

07/17/2023

Kit Components

Product code	Description
CAY640-VxxAAH	CA70SI Reagent Set for silicate

Components:

51508826	Reagent SI1 for silicate
51508827	Reagent SI2 for silicate
51509864_1	Reagent SI3, Component 1 for silicate
51509864_2	Reagent SI3, Component 2 for silicate

1 Identification

Product identifier

Trade name: Reagent SI1

Synonym: *for silicate*

Article number: 51508826

Application of the substance / the mixture *Laboratory chemicals*

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

Emergency telephone number: +1 604 682 5050

2 Hazard identification

Classification of the substance or mixture



GHS08 Health hazard

Specific Target Organ Toxicity - Repeated Exposure - H373 May cause damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

Serious Eye Damage - Category 1

H318 Causes serious eye damage.



GHS07

Skin Irritation - Category 2

H315 Causes skin irritation.

Label elements

GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

Hazard pictograms



GHS05 GHS08

Signal word *Danger*

Hazard-determining components of labelling:

*Sodium hydrogensulfate monohydrate
molybdic acid
sulphuric acid*

Hazard statements

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

Trade name: Reagent SI1

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Precautionary statements

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

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.





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

Other hazards

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

*** 3 Composition/Information on ingredients****Chemical characterisation: Mixtures**

Description: *Mixture of substances listed below with nonhazardous additions.*

Dangerous components:		
CAS: 10034-88-5	Sodium hydrogensulfate monohydrate  Serious Eye Damage - Category 1, H318	5-10% *
CAS: 7664-93-9	sulphuric acid  Skin Corrosion - Category 1A, H314	2-6% *
CAS: 7782-91-4	molybdc 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.*

4 First-aid measures**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.*

Information for doctor:

Most important symptoms and effects, both acute and delayed

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures**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*

Special hazards arising from the substance or mixture

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

Advice for firefighters *No further relevant information available.*

Protective equipment: *Mount respiratory protective device.*

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— CDN —

Trade name: Reagent SI1

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6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

Wear protective clothing.

Environmental precautions:

Dilute with plenty of water.

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

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.

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.

7 Handling and storage

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.

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

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

8 Exposure controls/ Personal protection

Additional information about design of technical facilities: No further data; see section 7.

Control parameters

Ingredients with limit values that require monitoring at the workplace:

CAS: 7664-93-9 sulphuric acid

EL TWA: 0.2 mg/m³
thoracic, ACGIH A2; IARC 1

EV TWA: 0.2 mg/m³

CAS: 7782-91-4 molybdic acid

EL TWA: 0.5 mg/m³
as Mo; respirable

DNELs

CAS: 7664-93-9 sulphuric acid

Inhalative DNEL short-term 0.1 mg/m³ (worker) (local effects)

DNEL long-term 0.05 mg/m³ (worker) (local effects)

PNECs

CAS: 7664-93-9 sulphuric acid

PNEC 8.8 mg/L (Wastewater treatment plant)

0.25 mg/L (sea water)

PNEC 2.5 µg/L (fresh water)

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Trade name: Reagent SI1

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PNEC	2 µg/kg (marine sediment)
	2 µg/kg (freshwater sediment)

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

Exposure controls**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.

Protection of hands:

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 protection:

Tightly sealed goggles

Body protection: *Protective work clothing***9 Physical and chemical properties****Information on basic physical and chemical properties****General Information****Appearance:**

Form:

Fluid

Colour:

Colourless

Odour:

Characteristic

Odour threshold:

Not determined.

pH-value:

Acidic

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—CDN—

Trade name: Reagent SI1

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Change in condition

Melting point/freezing point: *Undetermined.*Initial boiling point and boiling range: *100 °C*Flash point: *Not applicable.*Flammability (solid, gas): *Not applicable.*Decomposition temperature: *Not determined.*Ignition temperature: *Product is not selfigniting.*Explosive properties: *Product does not present an explosion hazard.
Not determined.*

Explosion limits:

Lower: *Not determined.*Upper: *Not determined.*Vapour pressure at 20 °C: *23 hPa*Density: *Not determined.*Relative density: *Not determined.*Vapour density: *Not determined.*Evaporation rate: *Not determined.*Solubility in / Miscibility with
water:*Fully miscible.*Partition coefficient: n-octanol/water: *Not determined.*

Viscosity:

Dynamic: *Not determined.*Kinematic: *Not determined.*

Solvent content:

Water: *>80.0 %*Solids content: *0.0 %*Other information: *No further relevant information available.*

10 Stability and reactivity

Reactivity: *No further relevant information available.*

Chemical stability

Thermal decomposition / conditions to be avoided:

*No decomposition if used according to specifications.*Possibility of hazardous reactions: *No dangerous reactions known.*Conditions to avoid: *No further relevant information available.*Incompatible materials: *No further relevant information available.*Hazardous decomposition products: *No dangerous decomposition products known.*

11 Toxicological information

Information on toxicological effects

Acute toxicity

LD/LC50 values relevant for classification:

CAS: 7782-91-4 molybdic acid

Oral LD50 2,689 mg/kg (rat)

Primary irritant effect:

Skin corrosion/irritation: *Irritant to skin and mucous membranes.*Serious eye damage/irritation: *Strong irritant with the danger of severe eye injury.*Respiratory or skin sensitisation: *No sensitising effects known.*

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Trade name: Reagent S11

(Contd. of page 5)

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant

12 Ecological information**Toxicity**

Aquatic toxicity: *No further relevant information available.*

Persistence and degradability *No further relevant information available.*

Behaviour in environmental systems:

Bioaccumulative potential *No further relevant information available.*

Mobility in soil *No further relevant information available.*

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.

Results of PBT and vPvB assessment

PBT: *Not applicable.*

vPvB: *Not applicable.*

Other adverse effects *No further relevant information available.*

13 Disposal considerations**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.*

14 Transport information*UN-Number****IMDG, IATA**

UN2796

UN proper shipping name**ADR**

UN2796 SULPHURIC ACID

IMDG

SULPHURIC ACID

IATA

Sulphuric acid

Transport hazard class(es)**ADR****Class**

8 (C1) Corrosive substances.

Label

8

IMDG, IATA**Class**

8 Corrosive substances.

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Label	8
Packing group	
ADR, IMDG, IATA	II
Environmental hazards:	Not applicable.
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
Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

Transport/Additional information:

ADR	
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

15 Regulatory information

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

GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

Hazard pictograms



GHS05 GHS08

Signal word *Danger*

Hazard-determining components of labelling:

Sodium hydrogensulfate monohydrate
molybdic acid
sulphuric acid

Hazard statements

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

Precautionary statements

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
Specific treatment (see on this label).
Take off contaminated clothing and wash it before reuse.
Dispose of contents/container in accordance with local/regional/national/international regulations.

National regulations:

Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

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Trade name: Reagent SI1

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Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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.

Department issuing SDS: PCC-TWR

Contact: MSDS.pcc@endress.com

Date of the latest revision of the safety data sheet 07/17/2023

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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

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

— CDN —

1 Identification

Product identifier

Trade name: Reagent SI2

Synonym: *for silicate*

Article number: 51508827

Application of the substance / the mixture *Laboratory chemicals*

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

Emergency telephone number: +1 604 682 5050

2 Hazard identification

Classification of the substance or mixture



GHS07

Eye Irritation - Category 2A H319 Causes serious eye irritation.

Label elements

GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

Hazard pictograms



GHS07

Signal word

Warning

Hazard statements

Causes serious eye irritation.

Precautionary statements

Wash thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

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

If eye irritation persists: Get medical advice/attention.

