

19.09.2024

Kit Components

Product code	Description
CAY640-VxxAAE	CA70SI Reagent Set for silicate

Components:

51508826	Reagent SI1 for silicate
51508827	Reagent SI2 for silicate
51509841	Reagent SI3 for silicate

SECTION 1: Identification of the substance or mixture and of the supplier

1.1 Product identifier

Trade name: Reagent SI1

Synonym: *for silicate*

Article number: 51508826

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

No further relevant information available.

Application of the substance / the mixture *Laboratory chemicals*

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Endress+Hauser

Conducta GmbH+Co. KG

Dieselstraße 24

D-70839 Gerlingen

Further information obtainable from:

Phone: +49 (0)7156 209-10117

E-Mail: MSDS.PCC@endress.com

1.4 Emergency telephone number: 0064 800 764 766

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



health hazard

*Specific target organ toxicity - repeated exposure
Category 2*

*H373 May cause damage to organs through
prolonged or repeated exposure.*



corrosion

Serious eye damage Category 1

H318 Causes serious eye damage.



Skin irritation Category 2

H315 Causes skin irritation.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS05 GHS08

Signal word *Danger*

Hazard-determining components of labelling:

Sodium hydrogensulfate monohydrate

molybdic acid

sulphuric acid

Hazard statements

H315 Causes skin irritation.

Trade name: Reagent S11

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H318 Causes serious eye damage.

H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

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.

P321 Specific treatment (see on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/Information on ingredients

3.2 Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 10034-88-5 EINECS: 231-665-7	Sodium hydrogensulfate monohydrate ⚠️ Serious eye damage Category 1, H318	5-10%
CAS: 7664-93-9 EINECS: 231-639-5	sulphuric acid ⚠️ Skin corrosion Category 1A, H314	2-6%
CAS: 7782-91-4 EINECS: 231-970-5	molybdic acid ⚠️ Specific target organ toxicity - repeated exposure Category 2, H373; ⚠️ Specific target organ toxicity - single exposure Category 3, H335	2-6%

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

After inhalation: In case of unconsciousness place patient stably in side position for transportation.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

Immediately rinse with water.

After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing: If symptoms persist consult doctor.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Fire fighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

For safety reasons unsuitable extinguishing agents: no further information

5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

(Contd. on page 3)

Trade name: Reagent S11

(Contd. of page 2)

5.3 Advice for firefighters *No further relevant information available.*
Protective equipment: *Mount respiratory protective device.*

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
Wear protective clothing.

6.2 Environmental precautions:

Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

Information about fire - and explosion protection: *Keep respiratory protective device available.*

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: *No special requirements.*

Information about storage in one common storage facility: *Not required.*

Further information about storage conditions: *Keep container tightly sealed.*

Storage class: *8 B*

7.3 Specific end use(s) *No further relevant information available.*

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

CAS: 7664-93-9 sulphuric acid

<i>WES (New Zealand)</i>	<i>Long-term value: 0.1 mg/m³</i> <i>confirmed carcinogen</i>
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<i>IOELV (EU)</i>	<i>Long-term value: 0.05 mg/m³</i>
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DNELs

CAS: 7664-93-9 sulphuric acid

<i>Inhalative</i>	<i>DNEL short-term</i>	<i>0.1 mg/m³ (worker) (local effects)</i>
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	<i>DNEL long-term</i>	<i>0.05 mg/m³ (worker) (local effects)</i>
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PNECs

CAS: 7664-93-9 sulphuric acid

<i>PNEC</i>	<i>8.8 mg/L (Wastewater treatment plant)</i>
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	<i>0.25 mg/L (sea water)</i>
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<i>PNEC</i>	<i>2.5 µg/L (fresh water)</i>
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(Contd. on page 4)

Trade name: Reagent S11

(Contd. of page 3)

<i>PNEC</i>	2 µg/kg (marine sediment)
	2 µg/kg (freshwater sediment)

Additional information: *The lists valid during the making were used as basis.*

8.2 Exposure controls

Appropriate engineering controls *No further data; see section 7.*

Individual protection measures, such as personal protective equipment

General protective and hygienic measures:

