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

1.1. Product identifier

14321-98 Potassium 1 Reagent

CAS No:	64-02-8
Index No:	607-428-00-2
EC No:	200-573-9

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

Use of the substance/mixture

Water analysis

1.3. Details of the supplier of the safety data sheet

Company name:	HACH LANGE GmbH
Street:	Willstätterstr. 11
Place:	D-40549 Düsseldorf
Telephone:	+49 (0)211 5288-383
e-mail:	SDS@hach.com
Internet:	www.de.hach.com
Responsible Department:	HACH LANGE Ltd. 5, Pacific Way Salford Manchester M50 1DL - United Kingdom Tel. +44 (0) 161 872 1487 * Fax +44 (0) 161 848 7324 e-Mail: info-uk@hach.com HACH LANGE Ltd. Unit 1, Chestnut Road Western Industrial Estate IRL-Dublin 12 Tel. +353 (0)1 4602522 e-Mail: info-ie@hach.com

1.4. Emergency telephone number:

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Acute toxicity: Acute Tox. 4
Serious eye damage/eye irritation: Eye Dam. 1
Hazard Statements:
Harmful if swallowed.
Causes serious eye damage.

2.2. Label elements

Regulation (EC) No. 1272/2008

Signal word: Danger

Pictograms:

Hazard statements

H302 Harmful if swallowed.

H318 Causes serious eye damage.

Precautionary statements

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330	Rinse mouth.
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.

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.1. Substances

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
64-02-8	tetrasodium ethylene diamine tetraacetate			100 %
	200-573-9	607-428-00-2		
	Acute Tox. 4, Eye Dam. 1; H302 H318			

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

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

After inhalation

Move to fresh air.

After contact with skin

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

After contact with eyes

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

After ingestion

Drink plenty of water. Call a physician immediately.

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.

5.2. Special hazards arising from the substance or mixture

The product itself does not burn.

In the event of fire the following can be released: nitrogen oxides (NOx), Sodium oxides, Carbon monoxide, Carbon dioxide (CO2)

5.3. Advice for firefighters

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

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.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep away from heat. Keep in a dry place.

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)

no data available

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

Wash hands before breaks and at the end of workday.

Eye/face protection

Safety glasses with side-shields

Hand protection

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

Skin protection

Avoid contact with skin, eyes and clothing.

Respiratory protection

Provide adequate ventilation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	powder
Colour:	white
Odour:	odourless

		Test method
pH-Value (at 20 °C):	11	
Changes in the physical state		
Melting point:	> 300 °C	
Initial boiling point and boiling range:	not applicable	
Flash point:	not applicable	
Flammability		
Solid:	not applicable	
Gas:	not applicable	
Explosive properties		
no data available		
Lower explosion limits:	not applicable	
Upper explosion limits:	not applicable	
Auto-ignition temperature		
Solid:	not applicable	
Gas:	not applicable	
Decomposition temperature:	no data available	
Oxidizing properties		
no data available. The product has been shown not to be oxidising in a test following Directive 67/548/EEC (Method A17, oxidising properties).		
Vapour pressure:	not applicable	
Density:	not applicable	
Water solubility: (at 20 °C)	1000-1100 g/L	soluble
Solubility in other solvents		
Alcohol		
Partition coefficient:	5,01	
Vapour density:	not applicable	
Evaporation rate:	not applicable	

9.2. Other information

no data available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Hazard: Oxidizing agents

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

To avoid thermal decomposition, do not overheat.

10.4. Conditions to avoid

Extremes of temperature and direct sunlight. Exposure to moisture.

10.5. Incompatible materials

Incompatible with oxidizing agents.