Other hazards


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

* 3 Composition/Information on ingredients

Chemical characterisation: Mixtures

Description: *Mixture of substances listed below with nonhazardous additions.*

Dangerous components:

CAS: 77-92-9	<i>citric acid</i>	10-20% *
	 <i>Eye Irritation - Category 2A, H319; Specific Target Organ Toxicity - Single Exposure - Category 3, H335</i>	

(Contd. on page 2)

— CDN —

Trade name: Reagent SI2

(Contd. of page 1)

Additional information: *For the wording of the listed hazard phrases refer to section 16.***4 First-aid measures****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.***Information for doctor:****Most important symptoms and effects, both acute and delayed***No further relevant information available.***Indication of any immediate medical attention and special treatment needed***No further relevant information available.***5 Fire-fighting measures****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***Special hazards arising from the substance or mixture** *No further relevant information available.***Advice for firefighters** *No further relevant information available.***Protective equipment:** *No special measures required.***6 Accidental release measures****Personal precautions, protective equipment and emergency procedures** *Wear protective clothing.***Environmental precautions:***Dilute with plenty of water.**Do not allow to enter sewers/ surface or ground water.***Methods and material for containment and cleaning up:***Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).***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.***7 Handling and storage****Precautions for safe handling** *No special precautions are necessary if used correctly.***Information about fire - and explosion protection:** *No special measures required.***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**Specific end use(s)** *No further relevant information available.*

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— CDN —

Trade name: Reagent SI2

(Contd. of page 2)

8 Exposure controls/ Personal protection

Additional information about design of technical facilities: *No further data; see section 7.*

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.*

Exposure controls

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.*

Protection of hands:



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.

Eye protection:



Tightly sealed goggles

Body protection: *Protective work clothing*

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:

Fluid

Colour:

Colourless

Odour:

Odourless

Odour threshold:

Not determined.

pH-value:

Slightly acidic

(Contd. on page 4)

— CDN —

Trade name: Reagent SI2

(Contd. of page 3)

Change in condition

Melting point/freezing point: *Undetermined.*Initial boiling point and boiling range: *100 °C*Flash point: *Not applicable.*Flammability (solid, gas): *Not applicable.*Auto-ignition temperature: *1 °C*Decomposition temperature: *Not determined.*Ignition temperature: *Product is not selfigniting.*Explosive properties: *Product does not present an explosion hazard.
Not determined.*

Explosion limits:

Lower: *Not determined.*Upper: *Not determined.*Vapour pressure at 20 °C: *23 hPa*Density at 20 °C: *1.081 g/cm³*Relative density: *Not determined.*Vapour density: *Not determined.*Evaporation rate: *Not determined.*Solubility in / Miscibility with
water:*Fully miscible.*Partition coefficient: n-octanol/water: *Not determined.*

Viscosity:

Dynamic: *Not determined.*Kinematic: *Not determined.*

Solvent content:

Water: *>80.0 %*Solids content: *0.0 %*Other information: *No further relevant information available.*

10 Stability and reactivity

Reactivity: *No further relevant information available.*

Chemical stability

Thermal decomposition / conditions to be avoided:

*No decomposition if used according to specifications.*Possibility of hazardous reactions: *No dangerous reactions known.*Conditions to avoid: *No further relevant information available.*Incompatible materials: *No further relevant information available.*Hazardous decomposition products: *No dangerous decomposition products known.*

11 Toxicological information

Information on toxicological effects

Acute toxicity

LD/LC50 values relevant for classification:

CAS: 77-92-9 citric acid

Oral LD50 5,040 mg/kg (Mouse)

Primary irritant effect:

Skin corrosion/irritation: *No irritant effect.*

(Contd. on page 5)

— CDN —

Trade name: Reagent SI2

(Contd. of page 4)

Serious eye damage/irritation *Irritating effect.***Respiratory or skin sensitisation** *No sensitising effects known.***Additional toxicological information:***The product shows the following dangers according to the calculation method of the General EU**Classification Guidelines for Preparations as issued in the latest version:**Irritant***12 Ecological information****Toxicity****Aquatic toxicity:** *No further relevant information available.***Persistence and degradability** *No further relevant information available.***Behaviour in environmental systems:****Bioaccumulative potential** *No further relevant information available.***Mobility in soil** *No further relevant information available.***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.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***Other adverse effects** *No further relevant information available.***13 Disposal considerations****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.***14 Transport information****UN-Number****ADN, IMDG, IATA***Void***UN proper shipping name****ADR, ADN, IMDG, IATA***Void***Transport hazard class(es)****ADR, ADN, IMDG, IATA****Class***Void***Packing group****ADR, IMDG, IATA***Void***Environmental hazards:***Not applicable.***Special precautions for user***Not applicable.***Transport in bulk according to Annex II of****Marpol and the IBC Code***Not applicable.***UN "Model Regulation":***Void***15 Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****GHS label elements***The product is classified and labelled according to the Globally Harmonised System (GHS).*

