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	



People for Process Automatio

Printing date 19.09.2024 Version 8 (replaces version 7) Revision: 19.09.2024

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

1.1 Product identifier

Trade name: Reagent SI1
Synonym: for silicate

Article number: 51508826 UFI: VUA0-X0R3-S00R-5F7A

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

Product category PC21 Laboratory chemicals

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: Phone: +49(0)6131-19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



Skin Irrit. 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

Signal word Danger

Hazard-determining components of labelling:

Sodium hydrogensulfate monohydrate sulphuric acid

Hazard statements

H315 Causes skin irritation.

H318 Causes serious eye damage.

Precautionary statements

P280 Wear protective gloves / 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.

(Contd. on page 2)

according to Regulation (EC) No 1907/2006, Article 31

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Trade name: Reagent SI1

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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.

Additional information:

Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.

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 Property Eye Dam. 1, H318	5-10%	
CAS: 7664-93-9 EINECS: 231-639-5 Registration number: 01- 2119458838-20-XXXX	sulphuric acid Skin Corr. 1A, H314 Specific concentration limits: Skin Corr. 1A; H314: C ≥ 15 % Skin Irrit. 2; H315: 5 % ≤ C < 15 % Eye Irrit. 2; H319: 5 % ≤ C < 15 %	2-6%	
CAS: 7782-91-4 EINECS: 231-970-5	molybdic acid STOT RE 2, H373;	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: Firefighting 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.*

(Contd. on page 3)

according to Regulation (EC) No 1907/2006, Article 31

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Trade name: Reagent SI1

(Contd. of page 2)

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.

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

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.

Ingredients with limit values that require monitoring at the workplace:

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

CAS: 7664-93-9 sulphuric acid			
IOELV Long-term value: 0.05 mg/m³			
DNELs	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)	

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)

PNEC 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.

(Contd. on page 4)

according to Regulation (EC) No 1907/2006, Article 31

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Trade name: Reagent SI1

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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 skin.

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

Natural rubber, NR

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 trough 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 Fluid
Colour: Colourless
Odour: Characteristic
Odour threshold: Not determined.
Melting point/freezing point: Undetermined.

Boiling point or initial boiling point and boiling

range 100 °C

Flammability Not applicable.

Lower and upper explosion limit

Lower: Not determined.
Upper: Not determined.
Flash point: Not applicable.
Decomposition temperature: Not determined.

pH Acidic

Viscosity:

Kinematic viscosity

Not determined.

Not determined.

Not determined.

(Contd. on page 5)

according to Regulation (EC) No 1907/2006, Article 31

Printing date 19.09.2024 Version 8 (replaces version 7) Revision: 19.09.2024

Trade name: Reagent SI1

(Contd. of page 4)

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 densityNot determined.Vapour densityNot determined.

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:

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 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

Oxidising liquids

Oxidising solids

Organic peroxides

Corrosive to metals

Desensitised explosives

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.

(Contd. on page 6)

according to Regulation (EC) No 1907/2006, Article 31

Printing date 19.09.2024 Version 8 (replaces version 7) Revision: 19.09.2024

Trade name: Reagent SI1

(Contd. of page 5)

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.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

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

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

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

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

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

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.

European waste catalogue

16 05 06* laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

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

(Contd. on page 7)

according to Regulation (EC) No 1907/2006, Article 31

Printing date 19.09.2024 Version 8 (replaces version 7) Revision: 19.09.2024

Trade name: Reagent SI1

(Contd. of page 6)

SECTION 14: Transport information

14.1 UN number or ID number

ADR, IMDG, IATA UN2796

14.2 UN proper shipping name

ADR UN2796 SULPHURIC ACID

IMDGSULPHURIC ACIDIATASulphuric acid

14.3 Transport hazard class(es)

ADR



Class 8 (C1) Corrosive substances.

Label 8

IMDG, IATA



Class 8 Corrosive substances.

Label 8

14.4 Packing group

ADR, IMDG, IATA //

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:

ADR

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

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

(Contd. on page 8)

according to Regulation (EC) No 1907/2006, Article 31

Printing date 19.09.2024 Version 8 (replaces version 7) Revision: 19.09.2024

Trade name: Reagent SI1

(Contd. of page 7)

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Labelling according to Regulation (EC) No 1272/2008

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

Hazard pictograms



Signal word Danger

Hazard-determining components of labelling:

Sodium hydrogensulfate monohydrate

sulphuric acid

Hazard statements

H315 Causes skin irritation.

