

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**21194-49 Nessler Reagent**

Revision date: 15.01.2020

Product code: 2119449

Page 1 of 11

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

21194-49 Nessler 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:

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

Acute toxicity: Acute Tox. 3

Acute toxicity: Acute Tox. 3

Skin corrosion/irritation: Skin Corr. 1A

Specific target organ toxicity - repeated exposure: STOT RE 2

Hazardous to the aquatic environment: Aquatic Chronic 1

Hazard Statements:

May be corrosive to metals.

Toxic if swallowed.

Toxic if inhaled.

Causes severe skin burns and eye damage.

May cause damage to organs through prolonged or repeated exposure.

Very toxic to aquatic life with long lasting effects.

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

sodium hydroxide; caustic soda

Mercury(II) iodide

**Signal word:** Danger

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 21194-49 Nessler Reagent

Revision date: 15.01.2020

Product code: 2119449

Page 2 of 11

#### Pictograms:



#### Hazard statements

H290	May be corrosive to metals.
H310	Fatal in contact with skin.
H301+H331	Toxic if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

#### Additional advice on labelling

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

#### 2.3. Other hazards

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 21194-49 Nessler Reagent

Revision date: 15.01.2020

Product code: 2119449

Page 3 of 11

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7732-18-5	Water			70-80 %
	231-791-2			
1310-73-2	sodium hydroxide; caustic soda			10-20 %
	215-185-5	011-002-00-6		
	Skin Corr. 1A; H314			
7774-29-0	Mercury(II) iodide			5-10 %
	231-873-8	080-002-00-6		
	Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1; H310 H330 H300 H373 H400 H410			
7681-82-5	Sodium iodide			1-10 %
	231-679-3			
	Skin Irrit. 2, Eye Irrit. 2A, Aquatic Acute 1; H315 H319 H400			

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

###### After contact with skin

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

###### After contact with eyes

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

###### After ingestion

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

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

Irritation and corrosion

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

Treat symptomatically.

#### SECTION 5: Firefighting measures

##### 5.1. Extinguishing media

###### Suitable extinguishing media

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 21194-49 Nessler Reagent

Revision date: 15.01.2020

Product code: 2119449

Page 4 of 11

#### Unsuitable extinguishing media

None known.

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

Fire may liberate hazardous vapours.

Fire may cause evolution of: Mercury, Sodium oxides

#### 5.3. Advice for firefighters

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

#### Additional information

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

### SECTION 6: Accidental release measures

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

Use personal protective equipment.

#### 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. Do not breathe vapours or spray mist. Avoid contact with skin and eyes.

##### Further information on handling

Wash hands before breaks and at the end of workday.

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

##### Requirements for storage rooms and vessels

Storage temperature: 5-25 °C, Keep away from heat and sources of ignition.

##### Hints on joint storage

Do not store together with Acids, Ammonia

Store in a cool and shaded area. Perishable if frozen.

##### Further information on storage conditions

Keep locked up or in an area accessible only to qualified or authorised persons.

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

Reagent for analysis

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Exposure limits (EH40)

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

##### Additional advice on limit values

None known.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 21194-49 Nessler Reagent

Revision date: 15.01.2020

Product code: 2119449

Page 5 of 11

#### 8.2. Exposure controls

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

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

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

Wash hands before breaks and at the end of workday.

##### **Eyeface protection**

Safety glasses with side-shields

##### **Hand protection**

Use barrier skin cream.

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

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

##### **Skin protection**

Avoid contact with skin, eyes and clothing.

##### **Respiratory protection**

Provide adequate ventilation. Use only in area provided with appropriate exhaust ventilation.

##### **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:	yellow	
Odour:	odourless	
pH-Value (at 20 °C):		12,1

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

Melting point:	not applicable
Initial boiling point and boiling range:	110 °C
Sublimation point:	no data available
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:	no data available

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

Solid:	not applicable
Gas:	not applicable

Decomposition temperature: no data available

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**21194-49 Nessler Reagent**

Revision date: 15.01.2020

Product code: 2119449

Page 6 of 11

**Oxidizing properties**

not applicable

Vapour pressure:

no data available

Vapour pressure:

no data available

Density (at 20 °C):

1,265 g/cm<sup>3</sup>

Bulk density:

not applicable

Water solubility:

soluble

**Solubility in other solvents**

no data available

Partition coefficient:

no data available

Viscosity / dynamic:

no data available

Viscosity / kinematic:

no data available

Flow time:

no data available

Vapour density:

no data available

Evaporation rate:

no data available

Solvent separation test:

no data available

Solvent content:

no data available

**9.2. Other information**

Solid content:

not applicable

no data available

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

see chapter: 10.3

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

Reacts with the following substances:

Metals, Strong acids

**10.4. Conditions to avoid**

Extremes of temperature and direct sunlight.