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Trade name: Reagent SI2

(Contd. of page 5)

Hazard pictograms

GHS07

Signal word *Warning***Hazard statements***Causes serious eye irritation.***Precautionary statements***Wash thoroughly after handling.**Wear protective gloves/protective clothing/eye protection/face protection.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**If eye irritation persists: Get medical advice/attention.***National regulations:****Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.***Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***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.

Department issuing SDS: *PCC-TWR***Contact:** *MSDS.pcc@endress.com***Date of the latest revision of the safety data sheet** *07/17/2023***Abbreviations and acronyms:***IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**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**** Data compared to the previous version altered.**

—CDN—

* 1 Identification

Product identifier

Trade name: Reagent SI3, Component 1

Synonym: *for silicate*

Article number: 51509864_1

Application of the substance / the mixture *Laboratory chemicals*

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

Emergency telephone number: +1 604 682 5050

2 Hazard identification

Classification of the substance or mixture

The product is not classified, according to the Globally Harmonised System (GHS).

Label elements

GHS label elements *Void*

Hazard pictograms *Void*

Signal word *Void*

Hazard statements *Void*

Other hazards


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

* 3 Composition/Information on ingredients

Chemical characterisation: Mixtures

Description: *Mixture of substances listed below with nonhazardous additions.*

Dangerous components:

CAS: 124-68-5	2-amino-2-methylpropanol	5-10% *
	 Skin Irritation - Category 2, H315; Eye Irritation - Category 2A, H319	

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

4 First-aid measures

Description of first aid measures

General information: *No special measures required.*

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.*

After swallowing: *If symptoms persist consult doctor.*

Information for doctor:

Most important symptoms and effects, both acute and delayed

No further relevant information available.

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CDN —

Trade name: Reagent SI3, Component 1

(Contd. of page 1)

Indication of any immediate medical attention and special treatment needed*No further relevant information available.**** 5 Fire-fighting measures****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***Special hazards arising from the substance or mixture** *No further relevant information available.***Advice for firefighters** *No further relevant information available.***Protective equipment:** *No special measures required.**** 6 Accidental release measures****Personal precautions, protective equipment and emergency procedures** *Wear protective clothing.***Environmental precautions:***Dilute with plenty of water.**Do not allow to enter sewers/ surface or ground water.***Methods and material for containment and cleaning up:***Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).***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.**** 7 Handling and storage****Precautions for safe handling** *No special measures required.***Information about fire - and explosion protection:** *No special measures required.***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:** *None.***Storage class:** 12**Specific end use(s)** *No further relevant information available.***8 Exposure controls/ Personal protection****Additional information about design of technical facilities:** *No further data; see section 7.***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.***Exposure controls****Personal protective equipment:****General protective and hygienic measures:***The usual precautionary measures are to be adhered to when handling chemicals.***Respiratory protection:** *Not required.***Protection of hands:** *No chemical-protective gloves required.***Material of gloves***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*

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Trade name: Reagent SI3, Component 1

(Contd. of page 2)

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 protection: Not required.

Body protection: Protective work clothing

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

Form:	Fluid
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Alkaline

Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	100 °C

Flash point: Not applicable.

Flammability (solid, gas): Not applicable.

Decomposition temperature: Not determined.

Ignition temperature: Product is not selfigniting.

Explosive properties: Product does not present an explosion hazard.
Not determined.

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure at 20 °C: 23 hPa

Density at 20 °C: 0.996 g/cm³

Relative density Not determined.

Vapour density Not determined.

Evaporation rate Not determined.

Solubility in / Miscibility with water:

Fully miscible.

Partition coefficient: n-octanol/water: Not determined.

Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

Solvent content:

Organic solvents:	7.5 %
Water:	92.5 %

Solids content: 0.0 %

Other information

No further relevant information available.

(Contd. on page 4)

— CDN —

Trade name: Reagent SI3, Component 1

(Contd. of page 3)

10 Stability and reactivity

Reactivity *No further relevant information available.*

Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Possibility of hazardous reactions *No dangerous reactions known.*

Conditions to avoid *No further relevant information available.*

Incompatible materials: *No further relevant information available.*

Hazardous decomposition products: *No dangerous decomposition products known.*

11 Toxicological information

Information on toxicological effects

Acute toxicity

Primary irritant effect:

Skin corrosion/irritation *No irritant effect.*

Serious eye damage/irritation *No irritating effect.*

Respiratory or skin sensitisation *No sensitising effects known.*

Additional toxicological information:

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12 Ecological information

Toxicity

Aquatic toxicity: *No further relevant information available.*

Persistence and degradability *No further relevant information available.*

Behaviour in environmental systems:

Bioaccumulative potential *No further relevant information available.*

Mobility in soil *No further relevant information available.*

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.

Results of PBT and vPvB assessment

PBT: *Not applicable.*

vPvB: *Not applicable.*

Other adverse effects *No further relevant information available.*

13 Disposal considerations

Waste treatment methods

Recommendation *Smaller quantities can be disposed of with household waste.*

Uncleaned packaging:

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

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

*14 Transport information

UN-Number

ADN, IMDG, IATA

Void

(Contd. on page 5)

— CDN —

Safety Data Sheet

according to HPR, Schedule 1

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Printing date 07/17/2023

Version 1

Revision: 07/17/2023

Trade name: Reagent SI3, Component 1

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UN proper shipping name	
ADR, ADN, IMDG, IATA	Void
Transport hazard class(es)	
ADR, ADN, IMDG, IATA	
Class	Void
Packing group	
ADR, IMDG, IATA	Void
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
Transport/Additional information:	Not dangerous according to the above specifications.
UN "Model Regulation":	Void

15 Regulatory information

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

GHS label elements Void

Hazard pictograms Void

Signal word Void

Hazard statements Void

National regulations:

Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

*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.

Department issuing SDS: PCC-TWR

Contact: MSDS.pcc@endress.com

Date of the latest revision of the safety data sheet 07/17/2023

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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

* Data compared to the previous version altered.

— CDN —

1 Identification

Product identifier

Trade name: Reagent SI3, Component 2

Synonym: *for silicate*

Article number: 51509864_2

Application of the substance / the mixture *Laboratory chemicals*

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

Emergency telephone number: +1 604 682 5050

2 Hazard identification

Classification of the substance or mixture



GHS05 Corrosion

Serious Eye Damage - Category 1 H318 Causes serious eye damage.



GHS07

Acute Toxicity (Oral) - Category 4 H302 Harmful if swallowed.

Label elements

GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

Hazard pictograms



GHS05 GHS07

Signal word *Danger*

Hazard-determining components of labelling:

disodium disulphite

Hazard statements

Harmful if swallowed.

Causes serious eye damage.

Precautionary statements

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

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

Immediately call a POISON CENTER/doctor.

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

(Contd. on page 2)

Trade name: Reagent SI3, Component 2

(Contd. of page 1)



Other hazards

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

*** 3 Composition/Information on ingredients****Chemical characterisation: Mixtures**

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 7681-57-4	disodium disulphite	80-100% *
	 Serious Eye Damage - Category 1, H318;  Acute Toxicity (Oral) - Category 4, H302	

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

4 First-aid measures**Description of first aid measures****General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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: Call for a doctor immediately.

Information for doctor:**Most important symptoms and effects, both acute and delayed**

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures**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

Special hazards arising from the substance or mixture No further relevant information available.

Advice for firefighters No further relevant information available.

Protective equipment: No special measures required.

6 Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Wear protective clothing.

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

Methods and material for containment and cleaning up:

Use neutralising agent.

