

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

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 Inc.
4123 E. La Palma Ave., Suite 200
Anaheim
CA 92807-1813
USA

Information department:

Phone: +49 (0)7156 209-10117
E-Mail: MSDS.PCC@endress.com

Emergency telephone number: 001 18000 222 1222

* 2 Hazard(s) identification

Classification of the substance or mixture



GHS08 Health hazard

Specific Target Organ Toxicity - Repeated Exposure 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

Eye Damage 1

H318 Causes serious eye damage.



GHS07

Skin Irritation 2

H315 Causes skin irritation.

Label elements

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS05 GHS08

Signal word *Danger*

Hazard-determining components of labeling:

*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 S11

(Contd. of page 1)

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.

Classification system:**NFPA ratings (scale 0 - 4)**

Health = 3

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = *3

Fire = 0

Reactivity = 0

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.

3 Composition/information on ingredients**Chemical characterization: Mixtures**

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

Dangerous components:

CAS: 10034-88-5	Sodium hydrogensulfate monohydrate ☠ Eye Damage 1, H318	5-10%
CAS: 7664-93-9	sulphuric acid ☠ Skin Corrosion 1A, H314	2-6%
CAS: 7782-91-4	molybdic acid ☠ Specific Target Organ Toxicity - Repeated Exposure 2, H373; ☠ Specific Target Organ Toxicity - Single Exposure 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.

(Contd. on page 3)

Trade name: Reagent S11

(Contd. of page 2)

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, extinguishing 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.***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 neutralizing agent.**Dispose contaminated material as waste according to item 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.***Protective Action Criteria for Chemicals****PAC-1:**

CAS: 10034-88-5	Sodium hydrogensulfate monohydrate	0.63 mg/m ³
CAS: 7664-93-9	sulphuric acid	0.20 mg/m ³
CAS: 7782-91-4	molybdic acid	2.5 mg/m ³

PAC-2:

CAS: 10034-88-5	Sodium hydrogensulfate monohydrate	7 mg/m ³
CAS: 7664-93-9	sulphuric acid	8.7 mg/m ³
CAS: 7782-91-4	molybdic acid	28 mg/m ³

PAC-3:

CAS: 10034-88-5	Sodium hydrogensulfate monohydrate	42 mg/m ³
CAS: 7664-93-9	sulphuric acid	160 mg/m ³
CAS: 7782-91-4	molybdic acid	170 mg/m ³

7 Handling and storage**Precautions for safe handling***Ensure good ventilation/exhaustion at the workplace.**Prevent formation of aerosols.***Information about protection against explosions and fires:***Keep respiratory protective device available.*

(Contd. on page 4)

Trade name: Reagent S11

(Contd. of page 3)

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 receptacle 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 systems:** *No further data; see item 7.***Control parameters****Components with limit values that require monitoring at the workplace:***The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.**At this time, the remaining constituent has no known exposure limits.*

CAS: 7664-93-9 sulphuric acid	
PEL	Long-term value: 1 mg/m ³
REL	Long-term value: 1 mg/m ³
TLV	Long-term value: 0.2* mg/m ³ *as thoracic fraction, A2
CAS: 7782-91-4 molybdic acid	
PEL	Long-term value: 5 mg/m ³ as Mo
TLV	Long-term value: 0.5 mg/m ³ as Mo; A3; respirable fraction

Additional information: *The lists that were valid during the creation 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.***Breathing equipment:***In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.***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-labeling 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.*

(Contd. on page 5)

Trade name: Reagent S11

(Contd. of page 4)

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
Color:	Colorless
Odor:	Characteristic
Odor threshold:	Not determined.
pH-value:	Acidic

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)

Flash point: Not applicable.

Flammability (solid, gaseous): Not applicable.

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.
Not determined.

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapor pressure at 20 °C (68 °F): 23 hPa (17.3 mm Hg)

Density: Not determined.

Relative density: Not determined.

Vapor 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 %

(Contd. on page 6)

Trade name: Reagent S11

(Contd. of page 5)

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 that are relevant for classification:**CAS: 7782-91-4 molybdic acid**

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

Primary irritant effect:**on the skin:** Irritant to skin and mucous membranes.**on the eye:** Strong irritant with the danger of severe eye injury.**Sensitization:** No sensitizing effects known.**Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

12 Ecological information**Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Behavior 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 (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 bodies of water or drainage ditch undiluted or unneutralized.

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 of together with household garbage. Do not allow product to reach sewage system.

