

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**2671745 HR Total Nitrogen Hydroxide Vials**

Revision date: 07.08.2019

Product code: 2671745

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

2671745 HR Total Nitrogen Hydroxide Vials

UFI: 7VEY-67WK-R30P-V81U

**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 hydroxide; caustic soda

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

H318 Causes serious eye damage.

**Precautionary statements**

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing

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P305+P351+P338 protection.  
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.

**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	
	GHS Classification			
7732-18-5	Water			> 98 %
	231-791-2			
1310-73-2	sodium hydroxide; caustic soda			<1 %
	215-185-5	011-002-00-6		
	Skin Corr. 1A; H314			
497-19-8	sodium carbonate			< 1,0 %
	207-838-8	011-005-00-2		
	Eye Irrit. 2; H319			

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

**Specific concentration limits and M-factors**

CAS No	EC No	Chemical name	Quantity
	Specific concentration limits and M-factors		
1310-73-2	215-185-5	sodium hydroxide; caustic soda	<1 % %
	Skin Corr. 1A; H314: >= 5 - 100 Skin Corr. 1B; H314: >= 2 - < 5 Skin Irrit. 2; H315: >= 0,5 - < 2 Eye Irrit. 2; H319: >= 0,5 - < 2		

**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.

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Consult a physician.

#### **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.

#### **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**

Dilute with plenty of water.

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

Sweep up or vacuum up spillage and collect in suitable container for disposal.

Small amounts: 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.

General industrial hygiene practice.

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

no data available

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

no data available

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

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

Keep containers tightly closed in a cool, well-ventilated place.

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

Do not store near acids.

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

Laboratory chemicals

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## 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
1310-73-2	Sodium hydroxide	-	2		STEL (15 min)	WEL

#### Additional advice on limit values

no data available

### 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

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Avoid contact with skin, eyes and clothing.

#### Respiratory protection

Precautions for safe handling (ventilation, dust generation)

## 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):	12,9

#### 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
:	not applicable
Flash point:	not applicable

#### Flammability

Solid:	not applicable
Gas:	not applicable

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**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:

no data available

**Oxidizing properties**

not applicable

Vapour pressure:

no data available

Vapour pressure:

no data available

Density (at 20 °C):

1 g/cm<sup>3</sup>

Bulk density:

not applicable

Water solubility:

soluble

**Solubility in other solvents**

soluble

Partition coefficient:

no data available

Viscosity / dynamic:

no data available

Viscosity / kinematic:

no data available

Flow time:

no data available

Vapour density:

no data available

Evaporation rate:

no data available

Solvent separation test:

no data available

Solvent content:

no data available

**9.2. Other information**

Solid content:

no data available

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

Reacts with the following substances: Strong acids

**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**

Strong acids

**10.6. Hazardous decomposition products**

None known.

**SECTION 11: Toxicological information**

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**11.1. Information on toxicological effects**
**Toxicokinetics, metabolism and distribution**

None known.

**Acute toxicity**

No data is available on the product itself.

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
497-19-8	sodium carbonate					
	oral	LD50 mg/kg	4090	Rat	IUCLID	

**Irritation and corrosivity**

H318 - Causes serious eye damage.

Skin corrosion: Not applicable. (Test result)

**Sensitising effects**

None known.

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

None known.

**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**

None known.

**Additional information on tests**

None known.

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

None known.

**Other observations**

None known.

**Further information**

None known.

**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		
497-19-8	sodium carbonate					
	Acute fish toxicity	LC50	300 mg/l	96 h Lepomis macrochirus		
	Acute crustacea toxicity	EC50	265 mg/l	48 h Daphnia magna	IUCLID	

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#### **12.2. Persistence and degradability**

None known.

#### **12.3. Bioaccumulative potential**

None known.

#### **12.4. Mobility in soil**

None known.

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

None known.

#### **12.6. Other adverse effects**

None known.

#### **Further information**

None known.

### **SECTION 13: Disposal considerations**

#### **13.1. Waste treatment methods**

##### **Disposal recommendations**

In accordance with local and national regulations.