- Keep away from foodstuffs, beverages and feed.*
- Immediately remove all soiled and contaminated clothing*
- Wash hands before breaks and at the end of work.*
- Store protective clothing separately.*
- Avoid contact with the skin.*
- Avoid contact with the eyes and skin.*

Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Hand protection



Protective gloves

To avoid skin problems reduce the wearing of gloves to the required minimum. Only use chemical-protective gloves with CE-labelling of category III. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves

- Nitrile rubber, NBR*
- Natural rubber, NR*
- Chloroprene rubber, CR*

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye/face protection



Tightly sealed goggles

Body protection: *Protective work clothing*

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Physical state	<i>Fluid</i>
Colour:	<i>Colourless</i>
Odour:	<i>Characteristic</i>
Odour threshold:	<i>Not determined.</i>
Melting point/freezing point:	<i>Undetermined.</i>
Boiling point or initial boiling point and boiling range	<i>100 °C</i>

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Trade name: Reagent S11

(Contd. of page 4)

Flammability	<i>Not applicable.</i>
Lower and upper explosion limit	
Lower:	<i>Not determined.</i>
Upper:	<i>Not determined.</i>
Flash point:	<i>Not applicable.</i>
Decomposition temperature:	<i>Not determined.</i>
pH	<i>Acidic</i>
Viscosity:	
Kinematic viscosity	<i>Not determined.</i>
Dynamic:	<i>Not determined.</i>
Solubility	
water:	<i>Fully miscible.</i>
Partition coefficient n-octanol/water (log value)	<i>Not determined.</i>
Vapour pressure at 20 °C:	<i>23 hPa</i>
Density and/or relative density	
Density:	<i>Not determined.</i>
Relative density	<i>Not determined.</i>
Vapour density	<i>Not determined.</i>
Particle characteristics	<i>Not applicable.</i>
9.2 Other information	
Appearance:	
Form:	<i>Fluid</i>
Important information on protection of health and environment, and on safety.	
Ignition temperature:	<i>Product is not selfigniting.</i>
Explosive properties:	<i>Product does not present an explosion hazard. Not determined.</i>
Solvent content:	
Water:	<i>>80.0 %</i>
Solids content:	<i>0.0 %</i>
Change in condition	
Evaporation rate	<i>Not determined.</i>
Information with regard to physical hazard classes	
Explosives	<i>Void</i>
Flammable gases	<i>Void</i>
Aerosols	<i>Void</i>
Oxidising gases	<i>Void</i>
Gases under pressure	<i>Void</i>
Flammable liquids	<i>Void</i>
Flammable solids	<i>Void</i>
Self-reactive substances and mixtures	<i>Void</i>
Pyrophoric liquids	<i>Void</i>
Pyrophoric solids	<i>Void</i>
Self-heating substances and mixtures	<i>Void</i>
Substances and mixtures, which emit flammable gases in contact with water	<i>Void</i>
Oxidising liquids	<i>Void</i>
Oxidising solids	<i>Void</i>
Organic peroxides	<i>Void</i>
Corrosive to metals	<i>Void</i>
Desensitised explosives	<i>Void</i>

SECTION 10: Stability and reactivity

10.1 Reactivity *No further relevant information available.*

(Contd. on page 6)

Trade name: Reagent S11

(Contd. of page 5)

10.2 Chemical stability**Thermal decomposition / conditions to be avoided:***No decomposition if used according to specifications.***10.3 Possibility of hazardous reactions** *No dangerous reactions known.***10.4 Conditions to avoid** *No further relevant information available.***10.5 Incompatible materials:** *No further relevant information available.***10.6 Hazardous decomposition products:** *No dangerous decomposition products known.***SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity** *Based on available data, the classification criteria are not met.***LD/LC50 values relevant for classification:****CAS: 7782-91-4 molybdic acid**

Oral | LD50 | 2,689 mg/kg (rat)

