

19.03.2022

### Kit Components

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

Components:

71255128	Reagent CL1 for total chlorine
71252292	Reagent CL2 for chlorine

## SECTION 1: Identification

### Product identifier

**Trade name:** Reagent CL1

**Synonym:** *for total chlorine*

**Article number:** 71255128

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

*No further relevant information available.*

**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*

*Regional representation:  
Endress+Hauser Australia Pty Ltd  
16 Giffnock Avenue  
Macquarie Park, NSW 2113  
Australia*

*Phone: 1300 363 707  
Phone: +61 2 8877 7000*

**Emergency telephone number:** *Poison Hotline: 13 11 26*

## SECTION 2: Hazard(s) Identification

### Classification of the substance or mixture

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

### Label elements

**GHS label elements** *Void*

**Hazard pictograms** *Void*

**Signal word** *Void*

**Hazard statements** *Void*

### Other hazards

### Results of PBT and vPvB assessment

**PBT:** *Not applicable.*

**vPvB:** *Not applicable.*

## SECTION 3: Composition and Information on Ingredients

### Mixtures

**Description:** *aqueous solution*

**Dangerous components:** *Void*

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

## SECTION 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.*

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**Trade name: Reagent CL1**

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**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.*

**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.*

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## \* SECTION 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.*

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## SECTION 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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## SECTION 7: Handling and Storage

**Precautions for safe handling** *No special measures required.*

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

**Conditions for safe storage, including any incompatibilities**

**Storage:**

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

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

**Further information about storage conditions:** *None.*

**Storage class:** 12

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

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## SECTION 8: Exposure controls and personal protection

**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**

**Appropriate engineering controls** *No further data; see item 7.*

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**Trade name: Reagent CL1**

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**Individual protection measures, such as personal protective equipment****General protective and hygienic measures:***The usual precautionary measures are to be adhered to when handling chemicals.***Respiratory protection:** *Not required.***Hand protection** *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.***Eyeface protection** *Not required.***Body protection:** *Protective work clothing***SECTION 9: Physical and Chemical Properties****Information on basic physical and chemical properties****General Information**

<b>Physical state</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>Melting point/freezing point:</b>	<i>Undetermined.</i>
<b>Boiling point or initial boiling point and boiling range</b>	<i>100 °C</i>
<b>Flammability</b>	<i>Not applicable.</i>
<b>Lower and upper explosion limit</b>	
<b>Lower:</b>	<i>Not determined.</i>
<b>Upper:</b>	<i>Not determined.</i>
<b>Flash point:</b>	<i>Not applicable.</i>
<b>pH</b>	<i>Not determined.</i>
<b>Viscosity:</b>	
<b>Kinematic viscosity</b>	<i>Not determined.</i>
<b>Dynamic:</b>	<i>Not determined.</i>
<b>Solubility</b>	
<b>water:</b>	<i>Fully miscible.</i>
<b>Partition coefficient n-octanol/water (log value)</b>	<i>Not determined.</i>
<b>Vapour pressure at 20 °C:</b>	<i>23 hPa</i>
<b>Density and/or relative density</b>	
<b>Density:</b>	<i>Not determined.</i>
<b>Relative density</b>	<i>Not determined.</i>
<b>Vapour density</b>	<i>Not determined.</i>

**Other information****Appearance:****Form:** *Fluid***Important information on protection of health and environment, and on safety.****Auto-ignition temperature:** *Product is not selfigniting.***Explosive properties:** *Product does not present an explosion hazard.  
Not determined.***Solvent content:****Water:** *85.4 %*

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## Trade name: Reagent CL1

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<b>Solids content:</b>	0.0 %
<b>Change in condition</b>	
<b>Evaporation rate</b>	Not determined.
<b>Information with regard to physical hazard classes</b>	
<b>Explosives</b>	Void
<b>Flammable gases</b>	Void
<b>Aerosols</b>	Void
<b>Oxidising gases</b>	Void
<b>Gases under pressure</b>	Void
<b>Flammable liquids</b>	Void
<b>Flammable solids</b>	Void
<b>Self-reactive substances and mixtures</b>	Void
<b>Pyrophoric liquids</b>	Void
<b>Pyrophoric solids</b>	Void
<b>Self-heating substances and mixtures</b>	Void
<b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
<b>Oxidising liquids</b>	Void
<b>Oxidising solids</b>	Void
<b>Organic peroxides</b>	Void
<b>Corrosive to metals</b>	Void
<b>Desensitised explosives</b>	Void

**SECTION 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.**SECTION 11: Toxicological Information****Information on other hazards****Endocrine disrupting properties**

None of the ingredients is listed.

