

03/19/2022

**Kit Components**

Product code	Description
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<b>CAY546-VxxAAE</b>	<b>CA7xCL Reagent Set for total chlorine</b>
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Components:

71255128	Reagent CL1 for total chlorine
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71252292	Reagent CL2 for chlorine
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## 1 Identification

### Product identifier

Trade name: **Reagent CL1**

Synonym: *for total chlorine*

Article number: 71255128

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.*

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**Trade name: Reagent CL1**

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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.*

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

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## 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.*

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## 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.*

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**Trade name: Reagent CL1**

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**Body protection:** *Protective work clothing*

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## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

**Appearance:**

<b>Form:</b>	<i>Fluid</i>
<b>Colour:</b>	<i>Colourless</i>
<b>Odour:</b>	<i>Characteristic</i>
<b>Odour threshold:</b>	<i>Not determined.</i>
<b>pH-value:</b>	<i>Not determined.</i>

**Change in condition**

<b>Melting point/freezing point:</b>	<i>Undetermined.</i>
<b>Initial boiling point and boiling range:</b>	<i>100 °C</i>

**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:**

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

**Vapour pressure at 20 °C:** *23 hPa***Density:** *Not determined.***Relative density** *Not determined.***Vapour density** *Not determined.***Evaporation rate** *Not determined.***Solubility in / Miscibility with****water:** *Fully miscible.***Partition coefficient: n-octanol/water:** *Not determined.***Viscosity:****Dynamic:** *Not determined.***Kinematic:** *Not determined.***Solvent content:****Water:** *85.4 %***Solids content:** *0.0 %***Other information** *No further relevant information available.*

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## 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.*

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**Trade name: Reagent CL1**

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

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## 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.*

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## 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.*

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## 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.*

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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:****Marine pollutant:**

No

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**Trade name: Reagent CL1**

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<b>Special precautions for user</b>	<i>Not applicable.</i>
<b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	<i>Not applicable.</i>
<b>Transport/Additional information:</b>	<i>Not dangerous according to the above specifications.</i>
<b>UN "Model Regulation":</b>	<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 (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 CL2**

Synonym: *for chlorine*

Article number: 71252292

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.*

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**Trade name: Reagent CL2**

(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*

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Trade name: Reagent CL2

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## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

##### Appearance:

Form:	Liquid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.
pH-value:	Not determined.

#### 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:	1.01 g/cm <sup>3</sup>
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:	99.6 %
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.

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Trade name: Reagent CL2

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## 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.*

#### 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.*

**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.*

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**Trade name: Reagent CL2**

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**UN "Model Regulation":**

Void

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## 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.*

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## 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.**

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