

19.09.2024

### 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

### Other means of identification

**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.*

**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.*

**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.*

**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.*

**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.*

**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 section 7.*

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**Trade name: Reagent CL1**

(Contd. of page 2)

**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>
<b>Particle characteristics</b>	<i>Not applicable.</i>
<b>Other information</b>	
<b>Appearance:</b>	
<b>Form:</b>	<i>Fluid</i>
<b>Important information on protection of health and environment, and on safety.</b>	
<b>Ignition temperature:</b>	<i>Product is not selfigniting.</i>
<b>Explosive properties:</b>	<i>Product does not present an explosion hazard. Not determined.</i>

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**Trade name: Reagent CL1**

(Contd. of page 3)

<b>Solvent content:</b>	
<b>Water:</b>	85.4 %
<b>Solids content:</b>	0.0 %
<b>Change in condition</b>	
<b>Evaporation rate</b>	Not determined.

**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 hazard classes as defined in Regulation (EC) No 1272/2008**

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

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

**Serious eye damage/irritation** *Based on available data, the classification criteria are not met.*

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

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

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

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

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

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

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

**Information on other hazards**

**Endocrine disrupting properties**

*None of the ingredients is listed.*

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Trade name: Reagent CL1

(Contd. of page 4)

**\* 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:**

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

**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

(Contd. on page 6)

**Trade name: Reagent CL1**

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**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 3 (Self-assessment): extremely hazardous for water.***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**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

### Other means of identification

**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.*



**Trade name: Reagent CL2**

(Contd. of page 1)

**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.*

## 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.*

## 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.*

## 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.*

## 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 section 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.*

(Contd. on page 3)

**Trade name: Reagent CL2**

(Contd. of page 2)

**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.***Eye/face 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>Particle characteristics</b>	<i>Not applicable.</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>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>

(Contd. on page 4)

Trade name: Reagent CL2

(Contd. of page 3)

**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 hazard classes as defined in Regulation (EC) No 1272/2008**

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

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

**Serious eye damage/irritation** *Based on available data, the classification criteria are not met.*

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

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

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

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

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

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

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

**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.*

(Contd. on page 5)

**Trade name: Reagent CL2**

(Contd. of page 4)

**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.*

**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.*

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**Trade name: Reagent CL2**

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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.**