

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**14458-49 Chloroform**

Revision date: 12.07.2017

Product code: 1445849

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

14458-49 Chloroform

CAS No: 67-66-3  
Index No: 602-006-00-4  
EC No: 200-663-8

**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:

Carcinogenicity: Carc. 2  
Germ cell mutagenicity: Muta. 2  
Reproductive toxicity: Repr. 2  
Acute toxicity: Acute Tox. 3  
Acute toxicity: Acute Tox. 4  
Skin corrosion/irritation: Skin Irrit. 2  
Serious eye damage/eye irritation: Eye Irrit. 2  
Specific target organ toxicity - repeated exposure: STOT RE 1

Hazard Statements:

Suspected of causing cancer.  
Suspected of causing genetic defects.  
Suspected of damaging the unborn child.  
Toxic if inhaled.  
Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye irritation.  
Causes damage to organs through prolonged or repeated exposure.

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#### 2.2. Label elements

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

##### Hazard components for labelling

chloroform; trichloromethane

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

##### Hazard statements

H331	Toxic if inhaled.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.

##### Precautionary statements

P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P301+P312	IF SWALLOWED: Call a POISON CENTER if you feel unwell.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P362	Take off contaminated clothing.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

##### Special labelling of certain mixtures

For use in industrial installations only.

##### 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

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**Hazardous components**

CAS No	Chemical name	Quantity
	EC No	
	Index No	
	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]	
67-66-3	chloroform; trichloromethane	100 %
	200-663-8	602-006-00-4
	Carc. 2, Muta. 2, Repr. 2, Acute Tox. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT RE 1; H351 H341 H361d H331 H302 H315 H319 H372	

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

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

Take off all contaminated clothing immediately.

**After inhalation**

Move to fresh air.

Consult a physician. Show this safety data sheet to the doctor in attendance.

**After contact with skin**

Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician.

**After contact with eyes**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Show this safety data sheet to the doctor in attendance.

**After ingestion**

Do NOT induce vomiting.

Consult a physician. Show this safety data sheet to the doctor in attendance.

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

irritant effects, Cough, Shortness of breath, Dizziness, Spasm, Nausea, Vomiting

**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**

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**

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#### **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**

Ventilators required at emission site. Use only in well-ventilated areas. Do not breathe vapours/dust.

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

See also section 5

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

Observe label precautions.

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

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

Keep tightly closed in a dry, cool and well-ventilated place. Protect against light.

##### **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)**

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
67-66-3	Chloroform	2	9.9		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**

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

Wash hands before breaks and after work.

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

Safety glasses with side-shields

##### **Hand protection**

Use barrier skin cream.

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

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

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

**Skin protection**

Remove and wash contaminated clothing before re-use.

**Respiratory protection**

Breathing apparatus only if aerosol or dust is formed. respirator with AX filter

**Environmental exposure controls**

Do not flush into surface water or sanitary sewer system.

## SECTION 9: Physical and chemical properties

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

Physical state:	liquid
Colour:	colourless
Odour:	sweet
pH-Value:	not applicable

**Changes in the physical state**

Melting point:	-64 °C
Initial boiling point and boiling range:	61 °C
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	no data available
Flash point:	not applicable
Sustaining combustion:	No data available

**Flammability**

Solid:	not applicable
Gas:	not applicable

**Explosive properties**

not applicable

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

**Auto-ignition temperature**

Solid:	no data available
Gas:	no data available

Decomposition temperature: no data available

**Oxidizing properties**

not applicable

Vapour pressure: (at 20 °C)	213 hPa
Density (at 20 °C):	1,49 g/cm <sup>3</sup>
Bulk density:	not applicable
Water solubility: (at 20 °C)	8 g/L

**Solubility in other solvents**

no data available

Partition coefficient:	no data available
Viscosity / dynamic: (at 20 °C)	0,56 mPa·s

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Viscosity / kinematic:	@N09.006025560 mm <sup>2</sup> /s
Flow time:	no data available
Vapour density: (at 20 °C)	4,1
Evaporation rate:	no data available
Solvent separation test:	no data available
Solvent content:	no data available

#### 9.2. Other information

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

#### 10.1. Reactivity

No dangerous reaction known under conditions of normal use.

