

Kit Components

Product code	Description
CAY546-VxxAAH	CA7xCL Reagent set for total chlorine

Components:

51513037	Reagent CL1, Component 1 for chlorine
51513039	Reagent CL1, Component 2 for chlorine
51513040	Reagent CL2, Component 1 for chlorine
51513041	Reagent CL2, Component 2 for chlorine

1 Identification

Product identifier

Trade name: Reagent CL1, Component 1

Synonym: *for chlorine*

Article number: 51513037

Application of the substance / the mixture *Laboratory chemicals*

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

*Endress+Hauser
Conducta GmbH+Co. KG
Dieselstraße 24
D-70839 Gerlingen*

Further information obtainable from:

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

Emergency telephone number: +1 604 682 5050

2 Hazard identification

Classification of the substance or mixture

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

Label elements

GHS label elements *Void*

Hazard pictograms *Void*

Signal word *Void*

Hazard statements *Void*

3 Composition/Information on ingredients

Chemical characterisation: Mixtures

Description: *Mixture of non-hazardous substances*

Dangerous components: *Void*

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

4 First-aid measures

Description of first aid measures

General information: *No special measures required.*

After inhalation: *Supply fresh air; consult doctor in case of complaints.*

After skin contact: *Generally the product does not irritate the skin.*

After eye contact: *Rinse opened eye for several minutes under running water.*

After swallowing: *If symptoms persist consult doctor.*

Information for doctor:

Most important symptoms and effects, both acute and delayed

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

* 5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents: *Use fire extinguishing methods suitable to surrounding conditions.*

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Trade name: Reagent CL1, Component 1

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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:** *Do not allow to enter sewers/ surface or ground water.***Methods and material for containment and cleaning up:** *Pick up mechanically.***Reference to other sections***See Section 7 for information on safe handling.**See Section 8 for information on personal protection equipment.**See Section 13 for disposal information.***7 Handling and storage****Precautions for safe handling** *No special measures required.***Information about fire - and explosion protection:** *No special measures required.***Storage:****Requirements to be met by storerooms and receptacles:** *No special requirements.***Information about storage in one common storage facility:** *Not required.***Further information about storage conditions:** *None.***Storage class:** *13***Specific end use(s)** *No further relevant information available.***8 Exposure controls/ Personal protection****Additional information about design of technical facilities:** *No further data; see item 7.***Control parameters****Ingredients with limit values that require monitoring at the workplace:***The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.***Additional information:** *The lists valid during the making were used as basis.***Exposure controls****Personal protective equipment:****General protective and hygienic measures:***The usual precautionary measures are to be adhered to when handling chemicals.***Respiratory protection:** *Not required.***Protection of hands:** *No chemical-protective gloves required.***Material of gloves***The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.***Penetration time of glove material***The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.***Eye protection:** *Not required.***Body protection:** *Protective work clothing*

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Trade name: Reagent CL1, Component 1

(Contd. of page 2)

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Powder
Colour:	White
Odour:	Odourless
Odour threshold:	Not determined.
pH-value:	Not applicable.

Change in condition

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

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

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure: Not applicable.**Density:** Not determined.**Relative density** Not determined.**Vapour density** Not applicable.**Evaporation rate** Not applicable.**Solubility in / Miscibility with****water:** Soluble.**Partition coefficient: n-octanol/water:** Not determined.**Viscosity:****Dynamic:** Not applicable.**Kinematic:** Not applicable.**Solvent content:****Solids content:** 100.0 %**Other information** No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available.**Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

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

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Trade name: Reagent CL1, Component 1

(Contd. of page 3)

11 Toxicological information

Information on toxicological effects

Acute toxicity

Primary irritant effect:

Skin corrosion/irritation *No irritant effect.*

Serious eye damage/irritation *No irritating effect.*

Respiratory or skin sensitisation *No sensitising effects known.*

Additional toxicological information:

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

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

12 Ecological information

Toxicity

Aquatic toxicity: *No further relevant information available.*

Persistence and degradability *No further relevant information available.*

Behaviour in environmental systems:

Bioaccumulative potential *No further relevant information available.*

Mobility in soil *No further relevant information available.*

Additional ecological information:

General notes:

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

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

Results of PBT and vPvB assessment

PBT: *Not applicable.*

vPvB: *Not applicable.*

Other adverse effects *No further relevant information available.*

13 Disposal considerations

Waste treatment methods

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

Uncleaned packaging:

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

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

*14 Transport information

UN-Number

ADN, IMDG, IATA *Void*

UN proper shipping name

ADR, ADN, IMDG, IATA *Void*

Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class *Void*

Packing group

ADR, IMDG, IATA *Void*

Environmental hazards:

Marine pollutant: *No*

Special precautions for user *Not applicable.*

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— CDN —

Trade name: Reagent CL1, Component 1

(Contd. of page 4)

Transport in bulk according to Annex II of Marpol and the IBC Code*Not applicable.***Transport/Additional information:***Not dangerous according to the above specifications.***UN "Model Regulation":***Void***15 Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****GHS label elements** *Void***Hazard pictograms** *Void***Signal word** *Void***Hazard statements** *Void***National regulations:****Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.***Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***16 Other information**

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

Department issuing SDS: *PCC-TWR***Contact:** *MSDS.pcc@endress.com***Date of the latest revision of the safety data sheet** *03/19/2022 / 5***Abbreviations and acronyms:***IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**** Data compared to the previous version altered.**

1 Identification

Product identifier

Trade name: Reagent CL1, Component 2

Synonym: *for chlorine*

Article number: 51513039

CAS Number:

7681-11-0

EC number:

231-659-4

Application of the substance / the mixture *Laboratory chemicals*

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

*Endress+Hauser
Conducta GmbH+Co. KG
Dieselstraße 24
D-70839 Gerlingen*

Further information obtainable from:

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

Emergency telephone number: +1 604 682 5050

2 Hazard identification

Classification of the substance or mixture

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

Label elements

GHS label elements *Void*

Hazard pictograms *Void*

Signal word *Void*

Hazard statements *Void*

Other hazards

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

* 3 Composition/Information on ingredients

Chemical characterisation: Substances

CAS No. Description

CAS: 7681-11-0 potassium iodide

Identification number(s)

EC number: 231-659-4

4 First-aid measures

Description of first aid measures

General information: *No special measures required.*

After inhalation: *Supply fresh air; consult doctor in case of complaints.*

After skin contact: *Generally the product does not irritate the skin.*

After eye contact: *Rinse opened eye for several minutes under running water.*

After swallowing: *If symptoms persist consult doctor.*

(Contd. on page 2)

Trade name: Reagent CL1, Component 2

(Contd. of page 1)

Information for doctor:

Most important symptoms and effects, both acute and delayed

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

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

For safety reasons unsuitable extinguishing agents: *no further information*

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

Advice for firefighters *No further relevant information available.*

Protective equipment: *No special measures required.*

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures *Wear protective clothing.*

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

Methods and material for containment and cleaning up: *Pick up mechanically.*

Reference to other sections

No dangerous substances are released.

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Precautions for safe handling *No special measures required.*

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

Storage:

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

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

Further information about storage conditions: *None.*

Storage class: 11

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

8 Exposure controls/ Personal protection

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

Control parameters

Ingredients with limit values that require monitoring at the workplace: *Not required.*

DNELs		
CAS: 7681-11-0 potassium iodide		
Oral	DNEL long term exposure	0.01 mg/kg /bw/day (consumer) (systemic effect)
Dermal	DNEL long term	1 mg/kg /bw/day (worker) (systemic effect)
		1 mg/kg /bw/day (consumer) (systemic effect)
Inhalative	DNEL long-term	0.07 mg/m ³ (worker) (systemic effect)
		0.035 mg/m ³ (consumer) (systemic effect)
PNECs		
CAS: 7681-11-0 potassium iodide		
PNEC	0.007 mg/L (fresh water)	

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Trade name: Reagent CL1, Component 2

(Contd. of page 2)

PNEC 0.007 mg/kg (freshwater sediment)