10.6. Hazardous decomposition products

Heating can release hazardous gases.
nitrogen oxides (NOx), Carbon monoxide, Carbon dioxide (CO2)

Further information

Stable under recommended storage conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Harmful if swallowed.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64-02-8	tetrasodium ethylene diamine tetraacetate				
	oral	LD50 1658 mg/kg	rat		

Irritation and corrosivity

Causes serious eye damage.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

Specific effects in experiment on an animal

rabbit skin: 500 mg/24H, Moderate skin irritation
rabbit eye: 100 mg/24H, Moderate eye irritation

SECTION 12: Ecological information

12.1. Toxicity

Biochemical Oxygen Demand (BOD) 0,02 g/g
Chemical Oxygen Demand (COD) 0,54 g/g
Acute fish toxicity = LC50/96h/bluegill sunfish = 410 mg/l

12.2. Persistence and degradability

Readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely.

12.4. Mobility in soil

Mobile in soils

12.5. Results of PBT and vPvB assessment

No data is available on the product itself.

12.6. Other adverse effects

No data is available on the product itself.

Further information

Ecological injuries are not known or expected under normal use.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

In accordance with local and national regulations.

Waste disposal number of waste from residues/unused products

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

Waste disposal number of used product

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

Waste disposal number of contaminated packaging

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

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: -

14.2. UN proper shipping name: -

14.3. Transport hazard class(es): -

14.4. Packing group: -

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)

14.1. UN number: -

14.3. Transport hazard class(es): -

14.4. Packing group: -

Marine pollutant: --

EmS: -

Other applicable information (marine transport)

Not subject to transport regulations.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number: -

14.3. Transport hazard class(es): -

14.4. Packing group: -

Other applicable information (air transport)

Not subject to transport regulations.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

no data available

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

Not relevant

SECTION 15: Regulatory information

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

EU regulatory information

Additional information

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

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
Revision: 18.04.2016
Safety datasheet sections which have been updated: 2, 4, 6, 7, 9, 10, 12, 14, 15
Safety datasheet sections which have been updated: 2, 3, 15

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H318	Causes serious eye damage.

Further Information

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

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

1.1. Product identifier

14322-98 Potassium 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

Hazard categories:
Acute toxicity: Acute Tox. 3
Acute toxicity: Acute Tox. 3
Acute toxicity: Acute Tox. 3
Skin corrosion/irritation: Skin Corr. 1B
Serious eye damage/eye irritation: Eye Dam. 1
Respiratory or skin sensitisation: Skin Sens. 1
Germ cell mutagenicity: Muta. 2
Carcinogenicity: Carc. 1B
Specific target organ toxicity - single exposure: STOT SE 1
Specific target organ toxicity - single exposure: STOT SE 3
Specific target organ toxicity - repeated exposure: STOT RE 1
Hazard Statements:
Toxic if swallowed.
Toxic in contact with skin.
Toxic if inhaled.
Causes severe skin burns and eye damage.
Causes serious eye damage.
May cause an allergic skin reaction.
Suspected of causing genetic defects.
May cause cancer.

Causes damage to organs.
May cause respiratory irritation.
Causes damage to organs through prolonged or repeated exposure.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

formaldehyde ... %
methanol

Signal word: Danger

Pictograms:

Hazard statements

H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H370	Causes damage to organs.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary statements

P201	Obtain special instructions before use.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER/doctor.

Additional advice on labelling

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

2.3. Other hazards

None known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
7732-18-5	Water			50-60 %
	231-791-2			
50-00-0	formaldehyde ... %			30-40 %
	200-001-8	605-001-00-5		
	Carc. 1B, Muta. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, Skin Corr. 1B, Skin Sens. 1; H350 H341 H301 H311 H331 H314 H317			
67-56-1	methanol			10-20 %
	200-659-6	603-001-00-X		
	Flam. Liq. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 1, STOT RE 1; H225 H331 H311 H301 H315 H319 H370 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.
Show this safety data sheet to the doctor in attendance.

After inhalation

Move to fresh air. Call a physician immediately.

After contact with skin

Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Call a physician immediately.

