcinogen

##### STOT-single exposure

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

##### STOT-repeated exposure

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

##### Aspiration hazard

No aspiration toxicity classification

##### Specific effects in experiment on an animal

No data is available on the product itself.

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#### 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.

Do not flush into surface water or sanitary sewer system.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
10102-17-7	Sodium thiosulfate					
	Acute fish toxicity	LC50 mg/l	>10000	96 h		
	Acute crustacea toxicity	EC50 mg/l	1223	48 h		

#### 12.2. Persistence and degradability

No data is available on the product itself.

#### 12.3. Bioaccumulative potential

No data is available on the product itself.

#### 12.4. Mobility in soil

no data available

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

no data available

#### 12.6. Other adverse effects

No known effect.

#### 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

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#### 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)

##### 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

no data available

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

not applicable

#### Other applicable information

no data available

### 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): - - 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: 27.04.2018

Safety datasheet sections which have been updated: 8

Revision: 26.01.2015

Safety datasheet sections which have been updated: 2

#### 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.)*



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

27901-66 TOC Persulfate

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

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
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.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

##### 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

#### 3.1. Substances

##### Hazardous components

CAS No	Chemical name	Quantity
	EC No	Index No
	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
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.

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#### After inhalation

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

#### After contact with skin

Wash off immediately with plenty of water. If symptoms persist, call a physician. Show this safety data sheet 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 (CO<sub>2</sub>)

##### **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

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#### 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.

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

Laboratory chemicals

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
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.

Smoking, eating and drinking should be prohibited in the application area.

##### Eye/face protection

Safety glasses with side-shields

##### Hand protection

Use barrier skin cream.

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

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

##### Skin protection

Avoid contact with skin, eyes and clothing.

##### Respiratory protection

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: solid  
Colour: white  
Odour: odourless

##### Test method

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

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**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	

**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
Density (at 20 °C):	2,48 g/cm <sup>3</sup>
Bulk density:	approx. 1150 kg/m <sup>3</sup>
Water solubility: (at 20 °C)	52 g/L

**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.

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#### 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

#### 10.6. Hazardous decomposition products

Sulphur oxides, nitrogen oxides (NO<sub>x</sub>)

### 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. (dipotassium peroxodisulphate; potassium persulphate)  
May cause sensitisation by inhalation. (dipotassium peroxodisulphate; potassium persulphate)

##### Carcinogenic/mutagenic/toxic effects for reproduction

No known effect.

##### 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 reticulato* LC50: 100 mg/l/96h  
Toxicity to daphnia = *Daphnia magna* EC50: 357 mg/l/24h  
Toxicity to bacteria = *Pseudomonas putida* EC50: 36 mg/l

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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	Poecilia reticulata	Hommel

**12.2. Persistence and degradability**

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

**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

**Contaminated packaging**

Dispose of as unused product.

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

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



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

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Tunnel restriction code: E

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

Not tested

**Marine transport (IMDG)**

**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



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**



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 27901-66 TOC Persulfate

Revision date: 27.04.2018

Product code: 2790166

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#### 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

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: 17.04.2018

Safety datasheet sections which have been updated: 2, 4, 8, 11, 13

Revision: 6.03.2017

Safety datasheet sections which have been updated: 2

Revision: 13.12.2016

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.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**28171-00 Acid Digestion Vials for Mid Range TOC**

Revision date: 09.07.2018

Product code: 2817100

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

28171-00 Acid Digestion Vials for Mid Range TOC

**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:

Substance or mixture corrosive to metals: Met. Corr. 1

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

May be corrosive to metals.

Causes serious eye damage.

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

sulphuric acid 4 %

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

H290

May be corrosive to metals.

H318

Causes serious eye damage.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

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**Precautionary statements**

- P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a POISON CENTER/doctor.  
 P390 Absorb spillage to prevent material damage.

**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 ... %			1-5%
	231-639-5	016-020-00-8		
	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. 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.  
 Consult a physician.

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

Irritation and corrosion, Cough, Shortness of breath

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

Treat symptomatically.

**SECTION 5: Firefighting measures**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 28171-00 Acid Digestion Vials for Mid Range TOC

Revision date: 09.07.2018

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

##### **Additional advice on limit values**

None known.