Skin corrosion/irritation *Causes skin irritation.***Serious eye damage/irritation** *Causes serious eye damage.***STOT-repeated exposure** *May cause damage to organs through prolonged or repeated exposure.***11.2 Information on other hazards****Endocrine disrupting properties***None of the ingredients is listed.***SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:** *No further relevant information available.***12.2 Persistence and degradability** *No further relevant information available.***12.3 Bioaccumulative potential** *No further relevant information available.***12.4 Mobility in soil** *No further relevant information available.***12.5 Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***12.6 Endocrine disrupting properties***The product does not contain substances with endocrine disrupting properties.***12.7 Other adverse effects****Additional ecological information:****General notes:***Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water**Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.**Must not reach sewage water or drainage ditch undiluted or unneutralised.***SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation***Must not be disposed together with household garbage. Do not allow product to reach sewage system.***Uncleaned packaging:****Recommendation:** *Disposal must be made according to official regulations.***Recommended cleansing agents:** *Water, if necessary together with cleansing agents.***SECTION 14: Transport information****14.1 UN number or ID number**

IMDG, IATA

UN2796

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— NZ —

Trade name: Reagent S11

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14.2 UN proper shipping name

NZS UN2796 SULPHURIC ACID
IMDG SULPHURIC ACID
IATA Sulphuric acid

14.3 Transport hazard class(es)

NZS



Class 8 (C1) Corrosive substances.
Label 8

IMDG, IATA



Class 8 Corrosive substances.
Label 8

14.4 Packing group

NZS, IMDG, IATA II

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Warning: Corrosive substances.

Hazard identification number (Kemler code):

80

EMS Number:

F-A, S-B

Segregation groups

(SGG1a) Strong acids

Stowage Category

B

Segregation Code

SG36 Stow "separated from" SGG18-alkalis.

SG49 Stow "separated from" SGG6-cyanides

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

Transport/Additional information:

NZS

Limited quantities (LQ) 1L
Transport category 2
Tunnel restriction code E

IMDG

Limited quantities (LQ) 1L
Excepted quantities (EQ) Code: E2
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation": UN 2796 SULPHURIC ACID, 8, II

SECTION 15: Regulatory information

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

New Zealand Inventory of Chemicals

All ingredients are listed.

HSNO Approval numbers

None of the ingredients is listed.

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

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Trade name: Reagent S11

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Hazard pictograms



GHS05 GHS08

Signal word *Danger*

Hazard-determining components of labelling:

Sodium hydrogensulfate monohydrate
molybdic acid
sulphuric acid

Hazard statements

H315 Causes skin irritation.
H318 Causes serious eye damage.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

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.*
P321 *Specific treatment (see on this label).*
P362+P364 *Take off contaminated clothing and wash it before reuse.*
P501 *Dispose of contents/container in accordance with local/regional/national/international regulations.*

Directive 2012/18/EU

Named dangerous substances - ANNEX I *None of the ingredients is listed.*

National regulations:

Waterhazard class: *Water hazard class 1 (Self-assessment): slightly hazardous for water.*
15.2 Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.*

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

16.1 Relevant phrases

H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.

16.3 Recommended restriction of use

Department issuing SDS: PCC-TWR

Contact: MSDS.pcc@endress.com

Abbreviations and acronyms:

ADR: *Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)*
IMDG: *International Maritime Code for Dangerous Goods*
IATA: *International Air Transport Association*
GHS: *Globally Harmonised System of Classification and Labelling of Chemicals*
EINECS: *European Inventory of Existing Commercial Chemical Substances*
ELINCS: *European List of Notified Chemical Substances*
CAS: *Chemical Abstracts Service (division of the American Chemical Society)*
DNEL: *Derived No-Effect Level (REACH)*
PNEC: *Predicted No-Effect Concentration (REACH)*
LC50: *Lethal concentration, 50 percent*
LD50: *Lethal dose, 50 percent*
PBT: *Persistent, Bioaccumulative and Toxic*
vPvB: *very Persistent and very Bioaccumulative*
Skin corrosion Category 1A: *Skin corrosion/irritation – Category 1A*
Skin irritation Category 2: *Skin corrosion/irritation – Category 2*
Serious eye damage Category 1: *Serious eye damage/eye irritation – Category 1*