H318 Causes serious eye damage.

Precautionary statements

P280 Wear protective gloves / 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.

P321 Specific treatment (see on this label).

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

Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed. REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

CAS: 7664-93-9 sulphuric acid

--

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

CAS: 7664-93-9 sulphuric acid

3

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.

16.3 Recommended restriction of use

Department issuing SDS: PCC-TWR

according to Regulation (EC) No 1907/2006, Article 31

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Trade name: Reagent SI1

(Contd. of page 8)

Contact: MSDS.pcc@endress.com Date of previous version: 29.12.2020 Version number of previous version: 7

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 Corr. 1A: Skin corrosion/irritation - Category 1A Skin Irrit. 2: Skin corrosion/irritation - Category 2

Eye Dam. 1: Serious eye damage/eye irritation - Category 1 Eye Irrit. 2: Serious eye damage/eye irritation - Category 2

STOT SE 3: Specific target organ toxicity (single exposure) - Category 3 STOT RE 2: Specific target organ toxicity (repeated exposure) - Category 2

EU -

^{*} Data compared to the previous version altered.

Endress+Hauser 417

according to Regulation (EC) No 1907/2006, Article 31

Popula for Process Automation

Printing date 19.09.2024 Version 6 (replaces version 5) Revision: 19.09.2024

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

1.1 Product identifier

Trade name: Reagent SI2 Synonym: for silicate

Article number: 51508827 UFI: 9WA0-F0EH-3007-USTD

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

Product category PC21 Laboratory chemicals

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: Phone: +49(0)6131-19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008



Eye Irrit. 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)

according to Regulation (EC) No 1907/2006, Article 31

Printing date 19.09.2024 Version 6 (replaces version 5) Revision: 19.09.2024

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 Irrit. 2, H319; STOT SE 3, H335	
Registration number: 01-		
2119457026-42-XXXX		

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: Firefighting 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.*

(Contd. on page 3)

according to Regulation (EC) No 1907/2006, Article 31

Printing date 19.09.2024 Version 6 (replaces version 5) Revision: 19.09.2024

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 trough 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

(Contd. on page 4)

according to Regulation (EC) No 1907/2006, Article 31

Printing date 19.09.2024 Version 6 (replaces version 5) Revision: 19.09.2024

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 Fluid
Colour: Colourless
Odour: Odourless
Odour threshold: Not determined.
Melting point/freezing point: Undetermined.

Boiling point or initial boiling point and boiling

range 100 °C

Flammability Not applicable.

Lower and upper explosion limit

Lower:Not determined.Upper:Not determined.Flash point:Not applicable.

Auto-ignition temperature: 1 °C

Decomposition temperature:Not determined.pHSlightly acidic

Viscosity:

Kinematic viscosity

Dynamic:

Not determined.

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 at 20 °C: 1.081 g/cm³
Relative density Not determined.
Vapour density Not determined.

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:

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 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

(Contd. on page 5)

according to Regulation (EC) No 1907/2006, Article 31

Printing date 19.09.2024 Version 6 (replaces version 5) Revision: 19.09.2024

Trade name: Reagent SI2

(Contd. of page 4)

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

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)

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/irritation Causes serious eye irritation.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

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

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

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

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

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

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.

(Contd. on page 6)

according to Regulation (EC) No 1907/2006, Article 31

Printing date 19.09.2024 Version 6 (replaces version 5) Revision: 19.09.2024

Trade name: Reagent SI2

(Contd. of page 5)

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.

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.

European waste catalogue

16 05 06* laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

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

ADR, ADN, IMDG, IATA Void
14.2 UN proper shipping name
ADR, ADN, IMDG, IATA Void

14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

14.4 Packing group

ADR, IMDG, IATA Void

14.5 Environmental hazards:Not applicable.14.6 Special precautions for userNot 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 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.

(Contd. on page 7)

according to Regulation (EC) No 1907/2006, Article 31

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Trade name: Reagent SI2

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

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Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed. REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

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.