#### 10.2. Chemical stability

Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

Reacts with the following substances:

Ammonia, Alcohols, Amines, Powdered metals, Alkali metals, Bases, Finely divided aluminium

#### 10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

Sensitivity to light

#### 10.5. Incompatible materials

Rubber products, Plastic material, including expanded plastics material

#### 10.6. Hazardous decomposition products

Heating can release hazardous gases.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Toxicokinetics, metabolism and distribution

No toxicology information is available.

##### Acute toxicity

Toxic by inhalation.

Harmful if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
67-66-3	chloroform; trichloromethane				
	oral	LD50 mg/kg	695	rat	Gestis
	dermal	LD50 mg/kg	20000	rabbit	Gestis
	inhalation (4 h) vapour	LC50	47,7 mg/l	rat	Gestis
	inhalation aerosol	ATE	0,5 mg/l		

#### Irritation and corrosivity

May cause eye and skin irritation.

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#### Sensitising effects

No known effect.

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

H351 - Suspected of causing cancer.

H361d - Suspected of damaging the unborn child.

#### STOT-single exposure

H336 - May cause drowsiness or dizziness.

#### STOT-repeated exposure

The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

#### Aspiration hazard

No aspiration toxicity classification

#### Specific effects in experiment on an animal

No toxicology information is available.

#### Further information

Handle in accordance with good industrial hygiene and safety practice.

### SECTION 12: Ecological information

#### 12.1. Toxicity

Do not flush into surface water or sanitary sewer system.

May cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
67-66-3	chloroform; trichloromethane					
	Acute fish toxicity	LC50	28 mg/l	96 h		Gestis
	Acute crustacea toxicity	EC50	66,8 mg/l	48 h		Gestis

#### 12.2. Persistence and degradability

Not readily biodegradable.

#### 12.3. Bioaccumulative potential

Bioaccumulation is unlikely.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
67-66-3	chloroform; trichloromethane	2

#### 12.4. Mobility in soil

Mobile in soils

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

no data available

#### 12.6. Other adverse effects

Discharge into the environment must be avoided.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Advice on disposal

In accordance with local and national regulations.

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

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

**Waste disposal number of used product**

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

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

**14.1. UN number:** UN1888  
**14.2. UN proper shipping name:** CHLOROFORM  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** III  
Hazard label: 6.1



Classification code: T1  
Limited quantity: 5 L  
Transport category: 2  
Hazard No: 60  
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:** UN1888  
**14.2. UN proper shipping name:** CHLOROFORM  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** III  
Hazard label: 6.1



Marine pollutant: --  
Special Provisions: -  
Limited quantity: 5 L  
EmS: F-A, S-A

**Other applicable information (marine transport)**

Excepted Quantities: E1

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

**14.1. UN number:** UN1888  
**14.2. UN proper shipping name:** CHLOROFORM  
**14.3. Transport hazard class(es):** 6.1  
**14.4. Packing group:** III



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Hazard label: 6.1



Limited quantity Passenger: 2 L

IATA-packing instructions - Passenger:	680
IATA-max. quantity - Passenger:	60 L
IATA-packing instructions - Cargo:	680
IATA-max. quantity - Cargo:	220 L

**Other applicable information (air transport)**

Excepted Quantities: E1  
Passenger-LQ: Y680

**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**

Restrictions on use (REACH, annex XVII):  
Entry 32: chloroform; trichloromethane

**Additional information**

Classification according to EU Directives 67/548/EEC or 1999/45/EC  
The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008.

**National regulatory information**

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

Water contaminating class (D): 3 - highly water contaminating

**15.2. Chemical safety assessment**

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

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

Revision: 12.07.2017  
Safety datasheet sections which have been updated: 2, 3  
Revision: 16.06.2016  
Safety datasheet sections which have been updated: 2, 11  
Revision: 27.10.2015  
Safety datasheet sections which have been updated: 2  
Revision: 16.03.2015  
Safety datasheet sections which have been updated: 3-16

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

H302 Harmful if swallowed.

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H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.