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Safety Data Sheet

in accordance with HSNO

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Date of issue: 19.09.2024

Version 8 (replaces version 7)

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Trade name: Reagent S11

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Specific target organ toxicity - single exposure Category 3: Specific target organ toxicity (single exposure) – Category 3

Specific target organ toxicity - repeated exposure Category 2: Specific target organ toxicity (repeated exposure) – Category 2

*** Data compared to the previous version altered.**

—NZ—

SECTION 1: Identification of the substance or mixture and of the supplier**1.1 Product identifier****Trade name:** Reagent SI2**Synonym:** *for silicate***Article number:** 51508827**1.2 Relevant identified uses of the substance or mixture and uses advised against***No further relevant information available.***Application of the substance / the mixture** *Laboratory chemicals***1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:***Endress+Hauser**Conducta GmbH+Co. KG**Dieselstraße 24**D-70839 Gerlingen***Further information obtainable from:***Phone: +49 (0)7156 209-10117**E-Mail: MSDS.PCC@endress.com***1.4 Emergency telephone number:** 0064 800 764 766**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008***Eye irritation Category 2 H319 Causes serious eye irritation.***2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008***The product is classified and labelled according to the CLP regulation.***Hazard pictograms**

GHS07

Signal word *Warning***Hazard statements***H319 Causes serious eye irritation.***Precautionary statements***P264 Wash thoroughly after handling.**P280 Wear eye protection / face protection.**P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P337+P313 If eye irritation persists: Get medical advice/attention.***2.3 Other hazards***The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.*

(Contd. on page 2)

— NZ —

Trade name: Reagent SI2

(Contd. of page 1)

SECTION 3: Composition/Information on ingredients**3.2 Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 77-92-9	citric acid	10-20%
EINECS: 201-069-1	⚠ Eye irritation Category 2, H319; Specific target organ toxicity - single exposure Category 3, H335	

Additional information: For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures****4.1 Description of first aid measures****After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing: If symptoms persist consult doctor.**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Fire fighting measures**5.1 Extinguishing media****Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:** no further information**5.2 Special hazards arising from the substance or mixture** No further relevant information available.**5.3 Advice for firefighters** No further relevant information available.**Protective equipment:** No special measures required.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.**6.2 Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

6.4 Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage**7.1 Precautions for safe handling** No special precautions are necessary if used correctly.**Information about fire - and explosion protection:** No special measures required.

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Trade name: Reagent SI2

(Contd. of page 2)

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:** *No special requirements.***Information about storage in one common storage facility:** *Not required.***Further information about storage conditions:** *Keep container tightly sealed.***Storage class:** 12**7.3 Specific end use(s)** *No further relevant information available.***SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:***The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.***Additional information:** *The lists valid during the making were used as basis.***8.2 Exposure controls****Appropriate engineering controls** *No further data; see section 7.***Individual protection measures, such as personal protective equipment****General protective and hygienic measures:***Keep away from foodstuffs, beverages and feed.**Immediately remove all soiled and contaminated clothing**Wash hands before breaks and at the end of work.**Avoid contact with the eyes.**Avoid contact with the eyes and skin.***Respiratory protection:** *Not required.***Hand protection***Protective gloves**To avoid skin problems reduce the wearing of gloves to the required minimum.**Only use chemical-protective gloves with CE-labelling of category III.**The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.***Material of gloves***Nitrile rubber, NBR**The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.***Penetration time of glove material***The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.***Eyeface protection***Tightly sealed goggles***Body protection:** *Protective work clothing*

(Contd. on page 4)

— NZ —

Trade name: Reagent SI2

(Contd. of page 3)

