26.10.2022Kit Components		
Product code	de Description	
CY80TP-FF+SV	CA80TP Reagent Set for total phosphate	
Components:		
71251096B	CA80TP Reagent RB, Component 1	
51509012D	CA80TP Reagent RK, Component 1	
71251978D	CA80TP Reagent RN	

Endress+Hauser

People for Process Automation

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Version 5 (replaces version 4)

Revision: 26.10.2022

## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

**1.1 Product identifier** 

Printing date 26.10.2022

Trade name: CA80TP Reagent RB, Component 1

Article number: 71251096B

CAS Number: 7775-27-1 EC number: 231-892-1

Registration number 01-2119495975-15 UFI: P7S0-W0E1-J00X-CQ4D

1.2 Relevant identified uses of the substance or mixture and uses advised against Product category PC21 Laboratory chemicals

Application of the substance / the mixture Laboratory chemicals

1.3 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

1.4 Emergency telephone number: 00356 21 22 40 71

## **SECTION 2: Hazards identification**

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008

GHS03 flame over circle



H272 May intensify fire; oxidiser.

GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



Acute Tox. 4 H302 Harmful if swallowed. Skin Sens. 1 H317 May cause an allergic skin reaction.

2.2 Label elements Labelling according to Regulation (EC) No 1272/2008 The substance is classified and labelled according to the CLP regulation. Hazard pictograms



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#### Signal word Danger

Hazard-determining components of labelling: sodium persulphate Hazard statements H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H317 May cause an allergic skin reaction. **Precautionary statements** P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220 Keep away from clothing and other combustible materials. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P284 [In case of inadequate ventilation] wear respiratory protection. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. 2.3 Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehvdes. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.

## **SECTION 3: Composition/information on ingredients**

3.1 Substances CAS No. Description CAS: 7775-27-1 sodium persulphate Identification number(s) EC number: 231-892-1

## **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

#### **General information:**

Immediately remove any clothing soiled by the product. 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 and to be sure call for a doctor. In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Immediately wash with water and soap and rinse thoroughly. Immediately rinse with water.

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

**After swallowing:** Call for a doctor immediately. **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed** *No further relevant information available.* 

## **SECTION 5: Firefighting measures**

#### 5.1 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

#### Trade name: CA80TP Reagent RB, Component 1

5.2 Special hazards arising from the substance or mixture No further relevant information available. 5.3 Advice for firefighters No further relevant information available. Protective equipment: No special measures required.

### **SECTION 6: Accidental release measures**

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

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

6.3 Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation. 6.4 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**

7.1 Precautions for safe handling Ensure good ventilation/exhaustion at the workplace. Information about fire - and explosion protection: No special measures required.

#### 7.2 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: 5.1 B 7.3 Specific end use(s) No further relevant information available.

## **SECTION 8: Exposure controls/personal protection**

#### 8.1 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.

8.2 Exposure controls Appropriate engineering controls No further data: see item 7. Individual protection measures, such as personal protective equipment

#### General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work.

#### **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

#### Hand protection



Protective gloves

To avoid skin problems reduce the wearing of gloves to the required minimum. Only use chemical-protective gloves with CE-labelling of category III. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. No chemical-protective gloves required.

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#### Trade name: CA80TP Reagent RB, Component 1

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#### 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. Nitrile rubber, NBR Natural rubber, NR

## Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Body protection: Protective work clothing

#### **SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical General Information	properties
	Calid
Physical state	Solid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.
Melting point/freezing point:	Undetermined.
Boiling point or initial boiling point and boiling	
range	Undetermined.
Flammability	Product is not flammable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	Not applicable.
Decomposition temperature:	Not determined.
рН	Slightly acidic
Viscosity:	
Kinematic viscosity	Not applicable.
Dynamic:	Not applicable.
Solubility	
water:	Easily soluble.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not applicable.
Density and/or relative density	
Density at 20 °C:	1.1 g/cm³
Relative density	Not determined.
Vapour density	Not applicable.
Particle characteristics	See item 3.
9.2 Other information	
Appearance:	
Form:	Crystalline powder
Important information on protection of health	
and environment, and on safety.	
Auto-ignition temperature:	Not determined.
Explosive properties:	
Explosive properties.	Product does not present an explosion hazard. Not determined.
Solida contanti	
Solids content:	100.0 %
Molecular weight	238.09 g/mol
Change in condition	Natanaka
Evaporation rate	Not applicable.
Information with regard to physical hazard	
classes	
Explosives	Void
Flammable gases	Void
	(Contd. on