16.3 Recommended restriction of use

Department issuing SDS: PCC-TWR
Contact: MSDS.pcc@endress.com
Date of previous version: 29.12.2020
Version number of previous version: 5

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 Irrit. 2: Serious eye damage/eye irritation - Category 2

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

* Data compared to the previous version altered.

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according to Regulation (EC) No 1907/2006, Article 31

Endress + Hauser 🖽

People for Process Automation

Printing date 19.09.2024 Version 6 (replaces version 5) Revision: 19.09.2024

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

1.1 Product identifier

Trade name: Reagent SI3
Synonym: for silicate

Article number: 51509841 **UFI:** P0C0-Y03W-D00R-G4DF

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

Product category PC21 Laboratory chemicals

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: Phone: +49(0)6131-19240

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008



Eye Dam. 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

P310

Signal word Danger

Hazard-determining components of labelling:

disodium disulphite

Hazard statements

H318 Causes serious eve 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.

Immediately call a POISON CENTER/doctor.

Additional information:

EUH031 Contact with acids liberates toxic gas.

2.3 Other hazards

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

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according to Regulation (EC) No 1907/2006, Article 31

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Trade name: Reagent SI3

(Contd. of page 1)

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: 124-68-5 EINECS: 204-709-8 Registration number: 01- 2119475788-16-xxxx	2-amino-2-methylpropanol Skin Irrit. 2, H315; Eye Irrit. 2, H319; Aquatic Chronic 3, H412	5-10%
CAS: 7681-57-4 EINECS: 231-673-0 Registration number: 01- 2119531326-45-XXXX	disodium disulphite Eye Dam. 1, H318; Acute Tox. 4, H302, EUH031	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: Firefighting 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: 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.

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according to Regulation (EC) No 1907/2006, Article 31

Printing date 19.09.2024 Version 6 (replaces version 5) Revision: 19.09.2024

Trade name: Reagent SI3

(Contd. of page 2)

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 *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: Do not store together with acids.

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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 4)

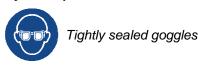
according to Regulation (EC) No 1907/2006, Article 31

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Trade name: Reagent SI3

(Contd. of page 3)

Eye/face protection



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.pHSlightly alkaline

Viscosity:

Kinematic viscosity

Dynamic:

Not determined.

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 densityNot determined.Vapour densityNot determined.

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

ExplosivesVoidFlammable gasesVoidAerosolsVoidOxidising gasesVoid

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according to Regulation (EC) No 1907/2006, Article 31

Printing date 19.09.2024 Version 6 (replaces version 5) Revision: 19.09.2024

Trade name: Reagent SI3

(Contd. of page 4) 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.

Skin corrosion/irritation Based on available data, the classification criteria are not met.

Serious eye damage/irritation Causes serious eye damage.

Respiratory or skin sensitisation Based on available data, the classification criteria are not met.

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

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

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

STOT-single exposure Based on available data, the classification criteria are not met.

STOT-repeated exposure Based on available data, the classification criteria are not met.

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

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.

(Contd. on page 6)

according to Regulation (EC) No 1907/2006, Article 31

Printing date 19.09.2024 Version 6 (replaces version 5) Revision: 19.09.2024

Trade name: Reagent SI3

(Contd. of page 5)

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.

European waste catalogue

16 05 06* laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

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

ADR, ADN, IMDG, IATA Void

14.2 UN proper shipping name

ADR, ADN, IMDG, IATA Void

14.3 Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class

14.4 Packing group

ADR, IMDG, IATA Void

14.5 Environmental hazards:Not applicable.14.6 Special precautions for userNot 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 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.

(Contd. on page 7)

according to Regulation (EC) No 1907/2006, Article 31

Printing date 19.09.2024 Version 6 (replaces version 5) Revision: 19.09.2024

Trade name: Reagent SI3

(Contd. of page 6)

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. REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

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.

16.3 Recommended restriction of use

Department issuing SDS: PCC-TWR
Contact: MSDS.pcc@endress.com
Date of previous version: 29.12.2020
Version number of previous version: 5

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 Tox. 4: Acute toxicity - Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation - Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard - Category 3

* Data compared to the previous version altered.