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

Physical state	<i>Fluid</i>
Colour:	<i>Colourless</i>
Odour:	<i>Odourless</i>
Odour threshold:	<i>Not determined.</i>
Melting point/freezing point:	<i>Undetermined.</i>
Boiling point or initial boiling point and boiling range	<i>100 °C</i>
Flammability	<i>Not applicable.</i>
Lower and upper explosion limit	
Lower:	<i>Not determined.</i>
Upper:	<i>Not determined.</i>
Flash point:	<i>Not applicable.</i>
Auto-ignition temperature:	<i>1 °C</i>
Decomposition temperature:	<i>Not determined.</i>
pH	<i>Slightly acidic</i>
Viscosity:	
Kinematic viscosity	<i>Not determined.</i>
Dynamic:	<i>Not determined.</i>
Solubility	
water:	<i>Fully miscible.</i>
Partition coefficient n-octanol/water (log value)	<i>Not determined.</i>
Vapour pressure at 20 °C:	<i>23 hPa</i>
Density and/or relative density	
Density at 20 °C:	<i>1.081 g/cm³</i>
Relative density	<i>Not determined.</i>
Vapour density	<i>Not determined.</i>
Particle characteristics	<i>Not applicable.</i>

9.2 Other information

Appearance:	
Form:	<i>Fluid</i>
Important information on protection of health and environment, and on safety.	
Ignition temperature:	<i>Product is not selfigniting.</i>
Explosive properties:	<i>Product does not present an explosion hazard. Not determined.</i>
Solvent content:	
Water:	<i>>80.0 %</i>
Solids content:	<i>0.0 %</i>
Change in condition	
Evaporation rate	<i>Not determined.</i>

Information with regard to physical hazard classes

Explosives	<i>Void</i>
Flammable gases	<i>Void</i>
Aerosols	<i>Void</i>
Oxidising gases	<i>Void</i>
Gases under pressure	<i>Void</i>
Flammable liquids	<i>Void</i>
Flammable solids	<i>Void</i>
Self-reactive substances and mixtures	<i>Void</i>
Pyrophoric liquids	<i>Void</i>
Pyrophoric solids	<i>Void</i>

(Contd. on page 5)

Trade name: Reagent SI2

(Contd. of page 4)

Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

10.4 Conditions to avoid No further relevant information available.

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

LD/LC50 values relevant for classification:

CAS: 77-92-9 citric acid

Oral | LD50 | 5,040 mg/kg (mouse)

Serious eye damage/irritation Causes serious eye irritation.

11.2 Information on other hazards

Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

12.4 Mobility in soil No further relevant information available.

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects

Additional ecological information:

General notes:

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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Trade name: Reagent SI2

(Contd. of page 5)

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Uncleaned packaging:

Recommendation: *Disposal must be made according to official regulations.*

Recommended cleansing agents: *Water, if necessary together with cleansing agents.*

SECTION 14: Transport information

14.1 UN number or ID number

ADN, IMDG, IATA

Void

14.2 UN proper shipping name

NZS, ADN, IMDG, IATA

Void

14.3 Transport hazard class(es)

NZS, ADN, IMDG, IATA

Class

Void

14.4 Packing group

NZS, IMDG, IATA

Void

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO

instruments

Not applicable.

UN "Model Regulation":

Void

SECTION 15: Regulatory information

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

New Zealand Inventory of Chemicals

All ingredients are listed.

HSNO Approval numbers

None of the ingredients is listed.

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS07

Signal word *Warning*

Hazard statements

H319 Causes serious eye irritation.

Precautionary statements

P264 Wash thoroughly after handling.

P280 Wear eye protection / face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 If eye irritation persists: Get medical advice/attention.

Directive 2012/18/EU

Named dangerous substances - ANNEX I *None of the ingredients is listed.*

(Contd. on page 7)

Trade name: Reagent SI2

(Contd. of page 6)

National regulations:**Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.***15.2 Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

16.1 Relevant phrases*H319 Causes serious eye irritation.**H335 May cause respiratory irritation.***16.3 Recommended restriction of use****Department issuing SDS:** *PCC-TWR***Contact:** *MSDS.pcc@endress.com***Abbreviations and acronyms:***ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Eye irritation Category 2: Serious eye damage/eye irritation – Category 2**Specific target organ toxicity - single exposure Category 3: Specific target organ toxicity (single exposure) – Category 3**** Data compared to the previous version altered.**