#### Trade name: CA80TP Reagent RB, Component 1

		(Contd. of pa
Aerosols	Void	
Oxidising gases	Void	
Gases under pressure	Void	
Flammable liquids	Void	
Flammable solids	Void	
Self-reactive substances and mixtures	Void	
Pyrophoric liquids	Void	
Pyrophoric solids	Void	
Self-heating substances and mixtures	Void	
Substances and mixtures, which emit flamma	able	
gases in contact with water	Void	
Oxidising liquids	Void	
Oxidising solids	May intensify fire; oxidiser.	
Organic peroxides	Void	
Corrosive to metals	Void	
Desensitised explosives	Void	

#### **SECTION 10: Stability and reactivity**

10.1 Reactivity No further relevant information available.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

**10.4 Conditions to avoid** *No further relevant information available.* 

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

## **SECTION 11: Toxicological information**

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 Acute toxicity *Harmful if swallowed.* 

LD/LC50 values relevant for classification:

CAS: 7775-27-1 sodium persulphate

Oral LD50 920 mg/kg (rat)

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

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

**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.

## 11.2 Information on other hazards

Endocrine disrupting properties

Substance is not listed.

## **SECTION 12: Ecological information**

#### 12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.

**12.3 Bioaccumulative potential** *No further relevant information available.* 

#### Trade name: CA80TP Reagent RB, Component 1

(Contd. of page 5) 12.4 Mobility in soil No further relevant information available. 12.5 Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. 12.6 Endocrine disrupting properties The product does not contain substances with endocrine disrupting properties. 12.7 Other adverse effects 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.

## **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

Recommendation

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

European	waste catalogue
16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of
	laboratory chemicals

#### **Uncleaned packaging:**

Recommendation: Disposal must be made according to official regulations.

## **SECTION 14: Transport information**

14.1 UN number or ID number ADR, IMDG, IATA 14.2 UN proper shipping name ADR IMDG IATA 14.3 Transport hazard class(es)

UN1505

UN1505 SODIUM PERSULPHATE SODIUM PERSULPHATE Sodium persulphate

ADR



Class Label 5.1 (O2) Oxidising substances. 5.1

IMDG, IATA



Class Label 14.4 Packing group ADR, IMDG, IATA 14.5 Environmental hazards: 14.6 Special precautions for user Hazard identification number (Kemler code): EMS Number: 5.1 Oxidising substances.
5.1
III Not applicable.
Warning: Oxidising substances.
50
F-A,S-Q

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#### Trade name: CA80TP Reagent RB, Component 1

Stowage Category	(Contd. of page 6)
Stowage Category Segregation Code	A SG38 Stow "separated from" SGG2-ammonium compounds. SG49 Stow "separated from" SGG6-cyanides
14.7 Maritime transport in bulk according to IMO instruments	
Transport/Additional information:	
ADR Limited quantities (LQ) Excepted quantities (EQ) Transport category Tunnel restriction code	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g 3 F
IMDG Limited quantities (LQ) Excepted quantities (EQ) UN "Model Regulation":	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g UN 1505 SODIUM PERSULPHATE, 5.1, III

## **SECTION 15: Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation. Hazard pictograms



Signal word Danger

Hazard-determining components of labelling: sodium persulphate **Hazard statements** H272 May intensify fire; oxidiser. H302 Harmful if swallowed. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H317 May cause an allergic skin reaction. **Precautionary statements** P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P220 Keep away from clothing and other combustible materials. P261 Avoid breathing dust/fume/gas/mist/vapours/sprav. P284 [In case of inadequate ventilation] wear respiratory protection. P501 Dispose of contents/container in accordance with local/regional/national/international regulations. Directive 2012/18/EU Named dangerous substances - ANNEX I Substance is not listed. Seveso category P8 OXIDISING LIQUIDS AND SOLIDS Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment - Annex II

Substance is not listed.