**SECTION 12: Ecological Information****Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

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**Trade name: Reagent CL1**

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**Other adverse effects****Additional ecological information:****General notes:***Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water**Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.***SECTION 13: Disposal considerations****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.***\* SECTION 14: Transport information****UN number or ID number****ADN, IMDG, IATA** *Void***UN proper shipping name****ADG, ADN, IMDG, IATA** *Void***Transport hazard class(es)****ADG, ADN, IMDG, IATA****Class** *Void***Packing group****ADG, IMDG, IATA** *Void***Environmental hazards:****Marine pollutant:** *No***Special precautions for user** *Not applicable.***Maritime transport in bulk according to IMO instruments** *Not applicable.***Transport/Additional information:** *Not dangerous according to the above specifications.***UN "Model Regulation":** *Void***SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****Australian Inventory of Industrial Chemicals***All ingredients are listed.***Standard for the Uniform Scheduling of Medicines and Poisons***CAS: 7558-79-4 | disodium hydrogenorthophosphate***S3, S4****Australia: Priority Existing Chemicals***None of the ingredients is listed.***GHS label elements** *Void***Hazard pictograms** *Void***Signal word** *Void***Hazard statements** *Void***Directive 2012/18/EU****Named dangerous substances - ANNEX I** *None of the ingredients is listed.***National regulations:****Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.*

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**Trade name: Reagent CL1**

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

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**SECTION 16: Other information**

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

**Department issuing SDS:** PCC-TWR**Contact:** *MSDS.pcc@endress.com***Abbreviations and acronyms:**

*ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)*

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*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.**

## SECTION 1: Identification

### Product identifier

**Trade name:** Reagent CL2

**Synonym:** *for chlorine*

**Article number:** 71252292

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

*No further relevant information available.*

**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*

*Regional representation:  
Endress+Hauser Australia Pty Ltd  
16 Giffnock Avenue  
Macquarie Park, NSW 2113  
Australia*

*Phone: 1300 363 707  
Phone: +61 2 8877 7000*

**Emergency telephone number:** *Poison Hotline: 13 11 26*

## SECTION 2: Hazard(s) Identification

### Classification of the substance or mixture

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

### Label elements

**GHS label elements** *Void*

**Hazard pictograms** *Void*

**Signal word** *Void*

**Hazard statements** *Void*

### Other hazards

### Results of PBT and vPvB assessment

**PBT:** *Not applicable.*

**vPvB:** *Not applicable.*

## SECTION 3: Composition and Information on Ingredients

### Mixtures

**Description:** *aqueous solution*

**Dangerous components:** *Void*

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

## SECTION 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.*



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**Trade name: Reagent CL2**

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**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.*

**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.*

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## \* SECTION 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.*

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## SECTION 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.*

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## SECTION 7: Handling and Storage

**Precautions for safe handling** *No special measures required.*

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

**Conditions for safe storage, including any incompatibilities**

**Storage:**

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

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

**Further information about storage conditions:** *None.*

**Storage class:** 12

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

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## SECTION 8: Exposure controls and personal protection

**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**

**Appropriate engineering controls** *No further data; see item 7.*

**Individual protection measures, such as personal protective equipment**

**General protective and hygienic measures:**

*The usual precautionary measures are to be adhered to when handling chemicals.*

**Respiratory protection:** *Not required.*

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**Trade name: Reagent CL2**

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**Hand protection** *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.***Eyeface protection** *Not required.***Body protection:** *Protective work clothing***SECTION 9: Physical and Chemical Properties****Information on basic physical and chemical properties****General Information**