SECTION 1: Identification of the substance or mixture and of the supplier**1.1 Product identifier****Trade name:** Reagent SI3**Synonym:** *for silicate***Article number:** 51509841**1.2 Relevant identified uses of the substance or mixture and uses advised against***No further relevant information available.***Application of the substance / the mixture** *Laboratory chemicals***1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:***Endress+Hauser**Conducta GmbH+Co. KG**Dieselstraße 24**D-70839 Gerlingen***Further information obtainable from:***Phone: +49 (0)7156 209-10117**E-Mail: MSDS.PCC@endress.com***1.4 Emergency telephone number:** 0064 800 764 766**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008***corrosion**Serious eye damage Category 1 H318 Causes serious eye damage.***2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008***The product is classified and labelled according to the CLP regulation.***Hazard pictograms**

GHS05

Signal word *Danger***Hazard-determining components of labelling:***disodium disulphite***Hazard statements***H318 Causes serious eye damage.***Precautionary statements***P280 Wear eye protection / face protection.**P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P310 Immediately call a POISON CENTER/doctor.***2.3 Other hazards***The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.*

Trade name: Reagent SI3

(Contd. of page 1)

SECTION 3: Composition/Information on ingredients**3.2 Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 124-68-5 EINECS: 204-709-8	2-amino-2-methylpropanol ⚠ Skin irritation Category 2, H315; Eye irritation Category 2, H319; Hazardous to the aquatic environment chronic Category 3, H412	5-10%
CAS: 7681-57-4 EINECS: 231-673-0	disodium disulphite ⚠ Serious eye damage Category 1, H318; ⚠ Acute oral toxicity Category 4, H302	2-6%

Additional information: For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First aid measures****4.1 Description of first aid measures****After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:** Generally the product does not irritate the skin.**After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.**After swallowing:** If symptoms persist consult doctor.**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Fire fighting measures**5.1 Extinguishing media****Suitable extinguishing agents:**CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:** no further information**5.2 Special hazards arising from the substance or mixture** No further relevant information available.**5.3 Advice for firefighters** No further relevant information available.**Protective equipment:** No special measures required.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Wear protective clothing.

6.2 Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to section 13.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

(Contd. on page 3)

— NZ —

Trade name: Reagent SI3

(Contd. of page 2)

*** SECTION 7: Handling and storage**

7.1 Precautions for safe handling *No special precautions are necessary if used correctly.*

Information about fire - and explosion protection: *No special measures required.*

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles: *No special requirements.*

Information about storage in one common storage facility: *Not required.*

Further information about storage conditions: *Keep container tightly sealed.*

Storage class: 12

7.3 Specific end use(s) *No further relevant information available.*

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

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

CAS: 7681-57-4 disodium disulphite

WES (New Zealand)	Long-term value: 5 mg/m ³ dsen, rsen
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Additional information: *The lists valid during the making were used as basis.*

8.2 Exposure controls

Appropriate engineering controls *No further data; see section 7.*

Individual protection measures, such as personal protective equipment

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Avoid contact with the eyes and skin.

Respiratory protection: *Not required.*

Hand protection



Protective gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

Only use chemical-protective gloves with CE-labelling of category III.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Material of gloves

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 4)

Trade name: Reagent S13

(Contd. of page 3)

Eye/face protection



Tightly sealed goggles

Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Physical state	Fluid
Colour:	Yellowish
Odour:	Pungent
Odour threshold:	Not determined.
Melting point/freezing point:	Undetermined.
Boiling point or initial boiling point and boiling range	Undetermined.
Flammability	Not applicable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	Not applicable.
Decomposition temperature:	Not determined.
pH	Slightly alkaline
Viscosity:	
Kinematic viscosity	Not determined.
Dynamic:	Not determined.
Solubility	
water:	Fully miscible.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure at 20 °C:	23 hPa
Density and/or relative density	
Density:	Not determined.
Relative density	Not determined.
Vapour density	Not determined.
Particle characteristics	Not applicable.