##### **List of Wastes Code - residues/unused products**

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

##### **List of Wastes Code - used product**

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

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

##### **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

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#### 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

##### EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 3

##### National regulatory information

Water hazard class (D): - - non-hazardous to water

#### 15.2. Chemical safety assessment

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

### SECTION 16: Other information

#### Changes

Revision: 07.08.2019

Safety datasheet sections which have been updated: 1-16

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

Classification	Classification procedure
Eye Dam. 1; H318	On basis of test data

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

H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.

#### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance 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.)*



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

2671846 Total Nitrogen Persulfate Reagent PP

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

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Resp. Sens. 1

Respiratory or skin sensitisation: Skin Sens. 1

Specific target organ toxicity - single exposure: STOT SE 3

Hazard Statements:

May intensify fire; oxidiser.

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

**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.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311	If experiencing respiratory symptoms: 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.
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	
	GHS Classification	
7727-21-1	dipotassium peroxodisulphate; potassium persulphate	100 %
	231-781-8	016-061-00-1
	Ox. Sol. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3; H272 H302 H315 H319 H334 H317 H335	

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

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

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#### General information

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

#### After inhalation

Move to fresh air. Give oxygen or artificial respiration if needed. Consult a physician.

#### After contact with skin

Wash off immediately with plenty of water. If symptoms persist, 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. Clean mouth with water and drink afterwards plenty of water. 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**

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

Water

##### Unsuitable extinguishing media

None known.

#### **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 Reacts with the following substances: Reducing agents

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Keep away from combustible materials.

#### Further information on handling

This information is not available.

#### 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.

##### Further information on storage conditions

This information is not available.

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

Water 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
7727-21-1	(OLD) Dipotassium peroxodisulphate (measured as [S208])	-	1		TWA (8 h)	OES

##### Additional advice on limit values

no data available

#### 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

##### Skin protection

Protective laboratory coats, gowns, or uniforms are recommended to prevent contamination of personal clothing.

##### Respiratory protection

Breathing apparatus only if aerosol or dust is formed.

Recommended Filter type: ABEK-filter

##### Environmental exposure controls

no data available

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## 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

#### Flammability

Solid: no data available  
 Gas: no data available

#### Explosive properties

not applicable

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

#### Auto-ignition temperature

Solid: no data available  
 Gas: not applicable

Decomposition temperature: approx. 100 °C

#### Oxidizing properties

Oxidising

Vapour pressure: no data available  
 Vapour pressure: no data available  
 Density (at 20 °C): 2,48 g/cm<sup>3</sup>  
 Bulk density: approx. 1150 kg/m<sup>3</sup>  
 Water solubility: 52 g/L  
 (at 20 °C)

#### Solubility in other solvents

no data available

Partition coefficient: not applicable  
 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

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**9.2. Other information**

Solid content: not applicable

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

no data available

**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**

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

**10.6. Hazardous decomposition products**

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

**Further information**

no data available

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

no data available

**Acute toxicity**

Harmful if swallowed.

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**

Causes skin irritation.

Causes serious eye irritation.

**Sensitising effects**

May cause allergy or asthma symptoms or breathing difficulties if inhaled. (dipotassium peroxodisulphate; potassium persulphate)

May cause an allergic skin reaction. (dipotassium peroxodisulphate; potassium persulphate)

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

Based on available data, the classification criteria are not met.

**STOT-single exposure**

May cause respiratory irritation. (dipotassium peroxodisulphate; potassium persulphate)

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

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#### 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

no data available

## 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

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.

### 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

Do not flush into surface water or sanitary sewer system.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations

In accordance with local and national regulations.

#### List of Wastes Code - residues/unused products

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

#### List of Wastes Code - used product

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

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**2671846 Total Nitrogen Persulfate Reagent PP**

Revision date: 29.07.2020

Product code: 2671846

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

**14.1. UN number:** UN1492  
**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



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

**Other applicable information (land transport)**

Excepted Quantities: E1

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

Not tested

**Marine transport (IMDG)**

**14.1. UN number:** UN1492  
**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  
EmS: F-A, S-Q

**Other applicable information (marine transport)**

Excepted Quantities: E1

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

**14.1. UN number:** UN1492  
**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



Limited quantity Passenger: 10 kg  
IATA-packing instructions - Passenger: 559



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### 2671846 Total Nitrogen Persulfate Reagent PP

Revision date: 29.07.2020

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IATA-max. quantity - Passenger: 25 kg  
IATA-packing instructions - Cargo: 563  
IATA-max. quantity - Cargo: 100 kg

#### Other applicable information (air transport)

Excepted Quantities: E1  
Passenger-LQ: Y546

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

#### 14.6. Special precautions for user

Use personal protective equipment.