Additional information: *The lists valid during the making were used as basis.***Exposure controls****Personal protective equipment:****General protective and hygienic measures:***The usual precautionary measures are to be adhered to when handling chemicals.***Respiratory protection:** *Not required.***Protection of hands:** *No chemical-protective gloves required.***Material of gloves***The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.***Penetration time of glove material***The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.***Eye protection:** *Not required.***Body protection:** *Protective work clothing***9 Physical and chemical properties****Information on basic physical and chemical properties****General Information****Appearance:****Form:** *Solid material***Colour:** *White***Odour:** *Odourless***Odour threshold:** *Not determined.***pH-value:** *Not applicable.***Change in condition****Melting point/freezing point:** *681 °C***Initial boiling point and boiling range:** *1,330 °C***Flash point:** *Not applicable.***Flammability (solid, gas):** *Product is not flammable.***Decomposition temperature:** *Not determined.***Auto-ignition temperature:** *Not determined.***Explosive properties:** *Product does not present an explosion hazard.
Not determined.***Explosion limits:****Lower:** *Not determined.***Upper:** *Not determined.***Vapour pressure:** *Not applicable.***Density at 20 °C:** *3.13 g/cm³***Relative density** *Not determined.***Vapour density** *Not applicable.***Evaporation rate** *Not applicable.***Solubility in / Miscibility with****water at 20 °C:** *1.4 g/l***Partition coefficient: n-octanol/water:** *Not determined.*

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Trade name: Reagent CL1, Component 2

(Contd. of page 3)

Viscosity:**Dynamic:** *Not applicable.***Kinematic:** *Not applicable.***Solids content:** 100.0 %**Other information** *No further relevant information available.***10 Stability and reactivity****Reactivity** *No further relevant information available.***Chemical stability****Thermal decomposition / conditions to be avoided:***No decomposition if used according to specifications.***Possibility of hazardous reactions** *No dangerous reactions known.***Conditions to avoid** *No further relevant information available.***Incompatible materials:** *No further relevant information available.***Hazardous decomposition products:** *No dangerous decomposition products known.***11 Toxicological information****Information on toxicological effects****Acute toxicity****Primary irritant effect:****Skin corrosion/irritation** *No irritant effect.***Serious eye damage/irritation** *No irritating effect.***Respiratory or skin sensitisation** *No sensitising effects known.***Additional toxicological information:***When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.**The substance is not subject to classification according to the latest version of the EU lists.***12 Ecological information****Toxicity****Aquatic toxicity:** *No further relevant information available.***Persistence and degradability** *No further relevant information available.***Behaviour in environmental systems:****Bioaccumulative potential** *No further relevant information available.***Mobility in soil** *No further relevant information available.***Additional ecological information:****General notes:***Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water**Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***Other adverse effects** *No further relevant information available.***13 Disposal considerations****Waste treatment methods****Recommendation** *Smaller quantities can be disposed of with household waste.***Uncleaned packaging:****Recommendation:** *Disposal must be made according to official regulations.*

(Contd. on page 5)

Trade name: Reagent CL1, Component 2

(Contd. of page 4)

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

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

15 Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture****GHS label elements** *Void***Hazard pictograms** *Void***Signal word** *Void***Hazard statements** *Void***National regulations:****Waterhazard class:** *Water hazard class 1 (Assessment by list): slightly hazardous for water.***Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***16 Other information**

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

Department issuing SDS: *PCC-TWR***Contact:** *MSDS.pcc@endress.com***Date of the latest revision of the safety data sheet** *03/19/2022 / 6***Abbreviations and acronyms:***IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**DNEL: Derived No-Effect Level (REACH)**PNEC: Predicted No-Effect Concentration (REACH)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**** Data compared to the previous version altered.**

1 Identification

Product identifier

Trade name: **Reagent CL2, Component 1**

Synonym: *for chlorine*

Article number: 51513040

Application of the substance / the mixture *Laboratory chemicals*

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

*Endress+Hauser
Conducta GmbH+Co. KG
Dieselstraße 24
D-70839 Gerlingen*

Further information obtainable from:

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

Emergency telephone number: +1 604 682 5050

2 Hazard identification

Classification of the substance or mixture

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

Label elements

GHS label elements *Void*

Hazard pictograms *Void*

Signal word *Void*

Hazard statements *Void*

3 Composition/Information on ingredients

Chemical characterisation: Mixtures

Description: *aqueous solution*

Dangerous components: *Void*

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

4 First-aid measures

Description of first aid measures

General information: *No special measures required.*

After inhalation: *Supply fresh air; consult doctor in case of complaints.*

After skin contact: *Generally the product does not irritate the skin.*

After eye contact: *Rinse opened eye for several minutes under running water.*

After swallowing: *If symptoms persist consult doctor.*

Information for doctor:

Most important symptoms and effects, both acute and delayed

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

* 5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents: *Use fire extinguishing methods suitable to surrounding conditions.*

(Contd. on page 2)

Trade name: Reagent CL2, Component 1

(Contd. of page 1)

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.*
Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