9.2 Other information

Appearance:	
Form:	Fluid
Important information on protection of health and environment, and on safety.	
Ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard. Not determined.
Solvent content:	
Organic solvents:	7.5 %
Water:	>80.0 %
Solids content:	0.0 %
Change in condition	
Evaporation rate	Not determined.

Information with regard to physical hazard classes

Explosives	Void
Flammable gases	Void
Aerosols	Void

(Contd. on page 5)

Trade name: Reagent SI3

(Contd. of page 4)

Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

SECTION 10: Stability and reactivity**10.1 Reactivity** *No further relevant information available.***10.2 Chemical stability****Thermal decomposition / conditions to be avoided:***No decomposition if used according to specifications.***10.3 Possibility of hazardous reactions** *No dangerous reactions known.***10.4 Conditions to avoid** *No further relevant information available.***10.5 Incompatible materials:** *No further relevant information available.***10.6 Hazardous decomposition products:** *No dangerous decomposition products known.***SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity** *Based on available data, the classification criteria are not met.***Serious eye damage/irritation** *Causes serious eye damage.***11.2 Information on other hazards****Endocrine disrupting properties***None of the ingredients is listed.***SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:** *No further relevant information available.***12.2 Persistence and degradability** *No further relevant information available.***12.3 Bioaccumulative potential** *No further relevant information available.***12.4 Mobility in soil** *No further relevant information available.***12.5 Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***12.6 Endocrine disrupting properties***The product does not contain substances with endocrine disrupting properties.***12.7 Other adverse effects****Additional ecological information:****General notes:***Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water**Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.**Must not reach sewage water or drainage ditch undiluted or unneutralised.*

(Contd. on page 6)

Trade name: Reagent SI3

(Contd. of page 5)

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Recommendation***Must not be disposed together with household garbage. Do not allow product to reach sewage system.***Uncleaned packaging:****Recommendation:** *Disposal must be made according to official regulations.***Recommended cleansing agents:** *Water, if necessary together with cleansing agents.***SECTION 14: Transport information****14.1 UN number or ID number**

ADN, IMDG, IATA

Void

14.2 UN proper shipping name

NZS, ADN, IMDG, IATA

Void

14.3 Transport hazard class(es)

NZS, ADN, IMDG, IATA

Class

Void

14.4 Packing group

NZS, IMDG, IATA

Void

14.5 Environmental hazards:

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO

instruments

Not applicable.

UN "Model Regulation":

Void

*** SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****New Zealand Inventory of Chemicals***All ingredients are listed.***HSNO Approval numbers**

CAS: 7681-57-4 | disodium disulphite

HSR001548

Labelling according to Regulation (EC) No 1272/2008*The product is classified and labelled according to the CLP regulation.***Hazard pictograms**

GHS05

Signal word *Danger***Hazard-determining components of labelling:***disodium disulphite***Hazard statements***H318 Causes serious eye damage.***Precautionary statements***P280 Wear eye protection / face protection.**P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P310 Immediately call a POISON CENTER/doctor.***Directive 2012/18/EU****Named dangerous substances - ANNEX I** *None of the ingredients is listed.*

(Contd. on page 7)

Trade name: Reagent SI3

(Contd. of page 6)

National regulations:**Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.***15.2 Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

16.1 Relevant phrases*H302 Harmful if swallowed.**H315 Causes skin irritation.**H318 Causes serious eye damage.**H319 Causes serious eye irritation.**H412 Harmful to aquatic life with long lasting effects.***16.3 Recommended restriction of use****Department issuing SDS:** *PCC-TWR***Contact:** *MSDS.pcc@endress.com***Abbreviations and acronyms:***RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)**IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)**ICAO: International Civil Aviation Organisation**ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)**ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute oral toxicity Category 4: Acute toxicity – Category 4**Skin irritation Category 2: Skin corrosion/irritation – Category 2**Serious eye damage Category 1: Serious eye damage/eye irritation – Category 1**Eye irritation Category 2: Serious eye damage/eye irritation – Category 2**Hazardous to the aquatic environment chronic Category 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3**** Data compared to the previous version altered.**