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

(Contd. on page 7)

Trade name: Reagent S11

(Contd. of page 6)

Recommended cleansing agent: *Water, if necessary with cleansing agents.****14 Transport information**

UN-Number
 DOT, IMDG, IATA
 UN proper shipping name
 DOT, IMDG
 IATA
 Transport hazard class(es)
 DOT

UN2796
 SULPHURIC ACID
 Sulphuric acid



Class
 Label

8 Corrosive substances
 8

IMDG, IATA



Class
 Label

8 Corrosive substances
 8

Packing group

DOT, 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

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
 MARPOL73/78 and the IBC Code

Not applicable.

Transport/Additional information:

DOT

Quantity limitations

On passenger aircraft/rail: 1 L
 On cargo aircraft only: 30 L

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
 Sara

Section 355 (extremely hazardous substances):

CAS: 7664-93-9 sulphuric acid

(Contd. on page 8)

Trade name: Reagent S11

(Contd. of page 7)

Section 313 (Specific toxic chemical listings):		
CAS: 7664-93-9	sulphuric acid	
TSCA (Toxic Substances Control Act):		
CAS: 7732-18-5	water	ACTIVE
CAS: 7664-93-9	sulphuric acid	ACTIVE
CAS: 7782-91-4	molybdic acid	ACTIVE
Hazardous Air Pollutants		
None of the ingredients is listed.		
Proposition 65		
Chemicals known to cause cancer:		
None of the ingredients is listed.		
Chemicals known to cause reproductive toxicity for females:		
None of the ingredients is listed.		
Chemicals known to cause reproductive toxicity for males:		
None of the ingredients is listed.		
Chemicals known to cause developmental toxicity:		
None of the ingredients is listed.		
Carcinogenicity categories		
EPA (Environmental Protection Agency)		
None of the ingredients is listed.		
TLV (Threshold Limit Value)		
CAS: 7664-93-9	sulphuric acid	A2
CAS: 7782-91-4	molybdic acid	A3
MAK (German Maximum Workplace Concentration)		
CAS: 7664-93-9	sulphuric acid	4
NIOSH-Ca (National Institute for Occupational Safety and Health)		
None of the ingredients is listed.		

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS05 GHS08

Signal word Danger**Hazard-determining components of labeling:**

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.

(Contd. on page 9)

Trade name: Reagent S11

(Contd. of page 8)

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

National regulations:

Water hazard 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 preparation / last revision 03/19/2022 / 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

DOT: US Department of Transportation

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Skin Corrosion 1A: Skin corrosion/irritation – Category 1A

Skin Irritation 2: Skin corrosion/irritation – Category 2

Eye Damage 1: Serious eye damage/eye irritation – Category 1

Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2

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

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 Inc.
4123 E. La Palma Ave., Suite 200
Anaheim
CA 92807-1813
USA

Information department:

Phone: +49 (0)7156 209-10117
E-Mail: MSDS.PCC@endress.com

Emergency telephone number: 001 18000 222 1222

2 Hazard(s) identification

Classification of the substance or mixture



GHS07

Eye Irritation 2A H319 Causes serious eye irritation.

Label elements

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS07

Signal word *Warning*

Hazard statements

Causes serious eye irritation.

Precautionary statements

Wash thoroughly after handling.

Wear 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.

Classification system:

NFPA ratings (scale 0 - 4)



Health = 2

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = 2

Fire = 0

Reactivity = 0

Trade name: Reagent SI2

(Contd. of page 1)

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.

3 Composition/information on ingredients**Chemical characterization: Mixtures**

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

Dangerous components:

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

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, extinguishing 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.

(Contd. on page 3)

Trade name: Reagent SI2

(Contd. of page 2)

Protective Action Criteria for Chemicals**PAC-1:***None of the ingredients is listed.***PAC-2:***None of the ingredients is listed.***PAC-3:***None of the ingredients is listed.***7 Handling and storage****Precautions for safe handling** *No special precautions are necessary if used correctly.***Information about protection against explosions and fires:** *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 receptacle tightly sealed.***Storage class:** 12**Specific end use(s)** *No further relevant information available.***8 Exposure controls/personal protection****Additional information about design of technical systems:** *No further data; see item 7.***Control parameters****Components 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 that were valid during the creation 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.***Breathing equipment:** *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-labeling 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.*

(Contd. on page 4)

— USA —

Trade name: Reagent SI2

(Contd. of page 3)

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
Color:	Colorless
Odor:	Odorless
Odor threshold:	Not determined.
pH-value:	Slightly acidic

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)

Flash point: Not applicable.

Flammability (solid, gaseous): Not applicable.