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according to Regulation (EC) No 1907/2006

### 28171-00 Acid Digestion Vials for Mid Range TOC

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#### **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.

## **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):	< 0,5

#### **Changes in the physical state**

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

#### **Flammability**

Solid:	not applicable
Gas:	not applicable

#### **Explosive properties**

not applicable

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

#### **Auto-ignition temperature**

Solid:	not applicable
Gas:	not applicable

Decomposition temperature:	no data available
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#### **Oxidizing properties**

not applicable

Vapour pressure:	no data available
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### 28171-00 Acid Digestion Vials for Mid Range TOC

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Vapour pressure:	no data available
Density (at 20 °C):	1,047 g/cm <sup>3</sup>
Bulk density:	not applicable
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:	not applicable
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## 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: Alkali metals, Alkaline earth metals, Metals, Bases

**10.4. Conditions to avoid**

Extremes of temperature and direct sunlight.

**10.5. Incompatible materials**

Bases, Oxidizing agents

**10.6. Hazardous decomposition products**

Gives off hydrogen by reaction with metals.

**Further information**

Stable under recommended storage conditions.

## SECTION 11: Toxicological information

**11.1. Information on toxicological effects****Acute toxicity**

No data is available on the product itself.

**Sensitising effects**

No known effect.

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

Contains no ingredient listed as a carcinogen

**STOT-single exposure**

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

**STOT-repeated exposure**

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

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### 28171-00 Acid Digestion Vials for Mid Range TOC

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**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.

**12.2. Persistence and degradability**

No data is available on the product itself.

**12.3. Bioaccumulative potential**

No data is available on the product itself.

**12.4. Mobility in soil**

no data available

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

no data available

**12.6. Other adverse effects**

No known effect.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods****Advice on disposal**

In accordance with local and national regulations.

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

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

**Waste disposal number of used product**

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

**Waste disposal number of contaminated packaging**

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

## SECTION 14: Transport information

**Land transport (ADR/RID)**

- 14.1. UN number:** UN 3264  
**14.2. UN proper shipping name:** Corrosive liquid, acidic, inorganic, n.o.s.  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** III

**Other applicable information (land transport)**

-

**Inland waterways transport (ADN)**

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### 28171-00 Acid Digestion Vials for Mid Range TOC

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

Not tested

#### Marine transport (IMDG)

<b>14.1. UN number:</b>	UN 3264
<b>14.2. UN proper shipping name:</b>	Corrosive liquid, acidic, inorganic, n.o.s. (<10% Sulphuric acid solution)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Marine pollutant:	--
EmS:	F-A,S-B

#### Other applicable information (marine transport)

-

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

<b>14.1. UN number:</b>	UN 3264
<b>14.2. UN proper shipping name:</b>	Corrosive liquid, acidic, inorganic, n.o.s. (<10% Sulphuric acid solution)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III

#### Other applicable information (air transport)

-

#### 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

### SECTION 15: Regulatory information

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

##### National regulatory information

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

#### 15.2. Chemical safety assessment

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

### SECTION 16: Other information

#### Changes

Revision: 09.07.2018

Safety datasheet sections which have been updated: 2, 4, 6, 7, 8, 9, 10, 11, 12, 15, 16

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

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Eye Dam. 1; H318	Calculation method

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

H290 May be corrosive to metals.



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according to Regulation (EC) No 1907/2006

**28171-00 Acid Digestion Vials for Mid Range TOC**

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H314 Causes severe skin burns and eye damage.  
H318 Causes serious 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.)*

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**45233 Buffer Solution, pH 2,0**

Revision date: 12.03.2015

Product code: 45233

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

45233 Buffer Solution, pH 2,0

**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:

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

Causes serious eye damage.

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

sodium hydrogensulphate

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

H318 Causes serious eye damage.

**Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**45233 Buffer Solution, pH 2,0**

Revision date: 12.03.2015

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P310 present and easy to do. Continue rinsing.  
Immediately call a POISON CENTER/doctor.