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#### Trade name: CA80TP Reagent RB, Component 1

#### **REGULATION (EU) 2019/1148**

## Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

Substance is not listed.

#### Annex II - REPORTABLE EXPLOSIVES PRECURSORS

Substance is not listed.

#### Regulation (EC) No 273/2004 on drug precursors

Substance is not listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

Substance is not listed.

#### National regulations:

Waterhazard class: Water hazard class 1 (Assessment by list): slightly hazardous for water. 15.2 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.

#### 16.3 Recommended restriction of use

Department issuing SDS: PCC-TWR Contact: MSDS.pcc@endress.com Date of previous version: 30.04.2021 Version number of previous version: 4 Abbreviations and acronyms: RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Civil Aviation Organisation ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO) ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Ox. Sol. 2: Oxidizing solids - Category 2 Acute Tox. 4: Acute toxicity – Category 4 Resp. Sens. 1: Respiratory sensitisation - Category 1 Skin Sens. 1: Skin sensitisation - Category 1 \* Data compared to the previous version altered.

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Revision: 26.10.2022

Version 5 (replaces version 4)

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

#### **1.1 Product identifier**

#### Trade name: CA80TP Reagent RK, Component 1

Article number: 51509012D

**CAS Number:** 50-81-7 **EC number:** 200-066-2

#### **Registration number**

A registration number for this substance is not available because the substance or its use are exempt from registration, the annual tonnage does not require registration or the registration is planned for a later date.

**1.2 Relevant identified uses of the substance or mixture and uses advised against Product category** *PC21* Laboratory chemicals

Application of the substance / the mixture Laboratory chemicals

**1.3 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

1.4 Emergency telephone number: 00356 21 22 40 71

## **SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008** *The substance is not classified, according to the CLP regulation.* 

2.2 Label elements Labelling according to Regulation (EC) No 1272/2008 Void Hazard pictograms Void Signal word Void Hazard statements Void 2.3 Other hazards The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.

#### **SECTION 3: Composition/information on ingredients**

3.1 Substances CAS No. Description CAS: 50-81-7 L (+) - ascorbic acid Identification number(s) EC number: 200-066-2

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#### Trade name: CA80TP Reagent RK, Component 1

(Contd. of page 1)

## **SECTION 4: First aid measures**

#### 4.1 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. 4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed** *No further relevant information available.* 

#### **SECTION 5: Firefighting measures**

5.1 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

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

**5.3 Advice for firefighters** *No further relevant information available.* 

Protective equipment: No special measures required.

#### **SECTION 6: Accidental release measures**

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

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

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

6.4 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.

#### **SECTION 7: Handling and storage**

**7.1 Precautions for safe handling** *No special measures required.* **Information about fire - and explosion protection:** *No special measures required.* 

7.2 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: *11* 7.3 Specific end use(s) *No further relevant information available.* 

#### **SECTION 8: Exposure controls/personal protection**

8.1 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.* 

(Contd. on page 3)

#### Trade name: CA80TP Reagent RK, Component 1

#### 8.2 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.

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.

#### Penetration time of glove material

The exact break trough 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**

9.1 Information on basic physical and chemical General Information	properties
Physical state	Solid
Colour:	Whitish
Odour:	Odourless
Odour threshold:	Not determined.
Melting point/freezing point:	191 °C
Boiling point or initial boiling point and boiling	
range	Undetermined.
Flammability	Product is not flammable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	Not applicable.
Decomposition temperature:	Not determined.
pH	Slightly acidic
Viscosity:	3 ,
Kinematic viscosity	Not applicable.
Dynamic:	Not applicable.
Solubility	
water at 20 °C:	333 g/l
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not applicable.
Density and/or relative density	
Density at 20 °C:	0.95 g/cm³
Relative density	Not determined.
Vapour density	Not applicable.
Particle characteristics	See item 3.
9.2 Other information	
Appearance:	
Form:	Crystalline powder
Important information on protection of health	
and environment, and on safety.	
Auto-ignition temperature:	Not determined.
Explosive properties:	Product does not present an explosion hazard.
	Not determined.
	(Contd. on