**10.5. Incompatible materials**

Acids, Oxidizing agents, Organic materials, Ammonia

**10.6. Hazardous decomposition products**

Under fire conditions: see chapter 5

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

No toxicology information is available.

**Acute toxicity**

Toxic if swallowed.

Toxic by inhalation.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

## 21194-49 Nessler Reagent

Revision date: 15.01.2020

Product code: 2119449

Page 7 of 11

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7774-29-0	Mercury(II) iodide				
	oral	LD50 18 mg/kg	rat		
	dermal	ATE 5 mg/kg			
	inhalation vapour	ATE 0,5 mg/l			
	inhalation aerosol	ATE 0,05 mg/l			
7681-82-5	Sodium iodide				
	oral	LD50 4340 mg/kg	rat		

**Irritation and corrosivity**

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

**Sensitising effects**

No known effect.

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

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

**STOT-single exposure**

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

**STOT-repeated exposure**

H373 - May cause damage to organs through prolonged or 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.

**Further information**

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

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

No data is available on the product itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
1310-73-2	sodium hydroxide; caustic soda					
	Acute fish toxicity	LC50 45,4 mg/l	96 h	Onchorhynchus mykiss		
7774-29-0	Mercury(II) iodide					
	Acute fish toxicity	LC50 0,13 mg/l	96 h	Leuciscus idus (Golden orfe)		
	Acute crustacea toxicity	EC50 0,0052 mg/l	48 h	Daphnia magna (Water flea)		
7681-82-5	Sodium iodide					
	Acute fish toxicity	LC50 860 mg/l	96 h			
	Acute crustacea toxicity	EC50 0,17 mg/l	48 h			

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 21194-49 Nessler Reagent

Revision date: 15.01.2020

Product code: 2119449

Page 8 of 11

#### **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**

Discharge into the environment must be avoided.

### SECTION 13: Disposal considerations

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

##### **Disposal recommendations**

Dispose of as special waste in compliance 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)**

<b><u>14.1. UN number:</u></b>	UN 2922
<b><u>14.2. UN proper shipping name:</u></b>	CORROSIVE LIQUID, TOXIC, N.O.S. (Mercuric Iodide/Sodium Hydroxide Solution)
<b><u>14.3. Transport hazard class(es):</u></b>	8
<b><u>14.4. Packing group:</u></b>	II
Hazard label:	8+6.1



Classification code:	CT1
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	86
Tunnel restriction code:	E

#### **Inland waterways transport (ADN)**



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**21194-49 Nessler Reagent**

Revision date: 15.01.2020



Product code: 2119449

Page 9 of 11



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

Not tested

**Marine transport (IMDG)**

<b>14.1. UN number:</b>	UN 2922
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, TOXIC, N.O.S. (Mercuric Iodide/Sodium Hydroxide Solution)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8+6.1
	 
Marine pollutant:	PP
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-A, S-B
Segregation group:	alkalis

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

<b>14.1. UN number:</b>	UN 2922
<b>14.2. UN proper shipping name:</b>	CORROSIVE LIQUID, TOXIC, N.O.S. (Mercuric Iodide/Sodium Hydroxide Solution)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	II
Hazard label:	8+6.1
	 
Special Provisions:	A3 A803
Limited quantity Passenger:	0.5 L
Passenger LQ:	Y840
Excepted quantity:	E2
IATA-packing instructions - Passenger:	851
IATA-max. quantity - Passenger:	1 L
IATA-packing instructions - Cargo:	855
IATA-max. quantity - Cargo:	30 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: yes

Danger releasing substance: sodium hydroxide; caustic soda  
Mercury(II) iodide**14.6. Special precautions for user**

Use personal protective equipment.