After contact with eyes

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

After ingestion

Do NOT induce vomiting. Drink 1 or 2 glasses of water.
Never give anything by mouth to an unconscious person.
Call a physician immediately.

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

Irritation and corrosion, sensitising effects, Dizziness

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing media

None known.

5.2. Special hazards arising from the substance or mixture

Fire may liberate hazardous vapours. In the event of fire the following can be released: Formaldehyde, Carbon monoxide, Carbon dioxide (CO2)

5.3. Advice for firefighters

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

Additional information

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment.

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste.

6.4. Reference to other sections

13. Disposal considerations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

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

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep away from heat and sources of ignition.
Keep containers tightly closed in a cool, well-ventilated place.

Hints on joint storage

Do not store near combustible materials.

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/m³	fibres/ml	Category	Origin
50-00-0	Formaldehyde	2	2.5		TWA (8 h)	WEL
		2	2.5		STEL (15 min)	WEL
67-56-1	Methanol	200	266		TWA (8 h)	WEL
		250	333		STEL (15 min)	WEL

Additional advice on limit values

None known.

8.2. Exposure controls

Appropriate engineering controls

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

Protective and hygiene measures

Wash hands before breaks and at the end of workday.
The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Eye/face protection

Safety glasses with side-shields

Hand protection

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

Skin protection

Avoid contact with skin, eyes and clothing.

Respiratory protection

Provide adequate ventilation.
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid
Colour:	clear, colourless
Odour:	formaldehyde-like
pH-Value (at 20 °C):	2,8 - 4,0

Changes in the physical state

Melting point:	-15 °C
Initial boiling point and boiling range:	96 °C
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	no data available
Autoignition temperature:	420 °C
Flash point:	64 °C

Flammability

Solid:	no data available
Gas:	no data available

Explosive properties

no data available

Lower explosion limits:	7 vol. %
Upper explosion limits:	70 vol. %
Ignition temperature:	no data available

Auto-ignition temperature

Solid:	no data available
Gas:	no data available
Decomposition temperature:	no data available

Oxidizing properties

no data available

Vapour pressure:	no data available
Density (at 20 °C):	1,08 g/cm³
Bulk density:	not applicable
Water solubility: (at 20 °C)	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

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

Heat, flames and sparks.

10.5. Incompatible materials

Incompatible with strong bases and oxidizing agents.

10.6. Hazardous decomposition products

Formaldehyde, Carbon monoxide, Carbon dioxide (CO2)

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution

No toxicology information is available.

Acute toxicity

Toxic if swallowed.
Toxic in contact with skin.
Toxic by inhalation.

ATEmix calculated

ATE (oral) 241,9 mg/kg; ATE (dermal) 733,5 mg/kg; ATE (inhalation vapour) 7,33 mg/l; ATE (inhalation aerosol) 1,000 mg/l

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
50-00-0	formaldehyde ... %					
	oral	ATE mg/kg	100			
	dermal	ATE mg/kg	300			
	inhalation (4 h) vapour	LC50	250 mg/l	rat		
	inhalation aerosol	ATE	0,5 mg/l			
67-56-1	methanol					
	oral	LD50 mg/kg	5628	rat		
	dermal	LD50 mg/kg	17100	rabbits		
	inhalation (4 h) vapour	LC50	10 mg/l	rat		
	inhalation aerosol	ATE	0,5 mg/l			

Irritation and corrosivity

Causes skin and eye burns.

Sensitising effects

May cause sensitisation by skin contact. (formaldehyde ... %)

Carcinogenic/mutagenic/toxic effects for reproduction

May cause cancer. (formaldehyde ... %)

H341 - Suspected of causing genetic defects. (formaldehyde ... %)

STOT-single exposure

H370 - Causes damage to organs (a,b,c).

H335 - May cause respiratory irritation.

STOT-repeated exposure

H372 - Causes 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.