#### 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

Employment restrictions: Observe restrictions to employment for juveniles 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 hazard class (D): 1 - slightly hazardous to water

#### 15.2. Chemical safety assessment

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

### SECTION 16: Other information

#### Changes

Revision: 29.07.2020

Safety datasheet sections which have been updated: 15

Revision: 6.03.2016

Safety datasheet sections which have been updated: 2

Revision: 13.12.2016

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

This data sheet contains changes from the previous version in section(s): 4-15

#### 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.

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according to Regulation (EC) No 1907/2006

**2671846 Total Nitrogen Persulfate Reagent PP**

Revision date: 29.07.2020

Product code: 2671846

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**Further Information**

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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**2671946 TN (Total Nitrogen) Reagent A**

Revision date: 20.04.2020

Product code: 2671946

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Creation date: 06.04.2005

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

2671946 TN (Total Nitrogen) Reagent A

CAS No: 7681-57-4  
Index No: 016-063-00-2  
EC No: 231-673-0

**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:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Dam. 1

Respiratory or skin sensitisation: Resp. Sens. 1

Specific target organ toxicity - single exposure: STOT SE 3

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Harmful if swallowed.

Causes skin irritation.

Causes serious eye damage.

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

May cause respiratory irritation.

Harmful to aquatic life with long lasting effects.

**2.2. Label elements****Regulation (EC) No. 1272/2008**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 2671946 TN (Total Nitrogen) Reagent A

Revision date: 20.04.2020

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Creation date: 06.04.2005

#### Hazard components for labelling

sodium metabisulphite

**Signal word:** Danger

#### Pictograms:



#### Hazard statements

- H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.  
 H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
 H335 May cause respiratory irritation.

#### Precautionary statements

- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P270 Do not eat, drink or smoke when using this product.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.  
 P332+P313 If skin irritation occurs: Get medical advice/attention.  
 P310 Immediately call a POISON CENTER/doctor.  
 P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 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

no data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7681-57-4	sodium metabisulphite			100 %
	231-673-0	016-063-00-2	01-2119531326-45-XXXX	
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Resp. Sens. 1, STOT SE 3, Aquatic Chronic 3; H302 H315 H318 H334 H335 H412 EUH031			

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.

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Show this safety data sheet to the doctor in attendance.

#### **After inhalation**

Move to fresh air. Oxygen, if needed. Consult a physician.

#### **After contact with skin**

Wash off immediately with plenty of water. Take off all contaminated clothing immediately. 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**

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. 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

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

Treat symptomatically.

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

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

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

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

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

None known.

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

Fire may liberate hazardous vapours. The following may develop in event of fire: sulfur oxides., Sodium 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. Only qualified personnel equipped with suitable protective equipment may intervene. Immediately evacuate personnel to safe areas.

Do not breathe vapours, mist or gas.

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

Do not flush into surface water or sanitary sewer system.

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

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

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

13. Disposal considerations

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

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

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

Use only in well-ventilated areas. Avoid inhalation, ingestion and contact with skin and eyes.

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**Advice on protection against fire and explosion**

Fire may liberate hazardous vapours. The following may develop in event of fire: sulfur oxides., Sodium oxides

**Further information on handling**

Reacts with the following substances: Strong acids, Oxidizing agents

**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**

Do not store near acids. Store in original container.

**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
7681-57-4	Disodium disulphite	-	5		TWA (8 h)	WEL

**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**

Wash hands before breaks and after work.

General industrial hygiene practice.

Ensure that eye flushing systems and safety showers are located close to the working place.