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

not applicable

**Other applicable information**

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 21194-49 Nessler Reagent

Revision date: 15.01.2020

Product code: 2119449

Page 10 of 11

dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit, Hazard Class: 9, UN Number 3316, Package group II, EMS Code: F-A, S-P  
These transport data apply to the entire pack

#### SECTION 15: Regulatory information

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

###### National regulatory information

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

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

##### 15.2. Chemical safety assessment

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

#### SECTION 16: Other information

##### Changes

Revision: 15.01.2020  
Safety datasheet sections which have been updated: 2, 11, 14-16

Revision: 28.04.2017  
Safety datasheet sections which have been updated: 2, 9, 14

Revision: 27.04.2015  
Safety datasheet sections which have been updated: 2, 4, 11

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

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Acute Tox. 3; H301	Calculation method
Acute Tox. 3; H331	Calculation method
Skin Corr. 1A; H314	Calculation method
STOT RE 2; H373	Calculation method
Aquatic Chronic 1; H410	Calculation method

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

H290 May be corrosive to metals.  
H300 Fatal if swallowed.  
H301 Toxic if swallowed.  
H301+H331 Toxic if swallowed or if inhaled.  
H310 Fatal in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H330 Fatal if inhaled.  
H331 Toxic if inhaled.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

##### Further Information

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 21194-49 Nessler Reagent

Revision date: 15.01.2020

Product code: 2119449

Page 11 of 11

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

DOMINIQUE DUTSCHER SAS

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**23765-26 Polyvinyl Alcohol Dispersing Agent**

Revision date: 16.02.2018

Product code: 2376526

Page 1 of 7

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

23765-26 Polyvinyl Alcohol Dispersing Agent

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

Water analysis

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

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

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

**1.4. Emergency telephone number:**

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

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

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

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

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

**2.3. Other hazards**

None known.

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**23765-26 Polyvinyl Alcohol Dispersing Agent**

Revision date: 16.02.2018

Product code: 2376526

Page 2 of 7

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7732-18-5	Water			> 95 %
	231-791-2			
9002-89-5	Polyvinyl alcohol			< 5 %
	209-183-3			

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.

**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.

**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 regulations.

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**23765-26 Polyvinyl Alcohol Dispersing Agent**

Revision date: 16.02.2018

Product code: 2376526

Page 3 of 7

**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.

**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**

None known.

**Further information on storage conditions**

no data available

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

Reagent for analysis

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

None known.

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

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

**Protective and hygiene measures**

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 23765-26 Polyvinyl Alcohol Dispersing Agent

Revision date: 16.02.2018

Product code: 2376526

Page 4 of 7

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

#### Skin protection

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

#### 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:	liquid	
Colour:	red brown	
Odour:	slight unpleasant	
pH-Value (at 20 °C):		5,4
<b>Changes in the physical state</b>		
Melting point:		0 °C
Initial boiling point and boiling range:		98 °C
Sublimation point:		not applicable
Softening point:		not applicable
Pour point:		not applicable
Flash point:		not applicable
<b>Flammability</b>		
Solid:		not applicable
Gas:		not applicable
<b>Explosive properties</b>		
not applicable		
Lower explosion limits:		not applicable
Upper explosion limits:		not applicable
Ignition temperature:		not applicable
<b>Auto-ignition temperature</b>		
Solid:		not applicable
Gas:		not applicable
Decomposition temperature:		no data available
<b>Oxidizing properties</b>		
not applicable		
Vapour pressure:		no data available
Density (at 20 °C):		1,0042 g/cm <sup>3</sup>
Bulk density:		not applicable
Water solubility: (at 20 °C)		soluble
<b>Solubility in other solvents</b>		
no data available		
Partition coefficient:		no data available
Viscosity / dynamic:		no data available
Viscosity / kinematic:		no data available

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**23765-26 Polyvinyl Alcohol Dispersing Agent**

Revision date: 16.02.2018

Product code: 2376526

Page 5 of 7

Flow time:	no data available
Vapour density:	no data available
Evaporation rate:	no data available
Solvent separation test:	no data available
Solvent content:	no data available

**9.2. Other information**

Solid content:	not applicable
no data available	

**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**

Carbon oxides

**Further information**

Stable under recommended storage conditions.

**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.

**Irritation and corrosivity**

No known effect.

**Sensitising effects**

No known effect.

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

Contains no ingredient listed as a carcinogen

**STOT-single exposure**

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

**STOT-repeated exposure**

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

**Aspiration hazard**

No aspiration toxicity classification

**Specific effects in experiment on an animal**

No toxicology information is available.