#### Further Information

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

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

1836-99 Phenol 2 Reagent

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

Water analysis

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

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

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

**1.4. Emergency telephone number:**

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

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

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

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

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

**2.3. Other hazards**

no data available

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

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**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
13746-66-2	Potassium hexacyanoferrate(III)			55-65 %
	237-323-3			
	EUH032			
7778-80-5	Potassium sulfate			35-45 %
	231-915-5			

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

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

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

**After inhalation**

Move to fresh air.

If symptoms persist, call a physician.

**After contact with skin**

Wash off immediately with soap and plenty of water.

Consult a physician. Show this safety data sheet to the doctor in attendance.

**After contact with eyes**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Show this safety data sheet to the doctor in attendance.

**After ingestion**

Drink 1 or 2 glasses of water. Induce vomiting, but only if victim is fully conscious.

Consult a physician. Show this safety data sheet to the doctor in attendance.

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

no data available

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

Treat symptomatically.

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

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

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

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

**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.

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#### 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**

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

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

See also section 5

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

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

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

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

Do not store near acids.

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

Accessible only for authorized persons.

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

Reagent for analysis

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

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

##### **8.2. Exposure controls**

###### **Appropriate engineering controls**

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

###### **Protective and hygiene measures**

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

Wash hands before breaks and after work.

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

Safety glasses with side-shields

###### **Hand protection**

Use barrier skin cream.

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

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

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

###### **Skin protection**

Remove and wash contaminated clothing before re-use.

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**Respiratory protection**

Breathing apparatus only if aerosol or dust is formed.

**Environmental exposure controls**

Should not be released into the environment.

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

Physical state:	solid
Colour:	orange
Odour:	odourless
pH-Value (at 20 °C):	8,3

**Changes in the physical state**

Melting point:	175 °C
Initial boiling point and boiling range:	not applicable
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

**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:	not applicable
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**Oxidizing properties**

not applicable

Vapour pressure:	not applicable
Vapour pressure:	not applicable

Density (at 20 °C):	2,05 g/cm <sup>3</sup>
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Bulk density:	not applicable
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Water solubility: (at 20 °C)	completely soluble
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**Solubility in other solvents**

not applicable

Partition coefficient:	not applicable
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Viscosity / dynamic:	not applicable
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Viscosity / kinematic:	not applicable
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Flow time:	not applicable
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Vapour density: not applicable  
 Evaporation rate: not applicable  
 Solvent separation test: not applicable  
 Solvent content: not applicable

#### 9.2. Other information

Solid content: not applicable  
 no data available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

None known.

#### 10.2. Chemical stability

Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

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

With acid and aluminium.

#### 10.6. Hazardous decomposition products

Sulphur oxides, Cyanides

#### Further information

Stable under recommended storage conditions.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity

No data is available on the product itself.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7778-80-5	Potassium sulfate				
	oral	LD50 mg/kg	6600	rat	

##### Irritation and corrosivity

no data available

##### Sensitising effects

no data available

##### 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.

##### Aspiration hazard

No aspiration toxicity classification

#### Further information

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

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practice.

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

No data is available on the product itself.

Do not flush into surface water or sanitary sewer system.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
13746-66-2	Potassium hexacyanoferrate(III)					
	Acute fish toxicity	LC50	869 mg/l	96 h		
	Acute crustacea toxicity	EC50	549 mg/l	48 h		
7778-80-5	Potassium sulfate					
	Acute fish toxicity	LC50	680 mg/l	96 h		

**12.2. Persistence and degradability**

No data is available on the product itself.

**12.3. Bioaccumulative potential**

No data is available on the product itself.

**12.4. Mobility in soil**

no data available

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

no data available

**12.6. Other adverse effects**

no data available

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

In accordance with local and national regulations.

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

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

**Waste disposal number of used product**

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

**Waste disposal number of contaminated packaging**

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

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

Not subject to transport regulations.

**Inland waterways transport (ADN)**



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Revision date: 04.05.2018

Product code: 183699

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

Not tested

**Marine transport (IMDG)****Other applicable information (marine transport)**

Not subject to transport regulations.