Ignition temperature: 1 °C (33.8 °F)

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.
Not determined.

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapor pressure at 20 °C (68 °F): 23 hPa (17.3 mm Hg)

Density at 20 °C (68 °F): 1.081 g/cm³ (9.021 lbs/gal)

Relative density Not determined.

Vapor 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 %

(Contd. on page 5)

Trade name: Reagent SI2

(Contd. of page 4)

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 that are relevant for classification:****CAS: 77-92-9 citric acid**

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

Primary irritant effect:**on the skin:** *No irritant effect.***on the eye:** *Irritating effect.***Sensitization:** *No sensitizing effects known.***Additional toxicological information:***The product shows the following dangers according to internally approved calculation methods for preparations:**Irritant*

12 Ecological information

Toxicity**Aquatic toxicity:** *No further relevant information available.***Persistence and degradability** *No further relevant information available.***Behavior 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 (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 of together with household garbage. Do not allow product to reach sewage system.***Uncleaned packagings:****Recommendation:** *Disposal must be made according to official regulations.*

(Contd. on page 6)

Trade name: Reagent SI2

(Contd. of page 5)

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

***14 Transport information**

UN-Number	
DOT, ADN, IMDG, IATA	Void
UN proper shipping name	
DOT, ADN, IMDG, IATA	Void
Transport hazard class(es)	
DOT, ADN, IMDG, IATA	
Class	Void
Packing group	
DOT, IMDG, IATA	Void
Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Void

15 Regulatory informationSafety, health and environmental regulations/legislation specific for the substance or mixture
Sara**Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

Hazardous Air Pollutants

None of the ingredients is listed.

Proposition 65**Chemicals known to cause cancer:**

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

Carcinogenicity categories**EPA (Environmental Protection Agency)**

None of the ingredients is listed.

TLV (Threshold Limit Value)

None of the ingredients is listed.

MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 7)

Trade name: Reagent SI2

(Contd. of page 6)

Hazard pictograms

GHS07

Signal word *Warning***Hazard statements***Causes serious eye irritation.***Precautionary statements***Wash thoroughly after handling.**Wear 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:****Water hazard 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 preparation / last revision** *03/19/2022 / 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**DOT: US Department of Transportation**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)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A**Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3**** Data compared to the previous version altered.**

1 Identification

Product identifier

Trade name: **Reagent SI3**

Synonym: *for silicate*

Article number: 51509841

Application of the substance / the mixture *Laboratory chemicals*

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Endress+Hauser Conducta Inc.
4123 E. La Palma Ave., Suite 200
Anaheim
CA 92807-1813
USA

Information department:

Phone: +49 (0)7156 209-10117
E-Mail: MSDS.PCC@endress.com

Emergency telephone number: 001 18000 222 1222

2 Hazard(s) identification

Classification of the substance or mixture



GHS05 Corrosion

Eye Damage 1 H318 Causes serious eye damage.

Label elements

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS05

Signal word *Danger*

Hazard-determining components of labeling:

disodium disulphite

Hazard statements

Causes serious eye damage.

Precautionary statements

Wear 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.

Immediately call a poison center/doctor.

Classification system:

NFPA ratings (scale 0 - 4)



Health = 3

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = *3

Fire = 0

Reactivity = 0

Trade name: Reagent SI3

(Contd. of page 1)

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.

3 Composition/information on ingredients**Chemical characterization: Mixtures**

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

Dangerous components:

CAS: 124-68-5	2-amino-2-methylpropanol ⚠ Skin Irritation 2, H315; ⚠ Eye Irritation 2A, H319	5-10%
CAS: 7681-57-4	disodium disulphite ⚠ Eye Damage 1, H318; ⚠ Acute Toxicity - Oral 4, H302	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**

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.

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, extinguishing 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:

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 neutralizing agent.

Dispose contaminated material as waste according to item 13.

(Contd. on page 3)

Trade name: Reagent SI3

(Contd. of page 2)

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.

Protective Action Criteria for Chemicals

PAC-1:		
CAS: 124-68-5	2-amino-2-methylpropanol	17 mg/m ³
CAS: 7681-57-4	disodium disulphite	15 mg/m ³
PAC-2:		
CAS: 124-68-5	2-amino-2-methylpropanol	190 mg/m ³
CAS: 7681-57-4	disodium disulphite	64 mg/m ³
PAC-3:		
CAS: 124-68-5	2-amino-2-methylpropanol	570 mg/m ³
CAS: 7681-57-4	disodium disulphite	390 mg/m ³

7 Handling and storage

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

Information about protection against explosions and fires: 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 receptacle tightly sealed.