**Eye/face protection**

Safety glasses with side-shields

**Hand protection**

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

In case of full contact:

Glove material : Nitrile rubber

Layer thickness: 0,11 mm

Break through time: &gt;480 min

In case of contact through splashing:

Glove material : Nitrile rubber

Layer thickness: 0,11 mm

Break through time: &gt;480 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves.

Use barrier skin cream.

**Skin protection**

Avoid contact with skin, eyes and clothing.

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**Respiratory protection**

Breathing apparatus only if aerosol or dust is formed.

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

Physical state: powder  
Colour: white  
Odour: sulphurous

**Test method**

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

**Changes in the physical state**

Melting point: no data available  
Initial boiling point and boiling range: not applicable  
Sublimation point: no data available  
Softening point: no data available  
Pour point: not applicable  
Decomposition temperature: 150 °C  
Flash point: not applicable  
Sustaining combustion: Not sustaining combustion

**Flammability**

Solid: no data available  
Gas: no data available

ISO 10156

Lower explosion limits: not applicable  
Upper explosion limits: not applicable  
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): 1,48 g/cm<sup>3</sup>  
Bulk density: no data available  
Water solubility: 600 g/L  
(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

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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

See also section 10.3

#### 10.2. Chemical stability

Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

Reacts with the following substances:  
 Acids, Oxidizing agents, Sulphides

#### 10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

#### 10.5. Incompatible materials

None known.

#### 10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapours. Sulphur oxides

#### Further information

Stable under recommended storage conditions.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity

Harmful if swallowed.  
 Harmful in contact with skin.  
 Harmful if inhaled.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7681-57-4	sodium metabisulphite				
	oral	LD50 mg/kg	1131	Rat	
	dermal	LD50 mg/kg	>2000	Rat	RTECS
	inhalation (4 h) aerosol	LC50	>5,5 mg/l	Rat	RTECS

##### Irritation and corrosivity

Causes skin irritation.  
 Causes serious eye damage.

##### Sensitising effects

May cause allergy or asthma symptoms or breathing difficulties if inhaled. (sodium metabisulphite)

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



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Based on available data, the classification criteria are not met.  
Did not show carcinogenic or mutagenic effects in animal experiments.

#### STOT-single exposure

May cause respiratory irritation. (sodium metabisulphite)

#### STOT-repeated exposure

Based on available data, the classification criteria are not met.

#### Aspiration hazard

Based on available data, the classification criteria are not met.

#### Specific effects in experiment on an animal

Causes severe irritation to eyes in animal experiments. (rabbit)

#### 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 = *Onchorhynchus mykiss* LC50= 150-220 mg/l/96h

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7681-57-4	sodium metabisulphite					
	Acute fish toxicity	LC50	32 mg/l	96 h	Lepomis macrochirus (Bluegill sunfish)	OECD
	Acute crustacea toxicity	EC50	89 mg/l	48 h	Daphnia magna (Water flea)	OECD

#### 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

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

#### 12.6. Other adverse effects

Discharge into the environment must be avoided.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Disposal recommendations

In accordance with local and national regulations.

##### List of Wastes Code - residues/unused products

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

##### List of Wastes Code - used product

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

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### 2671946 TN (Total Nitrogen) Reagent A

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#### 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)

##### 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

##### EU regulatory information

##### Additional information

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

##### National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

#### 15.2. Chemical safety assessment

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

### SECTION 16: Other information

#### Changes

Revision: 20.04.2020

Safety datasheet sections which have been updated: 2, 11, 15

Revision: 21.08.2017

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

Revision: 21.07.20104

Safety datasheet sections which have been updated: 4-16

Revision: 22.12.2012

This data sheet contains changes from the previous version in section(s): 1-15

## Safety Data Sheet

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### 2671946 TN (Total Nitrogen) Reagent A

Revision date: 20.04.2020

Product code: 2671946

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Creation date: 06.04.2005

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

H302	Harmful if swallowed.
H302+H312+H332	Harmful if swallowed, in contact with skin or if inhaled.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.
EUH031	Contact with acids liberates toxic gas.