**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**23765-26 Polyvinyl Alcohol Dispersing Agent**

Revision date: 16.02.2018

Product code: 2376526

Page 6 of 7

**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.

**12.2. Persistence and degradability**

No data is available on the product itself.

**12.3. Bioaccumulative potential**

No data is available on the product itself.

**12.4. Mobility in soil**

no data available

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

no data available

**12.6. Other adverse effects**

No known effect.

**Further information**

Should not be released into the environment.

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

In accordance with local and national regulations.

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

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

**List of Wastes Code - used product**

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

**List of Wastes Code - contaminated packaging**

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

**Contaminated packaging**

Dispose of as unused product.

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### 23765-26 Polyvinyl Alcohol Dispersing Agent

Revision date: 16.02.2018

Product code: 2376526

Page 7 of 7

**14.2. UN proper shipping name:** Not subject to transport regulations.

#### Inland waterways transport (ADN)

**14.2. UN proper shipping name:** Not tested

#### Marine transport (IMDG)

**14.2. UN proper shipping name:** Not subject to transport regulations.

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

**14.2. UN proper shipping name:** 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.

##### National regulatory information

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

#### 15.2. Chemical safety assessment

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

### SECTION 16: Other information

#### Changes

Revision: 16.02.2018

Safety datasheet sections which have been updated: 4, 12

Revision: 22.09.2014

Safety datasheet sections which have been updated: 4 - 16

#### Further Information

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

*(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

**23766526 - Belavstai Rfel SactfAo**

Revision date: 16.02.2018

Product code: 2376626

Page 1 of 7

**Sspr gEC TI gOotfRfNatfAo Af the 1ci 1taoNe:d Rrtcle aoO Af the NAd baoy:coOelta/ Rm****TxkIAcNt RdotfRf**

23766-26 Mineral Stabilizer Solution

**T2x. eveRdotfRfOc1e1 Af the 1ci 1taoNe Al d Rrtcle aoOc1e1 aORfOamaR1t****U1e Af the 1ci 1taoNe:d Rrtcle**

Water analysis

**T3xDetaf Af the 1cbbel Af the 1afety Oata 1heet**

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

**T4xs d elreNy tevbhAoe  
ocd i ell**

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

**Sspr gEC 2I HanalO1 RdotfRfNatfAo****2Txpva11fRfNatfAo Af the 1ci 1taoNe Al d Rrtcle****. emc:vatfAo zp ( CAxT272:2) ) 0**

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

**22x8ai eveved eot1****L OORfAoavaORfNe Ao vai evRm**

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

**23xEthel hanalO1**

no data available

**Sspr gEC 3I pAd ba1RfAo:RfAl d atfAo Ao RmleORot1****32x- Rrtcle1**

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**2376626 - Belavstai Rfel SactfAo**

Revision date: 16.02.2018

Product code: 2376626

Page 2 of 7

**Hanal OAc1 NAd bAeot1**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
7732-18-5	Water			50-60 %
	231-791-2			
6132-04-3	tri-Sodium citrate dihydrate			20-30 %
	200-675-3			
6381-59-5	Potassium sodium tartrate tetrahydrate			20-30 %
	205-698-2			

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

**Sspr gC 4l MR1t aRD ea1cle1****4xTxDe1N RbtfAo Af fR1t aRD ea1cle1****F eoel avRfAld atfAo**

Take off all contaminated clothing immediately.

**L ftel RbhavafAo**

Move to fresh air.

**L ftel NAotaN GRh 1/ R**Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes .  
If skin irritation persists, call a physician.**L ftel NAotaN GRh eye1**

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.

**L ftel Rbre1tfAo**

If conscious, drink plenty of water. Call a physician immediately. Show this safety data sheet to the doctor in attendance.

**4xTx- A1t Rl bAltaot 1yd btAd 1 aoOeffeN1wi Ath aNcte aoOeaveO**

No known effect.

**4xTxOONatfAo Af aoy Rl d eORate d eONavatteotfAo aoO1beNvtleatd eot oeeOeO**

Treat symptomatically.

**Sspr gC , l MRfRhtRmd ea1cle1****4xTx utRmc Rl hRmd eORa****ScRai ve eutRmc Rl hRmd eORa**Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  
The product itself does not burn.**4xTxSbeNvhanalO1 aRlRmfAd the 1ci 1taoNe Al d Rtle**

Fire may liberate hazardous vapours.