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
67-56-1	methanol						
	Acute fish toxicity	LC50 mg/l	15400	96 h	Lepomis macrochirus (Bluegill sunfish)		
	Acute algae toxicity	ErC50 mg/l	22000	96 h	Pseudokirchneriella subcapitata (green algae)		
	Acute crustacea toxicity	EC50 mg/l	24500	48 h	Crustaceans		

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
67-56-1	methanol	-0,77

12.4. Mobility in soil

no data available

12.5. Results of PBT and vPvB assessment

no data available

12.6. Other adverse effects

No known effect.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

In accordance with local and national regulations.

Waste disposal number of waste from residues/unused products

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

Waste disposal number of used product

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

Waste disposal number of contaminated packaging

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

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number: UN 2209

14.2. UN proper shipping name: Formaldehyde solution

14.3. Transport hazard class(es): 8

14.4. Packing group: III

Hazard label: 8

Classification code:	C9
Special Provisions:	533
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

Other applicable information (land transport)

-

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

14.1. UN number:	UN 2209
14.2. UN proper shipping name:	FORMALDEHYDE SOLUTION
14.3. Transport hazard class(es):	8
14.4. Packing group:	III

Hazard label: 8

Marine pollutant:	-
Special Provisions:	-
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-B

Other applicable information (marine transport)

-

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 2209
14.2. UN proper shipping name:	FORMALDEHYDE SOLUTION
14.3. Transport hazard class(es):	8
14.4. Packing group:	III

Hazard label: 8

Special Provisions:	A803
Limited quantity Passenger:	1 L
Passenger LQ:	Y841
Excepted quantity:	E1
IATA-packing instructions - Passenger:	852
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	856

IATA-max. quantity - Cargo: 60 L

Other applicable information (air transport)

-

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

no data available

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

Not relevant

Other applicable information

Additional Information:This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit, Hazard Class: 9, UN Number3316, 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

Restrictions on use (REACH, annex XVII):

Entry 28: formaldehyde ... %

Entry 69: methanol

National regulatory information

Employment restrictions:	Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.
Water contaminating class (D):	1 - slightly water contaminating

15.2. Chemical safety assessment

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

SECTION 16: Other information

Changes

Revision: 12.07.2017

Safety datasheet sections which have been updated: 2, 3

Revision: 08.12.2016

Safety datasheet sections which have been updated: 2, 11, 12

Revision: 17.03.2015

Safety datasheet sections which have been updated: 3

Revision: 11.03.2015

Safety datasheet sections which have been updated: 2-16

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H370	Causes damage to organs.
H372	Causes 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.

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

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

1.1. Product identifier

14323-99 Potassium 3 Reagent

CAS No: 143-66-8

EC No: 205-605-5

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

Use of the substance/mixture

Water analysis

1.3. Details of the supplier of the safety data sheet

Company name: HACH LANGE GmbH

Street: Willstätterstr. 11

Place: D-40549 Düsseldorf

Telephone: +49 (0)211 5288-383

e-mail: SDS@hach.com

Internet: www.de.hach.com

Responsible Department: HACH LANGE Ltd.
5, Pacific Way
Salford Manchester M50 1DL - United Kingdom
Tel. +44 (0) 161 872 1487 * Fax +44 (0) 161 848 7324
e-Mail: info-uk@hach.com

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

1.4. Emergency telephone number:

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Acute toxicity: Acute Tox. 3
Hazard Statements:
Toxic if swallowed.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

Sodium tetraphenyl borate

Signal word: Danger

Pictograms:

Hazard statements

H301 Toxic if swallowed.

Precautionary statements

P264	Wash thoroughly after handling.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P330	Rinse mouth.

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

Sum formula: C24H20BNa

Molecular weight: 342,22 g/mol

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
143-66-8	Sodium tetraphenyl borate			100 %
	205-605-5			
	Acute Tox. 3; H301			

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.

After contact with skin

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

After contact with eyes

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

After ingestion

Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person.

Consult a physician.