#### Further Information

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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**2672046 TN (Total Nitrogen) Reagent B**

Revision date: 20.04.2022

Product code: 2672046

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Creation date: 25.04.2005

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

2672046 TN (Total Nitrogen) Reagent B

UFI: AV1Y-C790-V30D-8FFT

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

Water analysis

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

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

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

**1.4. Emergency telephone number:**

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

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

Hazard categories:

Acute toxicity: Acute Tox. 4

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Resp. Sens. 1

Specific target organ toxicity - single exposure: STOT SE 1

Specific target organ toxicity - repeated exposure: STOT RE 1

Hazard Statements:

Harmful if swallowed.

Causes skin irritation.

Causes serious eye irritation.

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

Causes damage to organs.

Causes damage to organs through prolonged or repeated exposure.

**2.2. Label elements****Regulation (EC) No. 1272/2008**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 2672046 TN (Total Nitrogen) Reagent B

Revision date: 20.04.2022

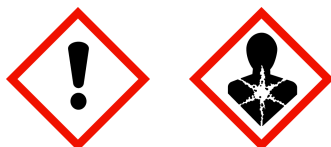
Product code: 2672046

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Creation date: 25.04.2005

#### Hazard components for labelling

Quartz  
sodium metabisulphite

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

#### Hazard statements

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.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.

#### Precautionary statements

P304+P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342+P311	If experiencing respiratory symptoms: 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.
P337+P313	If eye irritation persists: Get medical advice/attention.
P302+P352	IF ON SKIN: Wash with plenty of water.
P332+P313	If skin irritation 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

This mixture contains no substance considered to be persistent, bioaccumulating nor toxic (PBT).

This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**2672046 TN (Total Nitrogen) Reagent B**

Revision date: 20.04.2022

Product code: 2672046

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Creation date: 25.04.2005

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	CLP Classification			
14808-60-7	Quartz			60-70 %
	238-878-4			
	Acute Tox. 4, Eye Irrit. 2, STOT SE 1, STOT RE 1; H302 H319 H370 H372			
57-13-6	Urea			25-35 %
	200-315-5			
129-96-4	Chromotropic acid disodium salt			5-10 %
	204-972-9			
	Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H315 H319 H335			
7681-57-4	sodium metabisulphite			1-10 %
	231-673-0	016-063-00-2		
	Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Resp. Sens. 1, STOT SE 3; H332 H302 H315 H318 H334 H335 EUH031			

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. Give oxygen or artificial respiration if needed. Call a physician immediately.

**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**

Clean mouth with water and drink afterwards plenty of water.  
Call a physician immediately.

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

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**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
Suitable extinguishing media: Water, Water spray jet, Carbon dioxide (CO<sub>2</sub>), Dry chemical

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#### 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. 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

Avoid contact with skin and eyes.

Do not breathe vapours/dust.

Use with adequate ventilation.

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

Fire may liberate hazardous vapours.

##### Further information on handling

Wash hands before breaks and at the end of workday.

#### 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

None known.

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

Laboratory chemicals

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

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#### Exposure limits (EH40)

CAS No	Substance	ppm	mg/m <sup>3</sup>	fibres/ml	Category	Origin
7681-57-4	Disodium disulphite	-	5		TWA (8 h)	WEL

#### Additional advice on limit values

None known.

#### 8.2. Exposure controls

##### Appropriate engineering controls

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

##### Protective and hygiene measures

Wash hands before breaks and at the end of workday.

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

##### 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

Breathing apparatus only if aerosol or dust is formed. Use only with adequate ventilation.

## SECTION 9: Physical and chemical properties

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

Physical state:	solid	
Colour:	beige to brown	
Odour:	odourless	
pH-Value (at 20 °C):		no data available

#### Changes in the physical state

Melting point:	not applicable
Initial boiling point and boiling range:	not applicable
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



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**Explosive properties**

not applicable

Lower explosion limits:

not applicable

Upper explosion limits:

not applicable

Ignition temperature:

no data available

**Auto-ignition temperature**

Solid:

no data available

Gas:

not applicable

Decomposition temperature:

no data available

**Oxidizing properties**

no data available

Vapour pressure:

no data available

Vapour pressure:

no data available

Density:

no data available

Bulk density:

no data available

Water solubility:

no data available

**Solubility in other solvents**

no data available

Partition coefficient:

not applicable

Viscosity / dynamic:

not applicable

Viscosity / kinematic:

not applicable

Flow time:

not applicable

Vapour density:

no data available

Evaporation rate:

no data available

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**

no data available

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

no data available

**10.4. Conditions to avoid**

Extremes of temperature and direct sunlight. Avoid dust formation.

