

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**21873-99 Copper Masking Reagent**

Revision date: 21.08.2017

Product code: 2187399

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

21873-99 Copper Masking 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	
	GHS Classification			
7772-98-7	Sodium thiosulfate			85-95 %
	231-867-5			
150-90-3	di-Sodium succinate anhydrous			5-15 %
	205-778-7			
	Acute Tox. 4; H302			

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

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

Take off all contaminated clothing immediately.

**After inhalation**

Move to fresh air.

**After contact with skin**Wash off immediately with plenty of water.  
If skin irritation persists, call a physician.**After contact with eyes**Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.  
Show this safety data sheet to the doctor in attendance.**After ingestion**

If conscious, drink 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**

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.

**Unsuitable extinguishing media**

No Limit

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

Fire may liberate hazardous vapours.

In the event of fire the following can be released: Sodium oxides, Carbon oxides, Sulphur oxides

**5.3. Advice for firefighters**

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

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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**

Sweep up or vacuum up spillage and collect in suitable container 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**

Avoid contact with skin and eyes.

Do not breathe vapours/dust.

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

See also section 5

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

Avoid contact with skin, eyes and clothing.

##### **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**

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**

###### **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.

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

Safety glasses with side-shields

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

Use barrier skin cream. Wash hands before breaks and at the end of workday.

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

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Layer thickness: 0,11 mm, Break through time: 480 min  
 In case of contact through splashing: Glove material : Nitrile rubber  
 Layer thickness: 0,11 mm, Break through time: 60 min

#### Skin protection

Avoid contact with skin, eyes and clothing.

#### Respiratory protection

Provide adequate ventilation.

#### 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: powder  
 Colour: white  
 Odour: odourless

#### Test method

pH-Value (at 20 °C): 7,9 (5 % solution)

#### Changes in the physical state

Melting point: 48 °C Decomposition temperature  
 Initial boiling point and boiling range: not applicable  
 Sublimation point: no data available  
 Softening point: not applicable  
 Pour point: not applicable  
 : no data available  
 Flash point: no data available

#### Flammability

Solid: no data available  
 Gas: not applicable

#### Explosive properties

not applicable

Lower explosion limits: not applicable

Upper explosion limits: not applicable

Ignition temperature: no data available

#### Auto-ignition temperature

Solid: no data available  
 Gas: not applicable

Decomposition temperature: no data available

#### Oxidizing properties

no data available

Vapour pressure: not applicable

Vapour pressure: not applicable

Density (at 20 °C): 2,22 g/cm<sup>3</sup>

Bulk density: no data available

Water solubility: soluble  
 (at 20 °C)

#### Solubility in other solvents

no data available

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Partition coefficient:	no data available
Viscosity / dynamic:	no data available
Viscosity / kinematic:	no data available
Flow time:	no data available
Vapour density:	not applicable
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

No dangerous reaction known under conditions of normal use.

#### 10.2. Chemical stability

The product is chemically stable.

#### 10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

#### 10.4. Conditions to avoid

Extremes of temperature and direct sunlight.  
Exposure to moisture.

#### 10.5. Incompatible materials

Oxidizing agents

#### 10.6. Hazardous decomposition products

Sodium oxides, Carbon oxides, Sulphur oxides

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Acute toxicity

No data is available on the product itself.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7772-98-7	Sodium thiosulfate				
	oral	LD50 >5000 mg/kg	rat	RTECS	
150-90-3	di-Sodium succinate anhydrous				
	oral	LD50 >1200 mg/kg	rat		

##### Irritation and corrosivity

No known effect.

##### Sensitising effects

No known effect.

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

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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.

**Additional information on tests**

None known.

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

None known.

**Other observations**

None known.

**Further information**

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

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

No data is available on the product itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7772-98-7	Sodium thiosulfate					
	Acute fish toxicity	LC50 mg/l	24000	96 h Gambusia affinis (Mosquito fish)	IUCLID	

**12.2. Persistence and degradability**

No data is available on the product itself.

**12.3. Bioaccumulative potential**

no data available

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
7772-98-7	Sodium thiosulfate	-4,35

**12.4. Mobility in soil**

no data available

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

no data available

**12.6. Other adverse effects**

No known effect.

**Further information**

No known effect.

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

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#### 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.

## 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

#### Other applicable information

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

## SECTION 15: Regulatory information

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

#### EU regulatory information

##### Additional information

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

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#### National regulatory information

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: 21.08.2017

Safety datasheet sections which have been updated: 2, 3, 4, 11

Revision: 09.09.2015

Safety datasheet sections which have been updated: 8

Revision: 08.06.2015

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

Revision: 16.09.2014

Safety datasheet sections which have been updated: 4 - 16

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

H302 Harmful if swallowed.

#### 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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**21874-69 Porphyrin 1 Reagent**

Revision date: 07.03.2018

Product code: 2187469

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

21874-69 Porphyrin 1 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	
	GHS Classification			
134-03-2	(+)-Sodium L-ascorbate			80-90 %
	205-126-1			
50-81-7	Ascorbic acid			10-20 %
	200-066-2			

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.