Dispose contaminated material as waste according to section 13.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

(Contd. on page 3)

— CDN —

Trade name: Reagent SI3, Component 2

(Contd. of page 2)

*See Section 13 for disposal information.***7 Handling and storage****Precautions for safe handling** *Thorough dedusting.***Information about fire - and explosion protection:** *No special measures required.***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:** 11**Specific end use(s)** *No further relevant information available.***8 Exposure controls/ Personal protection****Additional information about design of technical facilities:** *No further data; see section 7.***Control parameters****Ingredients with limit values that require monitoring at the workplace:****CAS: 7681-57-4 disodium disulphite**EL TWA: 5 mg/m³EV TWA: 5 mg/m³**Additional information:** *The lists valid during the making were used as basis.***Exposure controls****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.***Protection of hands:***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)

— CDN —

Trade name: Reagent SI3, Component 2

(Contd. of page 3)

Eye protection:

*Tightly sealed goggles*Body protection: *Protective work clothing***9 Physical and chemical properties**

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Crystalline powder
Colour:	White
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Not applicable.

Change in condition

Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.

Flash point:	Not applicable.
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Flammability (solid, gas):	Not determined.
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Decomposition temperature:	Not determined.
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Ignition temperature:	Product is not selfigniting.
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Explosive properties:	Product does not present an explosion hazard. Not determined.
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Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure:	Not applicable.
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Density:	Not determined.
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Relative density	Not determined.
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Vapour density	Not applicable.
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Evaporation rate	Not applicable.
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Solubility in / Miscibility with water:	Soluble.
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Partition coefficient: n-octanol/water:	Not determined.
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Viscosity:

Dynamic:	Not applicable.
Kinematic:	Not applicable.

Solvent content:

Solids content:	100.0 %
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Other information	No further relevant information available.
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10 Stability and reactivityReactivity *No further relevant information available.*

(Contd. on page 5)

— CDN —

Trade name: Reagent SI3, Component 2

(Contd. of page 4)

Chemical stability**Thermal decomposition / conditions to be avoided:***No decomposition if used according to specifications.***Possibility of hazardous reactions** *No dangerous reactions known.***Conditions to avoid** *No further relevant information available.***Incompatible materials:** *No further relevant information available.***Hazardous decomposition products:** *No dangerous decomposition products known.***11 Toxicological information****Information on toxicological effects****Acute toxicity****Primary irritant effect:****Skin corrosion/irritation** *No irritant effect.***Serious eye damage/irritation** *Strong irritant with the danger of severe eye injury.***Respiratory or skin sensitisation** *No sensitising effects known.***Additional toxicological information:***The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:**Harmful**Irritant***12 Ecological information****Toxicity****Aquatic toxicity:** *No further relevant information available.***Persistence and degradability** *No further relevant information available.***Behaviour in environmental systems:****Bioaccumulative potential** *No further relevant information available.***Mobility in soil** *No further relevant information available.***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.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***Other adverse effects** *No further relevant information available.***13 Disposal considerations****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.***14 Transport information****UN-Number****ADN, IMDG, IATA***Void***UN proper shipping name****ADR, ADN, IMDG, IATA***Void*

(Contd. on page 6)

— CDN —

Trade name: Reagent SI3, Component 2

(Contd. of page 5)

Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

Void

Packing group

ADR, IMDG, IATA

Void

Environmental hazards:

Not applicable.

Special precautions for user

Not applicable.

Transport in bulk according to Annex II of

Marpol and the IBC Code

Not applicable.

UN "Model Regulation":

Void

15 Regulatory information

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

GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

Hazard pictograms



GHS05 GHS07

Signal word *Danger*

Hazard-determining components of labelling:

disodium disulphite

Hazard statements

*Harmful if swallowed.**Causes serious eye damage.*

Precautionary statements

*Wear protective gloves/protective clothing/eye protection/face protection.**IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**Immediately call a POISON CENTER/doctor.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

National regulations:

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

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.***Department issuing SDS:** *PCC-TWR***Contact:** *MSDS.pcc@endress.com***Date of the latest revision of the safety data sheet** *07/17/2023*

Abbreviations and acronyms:

*ICAO: International Civil Aviation Organisation**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**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**** Data compared to the previous version altered.**