**10.5. Incompatible materials**

Oxidizing agents

**10.6. Hazardous decomposition products**Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Sulphur oxides**SECTION 11: Toxicological information**

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#### 11.1. Information on toxicological effects

##### Acute toxicity

Harmful if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
14808-60-7	Quartz				
	oral	LD50 mg/kg	500	rat	
57-13-6	Urea				
	oral	LD50 mg/kg	8471	rat	
	dermal	LD50 mg/kg	8200	rat	
7681-57-4	sodium metabisulphite				
	oral	LD50 mg/kg	1131	Rat	
	dermal	LD50 mg/kg	>2000	Rat	
	inhalation vapour	ATE	11 mg/l		
	inhalation (4 h) aerosol	LC50	2,01 mg/l	Rat	

##### Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

##### Sensitising effects

May cause allergy or asthma symptoms or breathing difficulties if inhaled. (sodium metabisulphite)

##### 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

Causes damage to organs. (Quartz)

##### STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure. (Quartz)

##### Aspiration hazard

Based on available data, the classification criteria are not met.

No aspiration toxicity classification

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

No toxicology information is 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.

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**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
57-13-6	Urea					
	Acute fish toxicity	LC50 mg/l	6810	96 h		
	Acute crustacea toxicity	EC50 mg/l	3910	48 h		
7681-57-4	sodium metabisulphite					
	Acute fish toxicity	LC50 mg/l	150 - 220	96 h	Onchorhynchus mykiss	
	Acute crustacea toxicity	EC50	89 mg/l	48 h	Daphnia magna (Water flea)	

**12.2. Persistence and degradability**

no data available

**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**
**Disposal recommendations**

In accordance with local and national regulations.

**List of Wastes Code - residues/unused products**

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

**List of Wastes Code - used product**

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

**List of Wastes Code - 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.

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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)****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****EU regulatory information**

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**National regulatory information**

Water hazard class (D): 3 - strongly hazardous to water

**15.2. Chemical safety assessment**

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

**SECTION 16: Other information****Changes**

Revision: 20.04.2022

Safety datasheet sections which have been updated: 2, 7, 9, 11

Revision: 29.07.2020

Safety datasheet sections which have been updated: 15, 16

Revision: 28.11.2017

Safety datasheet sections which have been updated: 2, 11

Revision: 30.10.2016

Safety datasheet sections which have been updated: 2, 11, 15

Revision: 25.10.2016

Safety datasheet sections which have been updated: 2, 11

Revision: 21.07.2014

Safety datasheet sections which have been updated: 4,5,8,9,11,13

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Revision: 21.12.2011

Safety datasheet sections which have been updated:

This data sheet contains changes from the previous version in section(s): 2-15

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

Classification	Classification procedure
Acute Tox. 4; H302	Calculation method
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Resp. Sens. 1; H334	Calculation method
STOT SE 1; H370	Calculation method
STOT RE 1; H372	Calculation method

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

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H370	Causes damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
EUH031	Contact with acids liberates toxic gas.

**Further Information**

The information is based on the present level of our knowledge. It does not, however, give assurance 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.)*

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### 2672145 Total Nitrogen Acid Vials (Reagent C)

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

### 1.1. Product identifier

2672145 Total Nitrogen Acid Vials (Reagent C)

UFI: W0A9-TH90-W00S-Y17X

### 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

Skin corrosion/irritation: Skin Corr. 1A

Serious eye damage/eye irritation: Eye Dam. 1

Hazard Statements:

May be corrosive to metals.

Causes severe skin burns and eye damage.

Causes serious eye damage.