If symptoms persist, call a physician.

**After contact with skin**

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

If skin irritation persists, call a physician.

**After contact with eyes**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.

Show this safety data sheet to the doctor in attendance.

**After ingestion**

If conscious, drink 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**

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.

**Unsuitable extinguishing media**

No Limit

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

Fire may liberate hazardous vapours.

In the event of fire the following can be released: Sodium oxides, Carbon oxides

**5.3. Advice for firefighters**

In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit. In order to avoid contact with skin, keep a safety distance and wear suitable protective clothing.

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#### 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

Sweep up or vacuum up spillage and collect in suitable container 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

Avoid contact with skin and eyes.

Do not breathe vapours/dust.

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

See also section 5

###### Further information on handling

Avoid contact with skin, eyes and clothing.

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

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

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

###### Hints on joint storage

None known.

###### 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

###### 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.

###### Eye/face protection

Safety glasses with side-shields

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#### Hand protection

Use barrier skin cream. Wash hands before breaks and at the end of workday. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374.

#### Skin protection

Avoid contact with skin, eyes and clothing.

#### Respiratory protection

Provide adequate ventilation.  
In the case of dust or aerosol formation use respirator with an approved filter.

#### Environmental exposure controls

Should not be released into the environment.

## SECTION 9: Physical and chemical properties

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

Physical state:	powder
Colour:	light yellow, light brown
Odour:	odourless
pH-Value (at 20 °C):	4,9 (5 % solution)

#### Changes in the physical state

Melting point:	155-165 °C
Initial boiling point and boiling range:	not applicable
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	no data available
:	no data available
Flash point:	no data available

#### Flammability

Solid:	not applicable
Gas:	no data available

#### Explosive properties

not applicable

Lower explosion limits:	no data available
Upper explosion limits:	no data available
Ignition temperature:	no data available

#### Auto-ignition temperature

Solid:	no data available
Gas:	no data available

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

no data available

Vapour pressure:	no data available
Vapour pressure:	no data available
Density (at 20 °C):	2,511 g/cm <sup>3</sup>
Bulk density:	not applicable
Water solubility: (at 20 °C)	soluble

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**Solubility in other solvents**

no data available

Partition coefficient:

no data available

Viscosity / dynamic:

no data available

Viscosity / kinematic:

no data available

Flow time:

no data available

Vapour density:

no data available

Evaporation rate:

no data available

Solvent separation test:

no data available

Solvent content:

no data available

**9.2. Other information**

Solid content:

no data available

no data available

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

No dangerous reaction known under conditions of normal use.

**10.2. Chemical stability**

The product is chemically stable.

**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.

**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	
50-81-7	Ascorbic acid					
	oral	LD50 mg/kg	11900	rat	RTECS	

**Irritation and corrosivity**

No known effect.

**Sensitising effects**

No known effect.

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

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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.

#### **Additional information on tests**

None known.

#### **Practical experience**

#### **Observations relevant to classification**

None known.

#### **Other observations**

None known.

#### **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.  
Should not be released into the environment.

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

No data is available on the product itself.

### **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 known effect.

#### **Further information**

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

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

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

**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.

## 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.

**14.6. Special precautions for user**

no data available

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

Not relevant

**Other applicable information**

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

## SECTION 15: Regulatory information

**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****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 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: 07.03.2018

Safety datasheet sections which have been updated: 8, 12

Revision: 16.09.2014

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Safety datasheet sections which have been updated: 4 - 16

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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.

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



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according to Regulation (EC) No 1907/2006

**21875-69 Porphyrin 2 Reagent**

Revision date: 25.01.2017

Product code: 2187569

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

21875-69 Porphyrin 2 Reagent

CAS No: 7775-14-6  
Index No: 016-028-00-1  
EC No: 231-890-0

**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  
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HACH LANGE Ltd.  
Unit 1, Chestnut Road Western Industrial Estate  
IRL-Dublin 12  
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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:  
Self-heating substance or mixture: Self-heat. 1  
Acute toxicity: Acute Tox. 4  
Serious eye damage/eye irritation: Eye Irrit. 2  
Hazardous to the aquatic environment: Aquatic Chronic 3  
Hazard Statements:  
Self-heating: may catch fire.  
Harmful if swallowed.  
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**

sodium dithionite, sodium hydrosulphite

**Signal word:** Danger

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**Pictograms:**

**Hazard statements**

H251	Self-heating: may catch fire.
H302	Harmful if swallowed.
H335	May cause respiratory 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.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER/doctor if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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/doctor if you feel unwell.

**Special labelling of certain mixtures**

EUH031	Contact with acids liberates toxic gas.
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**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			
7775-14-6	sodium dithionite, sodium hydrosulphite			100 %
	231-890-0	016-028-00-1		
	Self-heat. 1, Acute Tox. 4, Eye Irrit. 2, Aquatic Chronic 3; H251 H302 H319 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 all contaminated clothing immediately.