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

If swallowed: Nausea, Vomiting, Spasm,

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 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.

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

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

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

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

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

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

Protective and hygiene measures

Wash hands before breaks and at the end of workday.

Eye/face protection

Safety glasses with side-shields

Hand protection

Use barrier skin cream.

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

Skin protection

Avoid contact with skin, eyes and clothing.

Respiratory protection

Provide adequate 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:	solid
Colour:	white
Odour:	phenol-like
pH-Value (at 20 °C):	8 (5 % solution)

Changes in the physical state

Melting point:	> 300 °C
Initial boiling point and boiling range:	no data available
Sublimation point:	no data available
Softening point:	not applicable
Pour point:	not applicable
Flash point:	-

Flammability

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:	no data available

Auto-ignition temperature

Solid:	no data available
Gas:	no data available
Decomposition temperature:	no data available

Oxidizing properties

no data available

Vapour pressure:	no data available
Density:	no data available
Bulk density:	500 kg/m³
Water solubility: (at 20 °C)	soluble

Solubility in other solvents

no data available

Partition coefficient:	no data available

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

9.2. Other information

Solid content:	no data available

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: Oxidizing agents, Acids, Bases

10.4. Conditions to avoid

To avoid thermal decomposition, do not overheat.

10.5. Incompatible materials

Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

10.6. Hazardous decomposition products

None known.

Further information

Stable under recommended storage conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution

No toxicology information is available.

Acute toxicity

LD50/oral/rat = 288 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
143-66-8	Sodium tetraphenyl borate				
	oral	LD50 288 mg/kg	Ratte		

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

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

LC50/48h/daphnia = 32 mg/l

Do not flush into surface water or sanitary sewer system.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
143-66-8	Sodium tetraphenyl borate					
	Acute crustacea toxicity	EC50 32 mg/l	48 h	Daphnia magna (Water flea)		

12.2. Persistence and degradability

No data is available on the product itself.

12.3. Bioaccumulative potential

Bioaccumulative potential

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

Advice on disposal

In accordance with local and national regulations.

Waste disposal number of waste from residues/unused products

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

Waste disposal number of used product

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

Waste disposal number of contaminated packaging

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

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 2811
14.2. UN proper shipping name:	Toxic solid, organic, n.o.s. (Sodium tetraphenyl borate)
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	III
Hazard label:	6.1

Classification code:	T2
Special Provisions:	274 614
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	2
Hazard No:	60
Tunnel restriction code:	E

Other applicable information (land transport)

-

Inland waterways transport (ADN)

Other applicable information (inland waterways transport)

Not tested

Marine transport (IMDG)

14.1. UN number:	UN 2811
14.2. UN proper shipping name:	TOXIC SOLID, ORGANIC, N.O.S. (Sodium tetraphenyl borate)
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	III
Hazard label:	6.1

Marine pollutant:	-
Special Provisions:	223, 274
Limited quantity:	5 kg
Excepted quantity:	E1
EmS:	F-A, S-A

Other applicable information (marine transport)

-

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 2811
14.2. UN proper shipping name:	TOXIC SOLID, ORGANIC, N.O.S. (Sodium tetraphenyl borate)
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	III
Hazard label:	6.1

Special Provisions:	A3 A5

Limited quantity Passenger:	10 kg	
Passenger LQ:	Y645	
Excepted quantity:	E1	
IATA-packing instructions - Passenger:		670
IATA-max. quantity - Passenger:		100 kg
IATA-packing instructions - Cargo:		677
IATA-max. quantity - Cargo:		200 kg

Other applicable information (air transport)

-

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

no data available

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

Not relevant

Other applicable information

Additional Information:This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit, Hazard Class: 9, UN Number3316, 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

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

Water contaminating class (D): 2 - clearly 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: 26.11.2015
Safety datasheet sections which have been updated: 2 - 16

Relevant H and EUH statements (number and full text)

H301 Toxic if swallowed.

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.