**Air transport (ICAO-TI/IATA-DGR)****Other applicable information (air transport)**

Not subject to transport regulations.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**14.6. Special precautions for user**

no data available

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

not applicable

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

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

**Additional information**

professional use

**15.2. Chemical safety assessment**

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

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

Revision: 04.05.2018

Safety datasheet sections which have been updated: 8, 11, 12

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

EUH032 Contact with acids liberates very toxic gas.

**Further Information**

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

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 424-49 Hardness 1 Buffer

Revision date: 03.01.2019

Product code: 42449

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

### 1.1. Product identifier

424-49 Hardness 1 Buffer

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

#### Use of the substance/mixture

Water analysis

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

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

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

### 1.4. Emergency telephone number:

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

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Causes skin irritation.

Causes serious eye irritation.

Harmful to aquatic life with long lasting effects.

### 2.2. Label elements

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

#### Hazard components for labelling

2-amino-2-methylpropanol

acetic acid ... %

Signal word: Warning

Pictograms:



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**Hazard statements**

- H315 Causes skin irritation.  
 H319 Causes serious eye irritation.  
 H412 Harmful to aquatic life with long lasting effects.

**Precautionary statements**

- P273 Avoid release to the environment.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P302+P352 IF ON SKIN: Wash with plenty of water.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P312 Call a POISON CENTER/doctor if you feel unwell.  
 P501 Dispose of contents/container to Disposal.

**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**
**3.2. Mixtures**
**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
124-68-5	2-amino-2-methylpropanol			50-60 %
	204-709-8	603-070-00-6		
	Eye Irrit. 2, Skin Irrit. 2, Aquatic Chronic 3; H319 H315 H412			
7732-18-5	Water			30-40 %
	231-791-2			
64-19-7	acetic acid ... %			1-10 %
	200-580-7	607-002-00-6		
	Flam. Liq. 3, Skin Corr. 1A; H226 H314			
14402-88-1	Diaminoethane tetra-acetic acid Magnesium-disodium salt			<1 %
	238-372-3			

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

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

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

**After inhalation**

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

**After contact with skin**

- Wash off immediately with plenty of water for at least 15 minutes.

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### 424-49 Hardness 1 Buffer

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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. Consult a physician.

#### **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. The product itself does not burn.

#### **Unsuitable extinguishing media**

No Limit

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

Fire may liberate hazardous vapours.

### **5.3. Advice for firefighters**

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

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

In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

#### **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**

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**

Use only in well-ventilated areas.

Avoid contact with skin and eyes.

Do not breathe vapours/dust.

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

None known.

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according to Regulation (EC) No 1907/2006

**424-49 Hardness 1 Buffer**

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See also section 5

**Further information on handling**

Observe label precautions.

Avoid contact with skin, eyes and clothing.

**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 together with Oxidizing agents

**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
64-19-7	Acetic acid	10	25		TWA (8 h)	EU
		15	37		STEL (15 min)	EU

**Additional advice on limit values**

None known.

**8.2. Exposure controls****Appropriate engineering controls**

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

**Protective and hygiene measures**

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

Wash hands before breaks and after work.

General industrial hygiene practice.

**Eye/face protection**

Safety glasses with side-shields

**Hand protection**

Use barrier skin cream.

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

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

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

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**

Remove and wash contaminated clothing before re-use.

**Respiratory protection**

Breathing apparatus only if aerosol or dust is formed.

Recommended Filter type: ABEK-filter

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

Physical state:	liquid
Colour:	yellow
Odour:	vinegar-like
pH-Value (at 20 °C):	10 (2 % solution)

**Changes in the physical state**

Melting point:	not applicable
Initial boiling point and boiling range:	104,5 °C
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	no data available
Flash point:	>97,2 °C

**Flammability**

Solid:	no data available
Gas:	no data available
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
Vapour pressure:	no data available
Vapour pressure:	no data available
Density (at 20 °C):	1,033 g/cm <sup>3</sup>
Bulk density:	not applicable
Water solubility: (at 20 °C)	completely 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: (at 20 °C)	no data available 0,36
Solvent separation test:	no data available
Solvent content:	no data available

**9.2. Other information**

Solid content:	no data available
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**SECTION 10: Stability and reactivity**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 424-49 Hardness 1 Buffer

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#### 10.1. Reactivity

Reactivity Hazard: Oxidizing agents

#### 10.2. Chemical stability

The product is chemically stable.