**After inhalation**

Move to fresh air.

**After contact with skin**

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

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#### 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. 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

irritant effects, Cough, Shortness of breath, Diarrhoea, Nausea

#### 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

Fire may liberate hazardous vapours.

The following may develop in event of fire: sulfur oxides., Sodium oxides.

Risk of dust explosion.

#### 5.3. Advice for firefighters

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

Use mechanical handling equipment. 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

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

##### Further information on handling

Observe label precautions.

Use barrier skin cream.

Recommended preventive skin protection

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

##### Requirements for storage rooms and vessels

Keep in a dry place.

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**Hints on joint storage**

Incompatible with strong acids and oxidizing agents.

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

Laboratory chemicals

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Additional advice on limit values**

None known.

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

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

**Protective and hygiene measures**

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

Wash hands before breaks and after work.

**Eye/face protection**

Safety glasses with side-shields

**Hand protection**

Use barrier skin cream.

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

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

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

**Skin protection**

Avoid contact with skin, eyes and clothing.

**Respiratory protection**

Breathing apparatus only if aerosol or dust is formed.

Recommended Filter type: ABEK-filter

**Environmental exposure controls**

Do not flush into surface water or sanitary sewer system.

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

Physical state:	solid
Colour:	white
Odour:	sulphurous

pH-Value (at 20 °C): 3,04 (5 % solution)

**Test method****Changes in the physical state**

Melting point:	55 °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**

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Solid: no data available  
Gas: no data available

**Explosive properties**

no data available

Lower explosion limits: not applicable

Upper explosion limits: not applicable

Ignition temperature: &gt;200 °C

**Auto-ignition temperature**

Solid: no data available

Gas: no data available

Decomposition temperature: &gt;80 °C

**Oxidizing properties**

no data available

Vapour pressure: not applicable

Density (at 20 °C): 2,2 g/cm<sup>3</sup>Bulk density: 1250 kg/m<sup>3</sup>Water solubility: moderately soluble  
(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

**9.2. Other information**

Solid content: no data available

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

Risk of dust explosion.

Potential for spontaneous combustion.

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

Reacts with the following substances: Acids, Oxidizing agents

**10.4. Conditions to avoid**

To avoid thermal decomposition, do not overheat.

Exposure to moisture.

Exposure to water vapour.

**10.5. Incompatible materials**

Acids, Oxidizing agents, Water

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**10.6. Hazardous decomposition products**

Sulphur oxides, Carbon monoxide, Carbon dioxide (CO<sub>2</sub>)  
Contact with acids liberates toxic gas.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Toxicokinetics, metabolism and distribution**

No toxicology information is available.

**Acute toxicity**

LD50/oral/mouse = 1500 mg/kg

CAS No	Chemical name					
	Exposure route	Dose	Species	Source	Method	
7775-14-6	sodium dithionite, sodium hydrosulphite					
	oral	LD50 mg/kg	2500	rat		

**Irritation and corrosivity**

May cause eye irritation.

**Sensitising effects**

No known effect.

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

This information is not available.

**STOT-single exposure**

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

**STOT-repeated exposure**

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

**Aspiration hazard**

No aspiration toxicity classification

**Specific effects in experiment on an animal**

No toxicology information is available.

**Further information**

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

**SECTION 12: Ecological information**

**12.1. Toxicity**

No data is available on the product itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7775-14-6	sodium dithionite, sodium hydrosulphite					
	Acute fish toxicity	LC50 mg/l	46-68	96 h	Leuciscus idus (Golden orfe)	
	Acute crustacea toxicity	EC50	98 mg/l	48 h	Daphnia magna (Water flea)	

**12.2. Persistence and degradability**

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

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#### 12.3. Bioaccumulative potential

Bioaccumulation : According to experience not expected

#### 12.4. Mobility in soil

no data available

#### 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

##### **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)

<u>14.1. UN number:</u>	UN 1384
<u>14.2. UN proper shipping name:</u>	Sodium dithionite
<u>14.3. Transport hazard class(es):</u>	4.2
<u>14.4. Packing group:</u>	II

#### Inland waterways transport (ADN)

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

Not tested

#### Marine transport (IMDG)

<u>14.1. UN number:</u>	UN 1384
<u>14.2. UN proper shipping name:</u>	Sodium dithionite
<u>14.3. Transport hazard class(es):</u>	4.2
<u>14.4. Packing group:</u>	II
Marine pollutant:	--
EmS:	F-A,S-J

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

<u>14.1. UN number:</u>	UN 1384
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**14.2. UN proper shipping name:** Sodium dithionite**14.3. Transport hazard class(es):** 4.2**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 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 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 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: 25.01.2017

Safety datasheet sections which have been updated: 2, 15

Revision: 6.10.2016

Safety datasheet sections which have been updated: 2, 3, 4, 11

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

H251 Self-heating: may catch fire.  
H302 Harmful if swallowed.  
H319 Causes serious eye irritation.  
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.