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#### Trade name: CA80TP Reagent RK, Component 1

		(Contd. of page 3)
Solids content:	100.0 %	
Molecular weight	176.13 g/mol	
Change in condition		
Evaporation rate	Not applicable.	
Information with regard to physical hazard		
classes		
Explosives	Void	
Flammable gases	Void	
Aerosols	Void	
Oxidising gases	Void	
Gases under pressure	Void	
Flammable liquids	Void	
Flammable solids	Void	
Self-reactive substances and mixtures	Void	
Pyrophoric liquids	Void	
Pyrophoric solids	Void	
Self-heating substances and mixtures	Void	
Substances and mixtures, which emit flamma	ble	
gases in contact with water	Void	
Oxidising liquids	Void	
Oxidising solids	Void	
Organic peroxides	Void	
Corrosive to metals	Void	
Desensitised explosives	Void	

## **SECTION 10: Stability and reactivity**

**10.1 Reactivity** No further relevant information available.

**10.2 Chemical stability** 

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

**10.4 Conditions to avoid** *No further relevant information available.* 

10.5 Incompatible materials: No further relevant information available.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

## **SECTION 11: Toxicological information**

#### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

#### LD/LC50 values relevant for classification:

CAS: 50-81-7 L (+) - ascorbic acid

Oral LD50 11,900 mg/kg (rat)

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.

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Printing date 26.10.2022

Version 5 (replaces version 4)

Trade name: CA80TP Reagent RK, Component 1

#### 11.2 Information on other hazards

## Endocrine disrupting properties

Substance is not listed.

## **SECTION 12: Ecological information**

#### 12.1 Toxicity

Aquatic toxicity: No further relevant information available.

12.2 Persistence and degradability No further relevant information available.

12.3 Bioaccumulative potential No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

#### 12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

vPvB: Not applicable.

**12.6 Endocrine disrupting properties** 

The product does not contain substances with endocrine disrupting properties.

12.7 Other adverse effects

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.

## **SECTION 13: Disposal considerations**

13.1 Waste treatment methods

Recommendation Smaller quantities can be disposed of with household waste.

#### European waste catalogue

16 05 09 discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

#### **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**

14.1 UN number or ID number ADR, ADN, IMDG, IATA 14.2 UN proper shipping name ADR, ADN, IMDG, IATA 14.3 Transport hazard class(es)	Void Void
ADR, ADN, IMDG, IATA Class 14.4 Packing group	Void
ADR, IMDG, IATA 14.5 Environmental hazards: Marine pollutant:	Void
14.6 Special precautions for user 14.7 Maritime transport in bulk according to IMC instruments	Not applicable.
Transport/Additional information: UN "Model Regulation":	Not dangerous according to the above specifications. Void (Contd. on page 6)

#### Revision: 26.10.2022

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Revision: 26.10.2022

#### Trade name: CA80TP Reagent RK, Component 1

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#### **SECTION 15: Regulatory information**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Labelling according to Regulation (EC) No 1272/2008 *Void* Hazard pictograms *Void* Signal word *Void* Hazard statements *Void* 

#### Directive 2012/18/EU

Named dangerous substances - ANNEX I Substance is not listed.

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

Substance is not listed.

#### **REGULATION (EU) 2019/1148**

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

Substance is not listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

Substance is not listed.

Regulation (EC) No 273/2004 on drug precursors

Substance is not listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

Substance is not listed.

#### National regulations:

**Waterhazard class:** Water hazard class 1 (Assessment by list): slightly hazardous for water. **15.2 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.

#### 16.3 Recommended restriction of use

Department issuing SDS: PCC-TWR

Contact: MSDS.pcc@endress.com

Date of previous version: 30.04.2021

#### Version number of previous version: 4

#### Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

\* Data compared to the provious version

\* Data compared to the previous version altered.