Precautions for safe handling *No special measures required.*
Information about fire - and explosion protection: *No special measures required.*
Storage:
Requirements to be met by storerooms and receptacles: *No special requirements.*
Information about storage in one common storage facility: *Not required.*
Further information about storage conditions: *None.*
Storage class: 12
Specific end use(s) *No further relevant information available.*

8 Exposure controls/ Personal protection

Additional information about design of technical facilities: *No further data; see item 7.*
Control parameters
Ingredients with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: *The lists valid during the making were used as basis.*
Exposure controls
Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures are to be adhered to when handling chemicals.
Respiratory protection: *Not required.*
Protection of hands: *No chemical-protective gloves required.*
Material of gloves
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Penetration time of glove material
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection: *Not required.*
Body protection: *Protective work clothing*

(Contd. on page 3)

Trade name: Reagent CL2, Component 1

(Contd. of page 2)

* 9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.
pH-value at 20 °C:	<2

Change in condition

Melting point/freezing point:	0 °C
Initial boiling point and boiling range:	100 °C

Flash point: Not applicable.

Flammability (solid, gas): Not applicable.

Auto-ignition temperature: Product is not selfigniting.

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

Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure at 20 °C: 23 hPa

Density at 20 °C:	1 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

Solubility in / Miscibility with

water: Fully miscible.

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

Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

Solvent content:

Water: 99.8 %

Solids content: 0.0 %

Other information: No further relevant information available.

10 Stability and reactivity

Reactivity No further relevant information available.

Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.

Conditions to avoid No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

(Contd. on page 4)

Trade name: Reagent CL2, Component 1

(Contd. of page 3)

11 Toxicological information**Information on toxicological effects****Acute toxicity****Primary irritant effect:****Skin corrosion/irritation** *No irritant effect.***Serious eye damage/irritation** *No irritating effect.***Respiratory or skin sensitisation** *No sensitising effects known.***Additional toxicological information:***The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.**When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.****12 Ecological information****Toxicity****Aquatic toxicity:** *No further relevant information available.***Persistence and degradability** *No further relevant information available.***Behaviour in environmental systems:****Bioaccumulative potential** *No further relevant information available.***Mobility in soil** *No further relevant information available.***Additional ecological information:****General notes:***Not hazardous for water.**Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***Other adverse effects** *No further relevant information available.***13 Disposal considerations****Waste treatment methods****Recommendation** *Smaller quantities can be disposed of with household waste.***Uncleaned packaging:****Recommendation:** *Disposal must be made according to official regulations.***Recommended cleansing agents:** *Water, if necessary together with cleansing agents.****14 Transport information****UN-Number****ADN, IMDG, IATA** *Void***UN proper shipping name****ADR, ADN, IMDG, IATA** *Void***Transport hazard class(es)****ADR, ADN, IMDG, IATA****Class** *Void***Packing group****ADR, IMDG, IATA** *Void***Environmental hazards:****Marine pollutant:** *No***Special precautions for user** *Not applicable.*

(Contd. on page 5)

Trade name: Reagent CL2, Component 1

(Contd. of page 4)

Transport in bulk according to Annex II of Marpol and the IBC Code*Not applicable.***Transport/Additional information:***Not dangerous according to the above specifications.***UN "Model Regulation":***Void***15 Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture***No further relevant information available.***GHS label elements** *Void***Hazard pictograms** *Void***Signal word** *Void***Hazard statements** *Void***Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***16 Other information***This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.***Department issuing SDS:** *PCC-TWR***Contact:** *MSDS.pcc@endress.com***Date of the latest revision of the safety data sheet** *03/19/2022 / 4***Abbreviations and acronyms:***IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**** Data compared to the previous version altered.**

1 Identification

Product identifier

Trade name: Reagent CL2, Component 2

Synonym: *for chlorine*

Article number: 51513041

CAS Number:

6283-63-2

EC number:

228-500-6

Application of the substance / the mixture *Laboratory chemicals*

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

*Endress+Hauser
Conducta GmbH+Co. KG
Dieselstraße 24
D-70839 Gerlingen*

Further information obtainable from:

Phone: +49 (0)7156 209-10117

E-Mail: MSDS.PCC@endress.com

Emergency telephone number: +1 604 682 5050

2 Hazard identification

Classification of the substance or mixture



GHS07

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

Label elements

GHS label elements

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

Hazard pictograms



GHS07

Signal word *Warning*

Hazard-determining components of labelling:

N,N-diethylbenzene-1,4-diammonium sulphate

Hazard statements

Harmful if swallowed.