### 2.2. Label elements

#### Regulation (EC) No. 1272/2008

#### Hazard components for labelling

sulphuric acid ... %

Signal word: Danger

Pictograms:



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#### Hazard statements

- H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

#### Precautionary statements

- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing 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.  
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	
	GHS Classification			
7664-93-9	sulphuric acid ... %			80-90 %
	231-639-5	016-020-00-8		
	Skin Corr. 1A; H314			
7732-18-5	Water			10-20 %
	231-791-2			

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

#### Specific concentration limits and M-factors

CAS No	EC No	Chemical name	Quantity
	Specific concentration limits and M-factors		
7664-93-9	231-639-5	sulphuric acid ... %	80-90 % %
	Skin Corr. 1A; H314: >= 15 - 100 Skin Irrit. 2; H315: >= 5 - < 15 Eye Irrit. 2; H319: >= 5 - < 15		

## 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 contact with skin

Wash off immediately with plenty of water for at least 15 minutes. Consult a physician.  
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty. Show this safety data sheet to the doctor in attendance.

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#### **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**

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

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

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

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

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

Water

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

The product itself does not burn.  
Gives off hydrogen by reaction with metals. Reacts violently with water.  
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.

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

Observe label precautions.

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

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

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



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#### Hints on joint storage

Protect against Bases, Oxidizing agents, Metals

#### 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 <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.

#### 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: &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

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:	210 °C
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: not applicable

Gas: not applicable

Decomposition temperature:

no data available

**Oxidizing properties**

not applicable

Vapour pressure:

no data available

Vapour pressure:

no data available

Density (at 20 °C):

1,78 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:

no data available

Corrosive in contact with 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: Alkali metals, Alkaline earth metals, Metals, Bases

**10.4. Conditions to avoid**

Extremes of temperature and direct sunlight. Decomposes on heating.

**10.5. Incompatible materials**

Bases, Oxidizing agents

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#### 10.6. Hazardous decomposition products

Gives off hydrogen by reaction with metals.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### **Acute toxicity**

No data is available on the product itself.

##### **Irritation and corrosivity**

Causes skin and eye burns.

##### **Sensitising effects**

No known effect.

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

Contains no ingredient listed as a carcinogen

##### **STOT-single exposure**

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

##### **STOT-repeated exposure**

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

##### **Aspiration hazard**

No aspiration toxicity classification

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

No toxicology information is available.

##### **Further information**

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

### SECTION 12: Ecological information

#### 12.1. Toxicity

No 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

##### **Disposal recommendations**

In accordance with local and national regulations.

##### **List of Wastes Code - residues/unused products**

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

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**List of Wastes Code - used product**

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

**List of Wastes Code - 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 1830  
**14.2. UN proper shipping name:** Sulphuric acid solution  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II

**Inland waterways transport (ADN)**

**Other applicable information (inland waterways transport)**  
Not tested

**Marine transport (IMDG)**

**14.1. UN number:** UN 1830  
**14.2. UN proper shipping name:** Sulphuric acid solution  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II  
Marine pollutant: --  
EmS: F-A,S-B

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

**14.1. UN number:** UN 1830  
**14.2. UN proper shipping name:** Sulphuric acid solution  
**14.3. Transport hazard class(es):** 8  
**14.4. Packing group:** II

**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**

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**

Restrictions on use (REACH, annex XVII):  
Entry 3

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 2672145 Total Nitrogen Acid Vials (Reagent C)

Revision date: 12.12.2017

Product code: 2672145

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#### National regulatory information

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

#### 15.2. Chemical safety assessment

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

### SECTION 16: Other information

#### Changes

Revision Date 12.12.2017

Safety datasheet sections which have been updated: 1-16

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

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.

#### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance 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

### 27242 deionized Water

Revision date: 25.05.2020

Product code: 27242

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

### 1.1. Product identifier

27242 deionized Water

CAS No: 7732-18-5  
EC No: 231-791-2

### 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 -

### Further Information

A registration number is not available for this substance because the substance or the use of this substance is exempt from registration pursuant to Article 2 of Regulation (EC) 1907/2006 (REACH), because the annual tonnage does not require registration or because registration is planned at a later date.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No. 1272/2008

This substance 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

no data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Molecular weight: 18,02 g/mol

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**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7732-18-5	Water			100 %
	231-791-2			

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

**Further Information**

No dangerous ingredients according to Regulation (EC) No. 1907/2006

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

No hazards which require special first aid measures.