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Endress+Hauser

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## SECTION 1: Identification of the substance/mixture and of the company/ undertaking

**1.1 Product identifier** 

Trade name: CA80TP Reagent RN

Article number: 71251978D UFI: WWH1-KOWM-300H-XWY6

1.2 Relevant identified uses of the substance or mixture and uses advised against Product category PC21 Laboratory chemicals

Application of the substance / the mixture Laboratory chemicals

1.3 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

1.4 Emergency telephone number: 00356 21 22 40 71

## **SECTION 2: Hazards identification**

2.1 Classification of the substance or mixture Classification according to Regulation (EC) No 1272/2008



Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

#### 2.2 Label elements Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation. Hazard pictograms



#### Signal word Danger

Hazard-determining components of labelling: sulphuric acid **Hazard statements** H314 Causes severe skin burns and eye damage. **Precautionary statements** P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. P310 Specific treatment (see on this label). P321 Store locked up. P405 Dispose of contents/container in accordance with local/regional/national/international P501 regulations.

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#### Trade name: CA80TP Reagent RN

#### Additional information:

Product contains: Restricted explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 5 (1) and (3).

#### 2.3 Other hazards

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

#### Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.

## **SECTION 3: Composition/information on ingredients**

#### 3.2 Mixtures

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

Dangerous components: CAS: 7664-93-9 EINECS: 231-639-5 Registration number: 01-2119458838-20-XXXX

sulphuric acid20-40% $\diamondsuit$  Skin Corr. 1A, H314Specific concentration limits: Skin Corr. 1A; H314:  $C \ge 15$  %<br/>Skin Irrit. 2; H315:  $5 \% \le C < 15$ <br/>%<br/>Eye Irrit. 2; H319:  $5 \% \le C < 15$ <br/>%

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

#### **SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

After inhalation: In case of unconsciousness place patient stably in side position for transportation.

#### After skin contact:

Immediately wash with water and soap and rinse thoroughly. Immediately rinse with water.

After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:** *Drink plenty of water and provide fresh air. Call for a doctor immediately.* **4.2 Most important symptoms and effects, both acute and delayed** *No further relevant information available.* 

**4.3 Indication of any immediate medical attention and special treatment needed** *No further relevant information available.* 

## **SECTION 5: Firefighting measures**

#### 5.1 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
5.2 Special hazards arising from the substance or mixture
During heating or in case of fire poisonous gases are produced.
5.3 Advice for firefighters No further relevant information available.
Protective equipment: Mount respiratory protective device.

## **SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures** *Mount respiratory protective device.* 

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Wear protective equipment. Keep unprotected persons away.
Wear protective clothing.
6.2 Environmental precautions:
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 13 for disposal information.

## **SECTION 7: Handling and storage**

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols. Information about fire - and explosion protection: Keep respiratory protective device available.

#### 7.2 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: *Keep container tightly sealed.* Storage class: *8 B* 7.3 Specific end use(s) *No further relevant information available.* 

## **SECTION 8: Exposure controls/personal protection**

#### 8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:		
CAS: 7664-93-9 su		
IOELV (EU)		
WEL (Great Britain)	WEL (Great Britain) Long-term value: 0.05* mg/m <sup>3</sup> *mist: defined as thoracic fraction	
DNELs		
CAS: 7664-93-9 su	Iphuric a	acid
Inhalative DNEL sh	ort-term	0.1 mg/m <sup>3</sup> (worker) (local effects)
DNEL lor	ng-term	0.05 mg/m <sup>3</sup> (worker) (local effects)
PNECs		
CAS: 7664-93-9 su	Iphuric a	acid
PNEC 8.8 mg/L (Wastewater treatment plant)		
0.25 mg/L (s	0.25 mg/L (sea water)	
PNEC 2.5 µg/L (fre	PNEC 2.5 μg/L (fresh water)	
PNEC 2 µg/kg (mai	PNEC 2 µg/kg (marine sediment)	
2 µg/kg (fres	2 μg/kg (freshwater sediment)	
Additional information: The lists valid during the making were used as basis.		

#### 8.2 Exposure controls

Appropriate engineering controls No further data; see item 7.

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

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Avoid contact with the eyes. Avoid contact with the eyes and skin.