#### 10.3. Possibility of hazardous reactions

Reacts with the following substances: Oxidizing agents

#### 10.4. Conditions to avoid

Extremes of temperature and direct sunlight.

#### 10.5. Incompatible materials

None known.

#### 10.6. Hazardous decomposition products

Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity

No data is available on the product itself.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
124-68-5	2-amino-2-methylpropanol				
	oral	LD50 mg/kg	2900	Rat	IUCLID
	dermal	LD50 mg/kg	> 2000	Rabbit	IUCLID
64-19-7	acetic acid ... %				
	oral	LD50 mg/kg	3310	Rat	GESTIS

##### Irritation and corrosivity

Irritating to eyes and skin.

##### 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 data is available on the product itself.

#### Further information

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

### SECTION 12: Ecological information

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 424-49 Hardness 1 Buffer

Revision date: 03.01.2019

Product code: 42449

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#### 12.1. Toxicity

No data is available on the product itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
124-68-5	2-amino-2-methylpropanol					
	Acute fish toxicity	LC50	190 mg/l	96 h	Lepomis macrochirus	IUCLID
	Acute algae toxicity	ErC50	520 mg/l	72 h	Desmodesmus subspicatus	
64-19-7	acetic acid ... %					
	Acute crustacea toxicity	EC50	65 mg/l	48 h	Daphnia magna	Janssen et al

#### 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.

#### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
124-68-5	2-amino-2-methylpropanol	-0,74
64-19-7	acetic acid ... %	-0,17

#### 12.4. Mobility in soil

no data available

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

no data available

#### 12.6. Other adverse effects

Do not flush into surface water or sanitary sewer system.

May cause long-term adverse effects in the aquatic environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Advice on disposal

In accordance with local and national regulations.

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

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

##### Waste disposal number of used product

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

### SECTION 14: Transport information

#### Land transport (ADR/RID)

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

Not subject to transport regulations.

#### Inland waterways transport (ADN)

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

Not tested



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**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.

**14.6. Special precautions for user**

no data available

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

Not relevant

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

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

**15.2. Chemical safety assessment**

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

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

Revision: 03.01.2019

Safety datasheet sections which have been updated: 2, 11, 15, 16

Revision: 28.04.2015

Safety datasheet sections which have been updated: 2

Revision: 25.02.2015

Safety datasheet sections which have been updated: 2 - 16

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

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Aquatic Chronic 3; H412	Calculation method

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

H226 Flammable liquid and vapour.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H412 Harmful to aquatic life with long lasting effects.

**Further Information**

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

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

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**872-99 Phenol Reagent**

Revision date: 22.04.2015

Product code: 87299

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

872-99 Phenol Reagent

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

Water analysis

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

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

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

**1.4. Emergency telephone number:**

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

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

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Hazardous to the aquatic environment: Aquatic Chronic 3

Hazard Statements:

Causes skin irritation.

Causes serious eye irritation.

Harmful to aquatic life with long lasting effects.

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

4-Aminoantipyrine hydrogen phosphate

**Signal word:** Warning**Pictograms:**

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

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**Hazard statements**

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.

**Precautionary statements**

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P362	Take off contaminated clothing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.

**Additional advice on labelling**

The product does not need to be labelled in accordance with EC directives or respective national laws.  
The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008.

**2.3. Other hazards**

None known.

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

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7757-82-6	Sodium sulfate			> 80 %
	231-820-9			
68258-97-9	4-Aminoantipyrine hydrogen phosphate			> 10 %
	269-500-6			
	Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3, Aquatic Chronic 2; H302 H315 H319 H335 H411			
9050-36-6	Maltodextrin			< 5 %

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

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

Take off all contaminated clothing immediately.

**After inhalation**

Move to fresh air.

**After contact with skin**

Wash off immediately with plenty of water.

**After contact with eyes**

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

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according to Regulation (EC) No 1907/2006

### 872-99 Phenol Reagent

Revision date: 22.04.2015

Product code: 87299

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#### After ingestion

Clean mouth with water and drink afterwards plenty of water.