**4xTxLORNe fAl fRfRhtel1**

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.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**23766526 - Belavstai Rfhe SActFAo**

Revision date: 16.02.2018

Product code: 2376626

Page 3 of 7

**L OORFAoavRfAI d atFAo**

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

**Sspr g C 6l LNFDeotavleea1e d ea1cle1****6xTxl e1AoavbleNactFAo1vbl AteNfRe eqcRd eot aoOed el meoNy bIANeOcle1**

Use personal protective equipment.

Only qualified personnel equipped with suitable protective equipment may intervene. Immediately evacuate personnel to safe areas.

For personal protection see section 8.

**6x2xs oRFAod eotavbleNactFAo1**

Do not flush into surface water or sanitary sewer system.

**6x3x- ethAO1 aoO d atel RvfAI NAotaRd eot aoO NeaoRmcb**

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

**6x4x. efel eoNe tA Athel 1eNfFAo1**

13. Disposal considerations

**Sspr g C 7l HaoORmaoO 1tAlame****7xTxl eNactFAo1 fAI 1afe haoORm****L ORNe Ao 1afe haoORm**

Avoid contact with skin and eyes.

Do not breathe vapours/dust.

Wash thoroughly after handling.

**L ORNe Ao bl AteNfFAo amaR1t fipe aoO eubvA1FAo**

See also section 5

**Mcl thel RfAI d atFAo Ao haoORm**

Avoid contact with skin, eyes and clothing.

**7x2xp AoORFAo1 fAI 1afe 1tAlamewRncORmaoy RnAd batf RFR1****. eqcRd eot1 fAI 1tAlame IAd 1 aoORe11evl**

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

**HRt1 Ao jARt 1tAlame**

no data available

**7x3xSbeNFRNeoOc1ez1(**

Reagent for analysis

**Sspr g C 0l subA1cle NAotl Avl :bel 1Aoavbl AteNfFAo****0xTxp Aotl Avbalad etel 1****0x2xs ubA1cle NAotl Avl****L bbl ABl Rte eonRbeel RmNAotl Avl**

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

**kI AteNfRe aoO hynf eoe d ea1cle1**

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.

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**2376626 - BelavStai RPhel SActFAo**

Revision date: 16.02.2018

Product code: 2376626

Page 4 of 7

**Sye:faNe bl AteNFAo**

Safety glasses with side-shields

**HaoO bl AteNFAo**

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

**S/ R bl AteNFAo**

Avoid contact with skin, eyes and clothing.

**. e1bRatAlY bl AteNFAo**

Provide adequate ventilation.

**Ss pr gC 9I khy1NavaoONhed RNavblAbeltr1****9xTropAl d atFAo Ao i a1R bhy1NavaoONhed RNavblAbeltr1**

Physical state:	liquid
Colour:	clear, colourless
Odour:	odourless
pH-Value (at 20 °C):	8,7
<b>phaom1 R the bhy1Nav1tate</b>	
Melting point:	- 8 °C
Initial boiling point and boiling range:	98 °C
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	no data available
:	no data available
Flash point:	no data available
<b>Mad d ai Rty</b>	
Solid:	no data available
Gas:	no data available
<b>subv1Rr bl Abeltr1</b>	
not applicable	
Lower explosion limits:	not applicable
Upper explosion limits:	not applicable
Ignition temperature:	no data available
<b>LctA5RrFAo ted bel atcle</b>	
Solid:	no data available
Gas:	no data available
Decomposition temperature:	no data available
<b>EuORPombI Abeltr1</b>	
no data available	
Vapour pressure:	no data available
Vapour pressure:	no data available
Density (at 20 °C):	1,29 g/cm <sup>3</sup>
Bulk density:	no data available
Water solubility: (at 20 °C)	soluble

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**2376626 - Belavstai RfAl d atFao**

Revision date: 16.02.2018

Product code: 2376626

Page 5 of 7

**Saci RfAl d atFao**

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

**9xEx thel RfAl d atFao**

Solid content:

no data available

no data available

**Sspr gC T) I Stai RfAl d atFao**

**T) xTx. eaN RfAl d atFao**

No dangerous reaction known under conditions of normal use.

**T) xxp hed RfAl d atFao**

The product is chemically stable.