Precautionary statements

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

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

Rinse mouth.

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

* 3 Composition/Information on ingredients

Chemical characterisation: Substances

CAS No. Description

CAS: 6283-63-2 *N,N-diethylbenzene-1,4-diammonium sulphate*

Trade name: Reagent CL2, Component 2

(Contd. of page 1)

Identification number(s)
EC number: 228-500-6

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

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

After inhalation: *Supply fresh air; consult doctor in case of complaints.*

After skin contact: *Generally the product does not irritate the skin.*

After eye contact: *Rinse opened eye for several minutes under running water.*

After swallowing: *Call for a doctor immediately.*

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

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures**Extinguishing media**

Suitable extinguishing agents: *Use fire extinguishing methods suitable to surrounding conditions.*

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

Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

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

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

Storage:

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

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

Further information about storage conditions: *None.*

Storage class: 11

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

8 Exposure controls/ Personal protection

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

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Trade name: Reagent CL2, Component 2

(Contd. of page 2)

Control parameters**Ingredients with limit values that require monitoring at the workplace:** *Not required.***Additional information:** *The lists valid during the making were used as basis.***Exposure controls****Personal protective equipment:****General protective and hygienic measures:***Keep away from foodstuffs, beverages and feed.**Wash hands before breaks and at the end of work.***Respiratory protection:** *Not required.***Protection of hands:***To avoid skin problems reduce the wearing of gloves to the required minimum.**The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.**No chemical-protective gloves required.***Material of gloves***The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.***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.***Body protection:** *Protective work clothing***9 Physical and chemical properties****Information on basic physical and chemical properties****General Information****Appearance:****Form:** *Crystalline powder***Colour:** *White***Odour:** *Odourless***Odour threshold:** *Not determined.***pH-value:** *Not applicable.***Change in condition****Melting point/freezing point:** *184-187 °C***Initial boiling point and boiling range:** *Undetermined.***Flash point:** *Not applicable.***Flammability (solid, gas):** *Product is not flammable.***Auto-ignition temperature:** *Not determined.***Explosive properties:** *Product does not present an explosion hazard.
Not determined.***Explosion limits:****Lower:** *Not determined.***Upper:** *Not determined.***Vapour pressure:** *Not applicable.***Density at 20 °C:** *0.5 g/cm³***Relative density** *Not determined.***Vapour density** *Not applicable.***Evaporation rate** *Not applicable.***Solubility in / Miscibility with
water at 20 °C:***1000 g/l*

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Partition coefficient: n-octanol/water:	<i>Not determined.</i>
Viscosity:	
Dynamic:	<i>Not applicable.</i>
Kinematic:	<i>Not applicable.</i>
Solids content:	100.0 %
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:
Skin corrosion/irritation *No irritant effect.*
Serious eye damage/irritation *No irritating effect.*
Respiratory or skin sensitisation *No sensitising effects known.*

12 Ecological information

Toxicity
Aquatic toxicity: *No further relevant information available.*
Persistence and degradability *No further relevant information available.*
Behaviour in environmental systems:
Bioaccumulative potential *No further relevant information available.*
Mobility in soil *No further relevant information available.*
Additional ecological information:
General notes:
*Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.*
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*
Other adverse effects *No further relevant information available.*

13 Disposal considerations

Waste treatment methods
Recommendation
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Uncleaned packaging:
Recommendation: *Disposal must be made according to official regulations.*
Recommended cleansing agents: *Water, if necessary together with cleansing agents.*

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14 Transport information

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

15 Regulatory information

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

GHS label elements

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

Hazard pictograms



GHS07

Signal word *Warning*

Hazard-determining components of labelling:

N,N-diethylbenzene-1,4-diammonium sulphate

Hazard statements

Harmful if swallowed.

Precautionary statements

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

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

Rinse mouth.

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

National regulations:

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

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

16 Other information

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

Department issuing SDS: *PCC-TWR*

Contact: *MSDS.pcc@endress.com*

Date of the latest revision of the safety data sheet *03/19/2022 / 4*

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

PBT: Persistent, Bioaccumulative and Toxic

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—CDN—

Safety Data Sheet

according to HPR, Schedule 1

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Version 5

Revision: 03/18/2022

Trade name: Reagent CL2, Component 2

vPvB: very Persistent and very Bioaccumulative

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

— CDN —