#### 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. The product itself does not burn.

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

Fire may liberate hazardous vapours.

#### 5.3. Advice for firefighters

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

#### Additional information

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

#### 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.

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

##### Requirements for storage rooms and vessels

Keep in a dry, cool place.

#### 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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

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Revision date: 22.04.2015

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#### 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

Remove and wash contaminated clothing before re-use.

#### Respiratory protection

Avoid breathing dust or vapour.

Provide adequate ventilation.

## SECTION 9: Physical and chemical properties

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

Physical state:	solid	
Colour:	yellow-orange	
Odour:	odourless	
pH-Value:		no data available

#### Changes in the physical state

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

#### Flammability

Solid:	not applicable
Gas:	not applicable

#### Explosive properties

not applicable

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

#### Auto-ignition temperature

Solid:	not applicable
Gas:	not applicable

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

not applicable

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 872-99 Phenol Reagent

Revision date: 22.04.2015

Product code: 87299

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Vapour pressure:	not applicable
Density:	no data available
Bulk density:	no data available
Water solubility:	soluble
<b>Solubility in other solvents</b>	
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

#### **9.2. Other information**

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

#### **10.1. Reactivity**

No dangerous reaction known under conditions of normal use.

#### **10.2. Chemical stability**

Stable under recommended storage conditions.

#### **10.3. Possibility of hazardous reactions**

Hazardous polymerisation does not occur.

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

Extremes of temperature and direct sunlight.

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

None known.

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

No decomposition if stored and applied as directed.

### SECTION 11: Toxicological information

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

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

No toxicology information is available.

##### **Acute toxicity**

No data is available on the product itself.

**Safety Data Sheet**

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7757-82-6	Sodium sulfate				
	oral	LD50 mg/kg	5989	mouse	
68258-97-9	4-Aminoantipyrine hydrogen phosphate				
	oral	LD50 mg/kg	1700	rat	

**Irritation and corrosivity**

May cause eye irritation. May cause skin irritation.

**Sensitising effects**

No known effect.

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

Contains no ingredient listed as a carcinogen

**Aspiration hazard**

No aspiration toxicity classification

**Specific effects in experiment on an animal**

No data is available on the product itself.

**Further information**

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

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

No data is available on the product itself.

Do not flush into surface water or sanitary sewer system.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7757-82-6	Sodium sulfate					
	Acute fish toxicity	LC50	120 mg/l	96 h	Gambusia affinis	Merck
	Acute crustacea toxicity	EC50 mg/l	2564	48 h		
68258-97-9	4-Aminoantipyrine hydrogen phosphate					
	Acute fish toxicity	LC50 mg/l	10,8	96 h		
	Acute algae toxicity	ErC50 mg/l	2,357			
	Acute crustacea toxicity	EC50 mg/l	80,899	48 h		

**12.2. Persistence and degradability**

No data is available on the product itself.

**12.3. Bioaccumulative potential**

No data is available on the product itself.

**12.4. Mobility in soil**

no data available

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

no data available

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

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**12.6. Other adverse effects**

No known effect.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Advice on disposal**

In accordance with local and national regulations.

Dispose of in accordance with the European Directives on waste and hazardous waste.

**Contaminated packaging**

Dispose of as unused product.

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

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

Not subject to transport regulations.

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

Not tested

**Marine transport (IMDG)****Other applicable information (marine transport)**

Not subject to transport regulations.

**Air transport (ICAO-TI/IATA-DGR)****Other applicable information (air transport)**

Not subject to transport regulations.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**14.6. Special precautions for user**

no data available

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

not applicable

**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 does not need to be labelled in accordance with EC directives or respective national laws.

**National regulatory information**

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

**15.2. Chemical safety assessment**

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

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

Revision: 22.04.2015



**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**872-99 Phenol Reagent**

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Product code: 87299

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

Revision: 29.11.2013

Safety datasheet sections which have been updated: 3-15

Revision: 24.04.2014

Safety datasheet sections which have been updated: 10, 13, 16

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

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

**Further Information**

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

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