**T) xkA11R RfAl d atFao**

Hazardous polymerisation does not occur.

**T) xxp AoORFao1 tA aRAF**

Extremes of temperature and direct sunlight.

**T) x xopNad batF ve d atel RfAl d atFao**

Organic materials

**T) xHana1OAc1 CeNad bA1RFAo bIAOcN1**

Sodium oxides

**McI thel RfAl d atFao**

Stable under recommended storage conditions.

**Sspr gC TTI rAuNAvAnRfAl d atFao**

**TTx xopFAl d atFao Ao tAuNAvAnRfAl d atFao**

**L Ncte tAuNRfAl d atFao**

No data is available on the product itself.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
6132-04-3	tri-Sodium citrate dihydrate				
	oral	LD50 >8000 mg/kg	rat		

**gIRatFao aoONAlA1RfAl d atFao**

No known effect.

**McI thel RfAl d atFao**

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

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**23766526 - Belavstai Rfel SActfAo**

Revision date: 16.02.2018

Product code: 2376626

Page 6 of 7

**Sspr gEC T2I sNAAnRfAl d atfAo****T2Xr AuRry**

No data is available on the product itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
6132-04-3	tri-Sodium citrate dihydrate					
	Acute crustacea toxicity	EC50	736 mg/l	48 h		

**T2xkel1FteNe aoOemlaOai Rry**

No data is available on the product itself.

**T2xBrAaNCd cAtRe bAteofAv**

No data is available on the product itself.

**T2x- Ai Rry R 1AR**

No data is available on the product itself.

**T2x x. e1c1 Af kBr aoORkRB a11e11d eot**

No data is available on the product itself.

**T2xExthel aOel1e effeN1**

No data is available on the product itself.

**Mlthel RfAl d atfAo**

Should not be released into the environment.

**Sspr gEC T3I DFbA1avNAo1RdelatfAo1****T3xWa1te tleatd eot d ethAO1****DFbA1avleNAd d eoOatfAo1**

In accordance with local and national regulations.

**8Ft Af Wa1te1 pAOe 5le1Rce1:coc1eObIAOcN1**

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

**8Ft Af Wa1te1 pAOe 5c1eObIAOcN1**

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

**8Ft Af Wa1te1 pAOe 5NAotad RbteObaN arRm**

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

**pAotad RbteObaN arRm**

Dispose of as unused product.

**Sspr gEC T4I rlao1bAlt RfAl d atfAo****8aoTlao1bAlt z.D. .: D(****T4xUC bIAbel 1hRbRmoad el**

Not subject to transport regulations.

**gaoOGatelGay1 tlao1bAlt z.DC(****T4xUC bIAbel 1hRbRmoad el**

Not tested

**- alRe tlao1bAlt zD DF(****T4xUC bIAbel 1hRbRmoad el**

Not subject to transport regulations.



## Safety Data Sheet

according to Regulation (EC) No 1907/2006

**2376626 - BelavStai Rfel SActFAo**

Revision date: 16.02.2018

Product code: 2376626

Page 7 of 7

**L R tlao1bAlt zp LE 5 gg\_rL 5DF . (****T4xUC blAbe1 1hRbRmoad el**

Not subject to transport regulations.

**T4x sORFAod eotavhanal O1**

ENVIRONMENTALLY HAZARDOUS: no

**T4xSbeNfAvbleNactFAo1 fAI c1el**

no data available

**T4xrlao1bAlt R i cv aNNAIORmtAL ooeu gAf - al bAvaoOthe dP pAOe**

Not relevant

**Sspr gEC T, I . emcvatAl y RfAl d atFAo****T, xTxSafetyweath aoO eoRFAod eotavlemcvatFAo1:enRfAtFAo 1beNfAI the 1ci 1taoNe AI d Rrtcle****sU lencvatAl y RfAl d atFAo****L OORFAoavRfAl d atFAo**

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

**CatFAoavlemcvatAl y RfAl d atFAo**

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

**T, xphed fAv1afety a11e11d eot**

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

**Sspr gEC T6I Ethel RfAl d atFAo****phaome1**

Revision: 16.02.2018

Safety datasheet sections which have been updated: 4, 12

Revision: 01.08.2014

Safety datasheet sections which have been updated: 2, 4-16

**Mcl thel gAfAl d atFAo**

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.)*