**Additional advice on labelling**

Classification according to EU Directives 67/548/EEC or 1999/45/EC

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			65-75 %
	231-791-2			
7757-82-6	Sodium sulfate			10-20 %
	231-820-9			
7681-38-1	sodium hydrogensulphate			10-15 %
	231-665-7	016-046-00-X		
	Eye Dam. 1; H318			

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**

No hazards which require special first aid measures.

**After contact with skin**

Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes.

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.

**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**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 45233 Buffer Solution, pH 2,0

Revision date: 12.03.2015

Product code: 45233

Page 3 of 7

#### **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.

#### **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**

Should not be released into the environment.

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

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Should not be released into the environment.

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

Neutralise with the following product(s): Cover with dry sodium carbonate. pH 6-9  
Flush into sewer with plenty of water.

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

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

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

Do not get in eyes, on skin, or on clothing. General hygiene considerations

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

Wash thoroughly after handling.

#### **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.

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

Laboratory chemicals

### **SECTION 8: Exposure controls/personal protection**

#### **8.1. Control parameters**

##### **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.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**45233 Buffer Solution, pH 2,0**

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**Eye/face protection**

Safety glasses with side-shields

**Hand protection**

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Use barrier skin cream.

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

Gloves material: Viton, Layer thickness: 0.70 mm, Breakthrough time: &gt;480 min. In splash contact: Glove

material: nitrile rubber, Layer thickness 0.40 mm, Breakthrough time: &gt; 30 min

**Skin protection**

Avoid contact with skin, eyes and clothing.

**Respiratory protection**

Provide adequate ventilation.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	clear
Odour:	odourless
pH-Value (at 20 °C):	2,0

**Changes in the physical state**

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

**Auto-ignition temperature**

Solid:	not applicable
Gas:	not applicable

Decomposition temperature: no data available

**Oxidizing properties**

not applicable

Vapour pressure:	no data available
Density (at 20 °C):	1,198 g/cm <sup>3</sup>
Bulk density:	not applicable
Water solubility: (at 20 °C)	soluble

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 45233 Buffer Solution, pH 2,0

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Product code: 45233

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#### Solubility in other solvents

Acids

Partition coefficient:	no data available
Viscosity / dynamic:	no data available
Viscosity / kinematic:	no data available
Flow time:	no data available
Vapour density:	no data available
Evaporation rate:	no data available
Solvent separation test:	no data available
Solvent content:	no data available

#### 9.2. Other information

Solid content:	not applicable
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Risk of violent reaction.: calcium hypochlorite

#### 10.2. Chemical stability

Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

#### 10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

#### 10.5. Incompatible materials

None known.

#### 10.6. Hazardous decomposition products

Sodium oxides, Sulphur oxides

### 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
7757-82-6	Sodium sulfate				
	oral	LD50 mg/kg	5989	mouse	

#### Irritation and corrosivity

Causes burns.

#### Sensitising effects

No known effect.

#### Carcinogenic/mutagenic/toxic effects for reproduction

Contains no ingredient listed as a carcinogen

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according to Regulation (EC) No 1907/2006

### 45233 Buffer Solution, pH 2,0

Revision date: 12.03.2015

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#### 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
7757-82-6	Sodium sulfate					
	Acute fish toxicity	LC50	120 mg/l	96 h	Gambusia affinis	Merck
	Acute crustacea toxicity	EC50	2564 mg/l	48 h		

### 12.2. Persistence and degradability

No data is available on the product itself.

### 12.3. Bioaccumulative potential

No data is available on the product itself.

### 12.4. Mobility in soil

no data available

### 12.5. Results of PBT and vPvB assessment

no data available

### 12.6. Other adverse effects

No known effect.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Advice on disposal

In accordance with local and national regulations.

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

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

#### Waste disposal number of used product

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

#### Waste disposal number of contaminated packaging

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

## SECTION 14: Transport information

### Land transport (ADR/RID)

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 45233 Buffer Solution, pH 2,0

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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)

##### 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

no data available

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

Not relevant

### SECTION 15: Regulatory information

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

##### National regulatory information

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

#### 15.2. Chemical safety assessment

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

### SECTION 16: Other information

#### Changes

Revision: 12.03.2015

Safety datasheet sections which have been updated: 2-16

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

H318 Causes serious 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.

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