**After inhalation**

No hazards which require special first aid measures.

**After contact with skin**

No hazards which require special first aid measures.

**After contact with eyes**

No hazards which require special first aid measures.

**After ingestion**

No hazards which require special first aid measures.

**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.**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**

None known.

**Additional information**

None known.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

No conditions to be specially mentioned.

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

No special environmental precautions required.

#### **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).

Keep in suitable, closed containers for disposal.

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

13. Disposal considerations

### SECTION 7: Handling and storage

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

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

Observe label precautions.

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

See also section 5

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

Keep in a dry, cool place.

#### **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**

no data available

##### **Further information on storage conditions**

no data available

#### **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**

See also section 7.1

##### **Eye/face protection**

Not required

##### **Hand protection**

Not required

##### **Skin protection**

Not required

##### **Respiratory protection**

Not required

##### **Environmental exposure controls**

No special technical protective measures required.



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**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):	7

**Changes in the physical state**

Melting point:	0 °C
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:	no data available

**Explosive properties**

no data available

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

**Auto-ignition temperature**

Solid:	not applicable
Gas:	not applicable

Decomposition temperature:	not applicable
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**Oxidizing properties**

no data available

Vapour pressure:	23 hPa
Vapour pressure:	no data available
Density (at 20 °C):	1 g/cm <sup>3</sup>
Bulk density:	no data available
Water solubility: (at 20 °C)	completely soluble

**Solubility in other solvents**

Acids soluble

Partition coefficient:	not applicable
Viscosity / dynamic: (at 20 °C)	0,952 mPa·s
Viscosity / kinematic:	no data available
Flow time:	no data available
Vapour density:	no data available
Evaporation rate:	no data available

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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**

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.

Hazardous polymerisation does not occur.

#### **10.4. Conditions to avoid**

None known.

#### **10.5. Incompatible materials**

None known.

#### **10.6. Hazardous decomposition products**

None known.

#### **Further information**

None known.

### **SECTION 11: Toxicological information**

#### **11.1. Information on toxicological effects**

##### **Toxicokinetics, metabolism and distribution**

No toxicology information is available.

##### **Acute toxicity**

Based on available data, the classification criteria are not met.

no data available

##### **Irritation and corrosivity**

Based on available data, the classification criteria are not met.

No known effect.

##### **Sensitising effects**

Based on available data, the classification criteria are not met.

Contains no substance or substances classified as sensitising.

##### **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.

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**Aspiration hazard**

Based on available data, the classification criteria are not met.

No aspiration toxicity classification

**Specific effects in experiment on an animal**

No toxicology information is available.

**Additional information on tests**

no data available

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

no data available

**Other observations**

no data available

**Further information**

no data available

**SECTION 12: Ecological information****12.1. Toxicity**

No information on ecology is available.

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**

not applicable

**12.4. Mobility in soil**

no data available

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

no data available.

A Chemical Safety Assessment is not required for this substance.

**12.6. Other adverse effects**

None known.

**Further information**

no data available

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

In accordance with local and national regulations.

**List of Wastes Code - residues/unused products**

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

**List of Wastes Code - used product**

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

**List of Wastes Code - 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

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#### Contaminated packaging

Dispose of as unused product.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

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

Not classified as dangerous in the meaning of transport regulations.

#### Inland waterways transport (ADN)

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

Not tested

#### Marine transport (IMDG)

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

Not classified as dangerous in the meaning of transport regulations.

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

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

Not classified as dangerous in the meaning of transport regulations.

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

#### 14.6. Special precautions for user

Not relevant

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

Not relevant

#### 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 hazard class (D): -- non-hazardous to water

#### 15.2. Chemical safety assessment

For this substance a chemical safety assessment is not required.

### SECTION 16: Other information

#### Changes

Revision: 25.05.2020

Safety datasheet sections which have been updated: 7

Revision: 26.02.2020

Safety datasheet sections which have been updated: 15

Revision: 12.05.2017

Safety datasheet sections which have been updated: 1-16

Revision: 11.11.2014

Safety datasheet sections which have been updated: 1-16

#### Further Information

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