Storage class: 12

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

*** 8 Exposure controls/personal protection**

Additional information about design of technical systems: No further data; see item 7.

Control parameters

Components with limit values that require monitoring at the workplace:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

CAS: 7681-57-4 disodium disulphite	
REL	Long-term value: 5 mg/m ³
TLV	Long-term value: 5 mg/m ³
	A4

Additional information: The lists that were valid during the creation 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.

Breathing equipment: Not required.

(Contd. on page 4)

Trade name: Reagent SI3

(Contd. of page 3)

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-labeling 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:	<i>Fluid</i>
Color:	<i>Yellowish</i>
Odor:	<i>Pungent</i>
Odor threshold:	<i>Not determined.</i>
pH-value:	<i>Slightly alkaline</i>

Change in condition

Melting point/Melting range:	<i>Undetermined.</i>
Boiling point/Boiling range:	<i>Undetermined.</i>

Flash point: *Not applicable.*

Flammability (solid, gaseous): *Not applicable.*

Decomposition temperature: *Not determined.*

Auto igniting: *Product is not selfigniting.*

Danger of explosion: *Product does not present an explosion hazard.
Not determined.*

Explosion limits:

Lower:	<i>Not determined.</i>
Upper:	<i>Not determined.</i>

Vapor pressure at 20 °C (68 °F): *23 hPa (17.3 mm Hg)*

Density: *Not determined.*

Relative density *Not determined.*

Vapor density *Not determined.*

(Contd. on page 5)

Trade name: Reagent SI3

(Contd. of page 4)

Evaporation rate	<i>Not determined.</i>
Solubility in / Miscibility with Water:	<i>Fully miscible.</i>
Partition coefficient (n-octanol/water):	<i>Not determined.</i>
Viscosity:	
Dynamic:	<i>Not determined.</i>
Kinematic:	<i>Not determined.</i>
Solvent content:	
Organic solvents:	<i>7.5 %</i>
Water:	<i>>80.0 %</i>
Solids content:	<i>0.0 %</i>
Other information	<i>No further relevant information available.</i>

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:**

on the skin: *No irritant effect.*

on the eye: *Strong irritant with the danger of severe eye injury.*

Sensitization: *No sensitizing effects known.*

Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

12 Ecological information**Toxicity**

Aquatic toxicity: *No further relevant information available.*

Persistence and degradability *No further relevant information available.*

Behavior 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 (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 bodies of water or drainage ditch undiluted or unneutralized.

Results of PBT and vPvB assessment

PBT: *Not applicable.*

vPvB: *Not applicable.*

(Contd. on page 6)

Trade name: Reagent SI3

(Contd. of page 5)

Other adverse effects *No further relevant information available.*

13 Disposal considerations

Waste treatment methods

Recommendation:

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

Uncleaned packagings:

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

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

***14 Transport information**

UN-Number

DOT, ADN, IMDG, IATA *Void*

UN proper shipping name

DOT, ADN, IMDG, IATA *Void*

Transport hazard class(es)

DOT, ADN, IMDG, IATA

Class *Void*

Packing group

DOT, IMDG, IATA *Void*

Environmental hazards: *Not applicable.*

Special precautions for user *Not applicable.*

Transport in bulk according to Annex II of MARPOL73/78 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
Sara

Section 355 (extremely hazardous substances):

None of the ingredient is listed.

Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

Hazardous Air Pollutants

None of the ingredients is listed.

Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.

Chemicals known to cause developmental toxicity:

None of the ingredients is listed.

(Contd. on page 7)

Trade name: Reagent SI3

(Contd. of page 6)

Carcinogenicity categories**EPA (Environmental Protection Agency)**

None of the ingredients is listed.

TLV (Threshold Limit Value)

CAS: 7681-57-4 | disodium disulphite

A4

MAK (German Maximum Workplace Concentration)

None of the ingredients is listed.

NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms

GHS05

Signal word *Danger***Hazard-determining components of labeling:***disodium disulphite***Hazard statements***Causes serious eye damage.***Precautionary statements***Wear 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.**Immediately call a poison center/doctor.***National regulations:****Water hazard 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 preparation / last revision** *03/19/2022 / 4***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**DOT: US Department of Transportation**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)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**TLV: Threshold Limit Value*

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 03/19/2022

Version 5

Reviewed on 03/19/2022

Trade name: Reagent SI3

(Contd. of page 7)

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Skin Irritation 2: Skin corrosion/irritation – Category 2

Eye Damage 1: Serious eye damage/eye irritation – Category 1

Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A

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