<b>Physical state</b>	<i>Fluid</i>
<b>Colour:</b>	<i>Colourless</i>
<b>Odour:</b>	<i>Odourless</i>
<b>Odour threshold:</b>	<i>Not determined.</i>
<b>Melting point/freezing point:</b>	<i>0 °C</i>
<b>Boiling point or initial boiling point and boiling range</b>	<i>100 °C</i>
<b>Flammability</b>	<i>Not applicable.</i>
<b>Lower and upper explosion limit</b>	
<b>Lower:</b>	<i>Not determined.</i>
<b>Upper:</b>	<i>Not determined.</i>
<b>Flash point:</b>	<i>Not applicable.</i>
<b>pH</b>	<i>Not determined.</i>
<b>Viscosity:</b>	
<b>Kinematic viscosity</b>	<i>Not determined.</i>
<b>Dynamic:</b>	<i>Not determined.</i>
<b>Solubility</b>	
<b>water:</b>	<i>Fully miscible.</i>
<b>Partition coefficient n-octanol/water (log value)</b>	<i>Not determined.</i>
<b>Vapour pressure at 20 °C:</b>	<i>23 hPa</i>
<b>Density and/or relative density</b>	
<b>Density at 20 °C:</b>	<i>1.01 g/cm<sup>3</sup></i>
<b>Relative density</b>	<i>Not determined.</i>
<b>Vapour density</b>	<i>Not determined.</i>
<b>Other information</b>	
<b>Appearance:</b>	
<b>Form:</b>	<i>Liquid</i>
<b>Important information on protection of health and environment, and on safety.</b>	
<b>Auto-ignition temperature:</b>	<i>Product is not selfigniting.</i>
<b>Explosive properties:</b>	<i>Product does not present an explosion hazard. Not determined.</i>
<b>Solvent content:</b>	
<b>Water:</b>	<i>99.6 %</i>
<b>Solids content:</b>	<i>0.0 %</i>
<b>Change in condition</b>	
<b>Evaporation rate</b>	<i>Not determined.</i>

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## Trade name: Reagent CL2

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**Information with regard to physical hazard****classes**

<b>Explosives</b>	Void
<b>Flammable gases</b>	Void
<b>Aerosols</b>	Void
<b>Oxidising gases</b>	Void
<b>Gases under pressure</b>	Void
<b>Flammable liquids</b>	Void
<b>Flammable solids</b>	Void
<b>Self-reactive substances and mixtures</b>	Void
<b>Pyrophoric liquids</b>	Void
<b>Pyrophoric solids</b>	Void
<b>Self-heating substances and mixtures</b>	Void
<b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
<b>Oxidising liquids</b>	Void
<b>Oxidising solids</b>	Void
<b>Organic peroxides</b>	Void
<b>Corrosive to metals</b>	Void
<b>Desensitised explosives</b>	Void

**SECTION 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.**SECTION 11: Toxicological Information****Information on other hazards****Endocrine disrupting properties**

None of the ingredients is listed.

**SECTION 12: Ecological Information****Toxicity****Aquatic toxicity:** No further relevant information available.**Persistence and degradability** No further relevant information available.**Bioaccumulative potential** No further relevant information available.**Mobility in soil** No further relevant information available.**Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

**Other adverse effects****Additional ecological information:****General notes:** Not hazardous for water.

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Trade name: Reagent CL2

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**SECTION 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.***\* SECTION 14: Transport information****UN number or ID number****ADN, IMDG, IATA** *Void***UN proper shipping name****ADG, ADN, IMDG, IATA** *Void***Transport hazard class(es)****ADG, ADN, IMDG, IATA****Class** *Void***Packing group****ADG, IMDG, IATA** *Void***Environmental hazards:****Marine pollutant:** *No***Special precautions for user** *Not applicable.***Maritime transport in bulk according to IMO instruments** *Not applicable.***Transport/Additional information:** *Not dangerous according to the above specifications.***UN "Model Regulation":** *Void***SECTION 15: Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture****Australian Inventory of Industrial Chemicals***All ingredients are listed.***Standard for the Uniform Scheduling of Medicines and Poisons**CAS: 7664-93-9 | *sulphuric acid*

S6

**Australia: Priority Existing Chemicals***None of the ingredients is listed.***GHS label elements** *Void***Hazard pictograms** *Void***Signal word** *Void***Hazard statements** *Void***Directive 2012/18/EU****Named dangerous substances - ANNEX I** *None of the ingredients is listed.***Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***SECTION 16: Other information***This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.***Department issuing SDS:** *PCC-TWR***Contact:** *MSDS.pcc@endress.com***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*

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**Trade name: Reagent CL2**

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*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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