#### **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

#### Hand protection



Protective gloves

To avoid skin problems reduce the wearing of gloves to the required minimum. Only use chemical-protective gloves with CE-labelling of category III. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

#### Material of gloves

Nitrile rubber, NBR

Chloroprene rubber, CR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

#### Penetration time of glove material

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

#### Eye/face protection



Tightly sealed goggles

Body protection: Protective work clothing

# SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical p	properties
General Information	
Physical state	Fluid
Colour:	According to product specification
Odour:	Characteristic
Odour threshold:	Not determined.
Melting point/freezing point:	Undetermined.
Boiling point or initial boiling point and boiling	
range	100 °C
Flammability	Not applicable.
Lower and upper explosion limit	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	Not applicable.
Decomposition temperature:	Not determined.
pH at 20 °C	<1

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## Safety data sheet

according to 1907/2006/EC, Article 31

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Viscosity:	Not determined
Kinematic viscosity	Not determined.
Dynamic:	Not determined.
Solubility	Fully missible
water:	Fully miscible.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure at 20 °C:	23 hPa
Density and/or relative density	Not data main ad
Density:	Not determined.
Relative density	Not determined.
Vapour density	Not determined.
9.2 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.
har that a	Not determined.
Solvent content:	
Water:	67.3 %
Solids content:	0.0 %
Change in condition	
Evaporation rate	Not determined.
Information with regard to physical hazard	
classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable	)
gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void
-	

## **SECTION 10: Stability and reactivity**

**10.1 Reactivity** No further relevant information available.

**10.2 Chemical stability** 

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

10.3 Possibility of hazardous reactions No dangerous reactions known.

**10.4 Conditions to avoid** No further relevant information available.

**10.5 Incompatible materials:** No further relevant information available.

**10.6 Hazardous decomposition products:** No dangerous decomposition products known. (Contd. on page 6)

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## **SECTION 11: Toxicological information**

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 Acute toxicity** *Based on available data, the classification criteria are not met.* 

LD/LC50 values relevant for classification:

Oral LD50 5,800 mg/kg (Mouse)

Skin corrosion/irritation Causes severe skin burns and eye damage.

Serious eye damage/irritation Causes serious eye damage.

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.

11.2 Information on other hazards

Endocrine disrupting properties

None of the ingredients is listed.

## **SECTION 12: Ecological information**

#### 12.1 Toxicity

Aquatic toxicity: No further relevant information available.

**12.2 Persistence and degradability** *No further relevant information available.* 

**12.3 Bioaccumulative potential** *No further relevant information available.* 

**12.4 Mobility in soil** No further relevant information available.

12.5 Results of PBT and vPvB assessment

**PBT:** Not applicable.

vPvB: Not applicable.

#### **12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

#### 12.7 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.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

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.

## **SECTION 13: Disposal considerations**

## 13.1 Waste treatment methods

Recommendation

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

#### European waste catalogue

16 05 06\* laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

#### 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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# Safety data sheet according to 1907/2006/EC, Article 31

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SECTION 14: Transport information	
14.1 UN number or ID number ADR, IMDG, IATA 14.2 UN proper shipping name ADR IMDG IATA 14.3 Transport hazard class(es)	UN2796 UN2796 SULPHURIC ACID SULPHURIC ACID Sulphuric acid
ADR	
Class Label	8 (C1) Corrosive substances. 8
IMDG, IATA	o
Class Label	8 Corrosive substances.
Labei 14.4 Packing group	8
ADR, IMDG, IATA	11
14.5 Environmental hazards:	Not applicable.
14.6 Special precautions for user	Warning: Corrosive substances.
Hazard identification number (Kemler code):	80
EMS Number:	F-A,S-B
Segregation groups Stowage Category	(SGG1a) Strong acids B
Segregation Code	ь SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides
14.7 Maritime transport in bulk according to IMC	)
instruments	Not applicable.
Transport/Additional information:	
ADR	
Limited quantities (LQ)	1L Cada: E2
Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per unter packaging: 50 ml
Transport category	2
Tunnel restriction code	E
IMDG	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
UN "Model Regulation":	UN 2796 SULPHURIC ACID, 8, II
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## **SECTION 15: Regulatory information**

# 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation. Hazard pictograms



Signal word Danger

#### Hazard-determining components of labelling:

sulphuric acid

#### Hazard statements

H314 Causes severe skin burns and eye damage.

#### **Precautionary statements**

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P321 Specific treatment (see on this label).

- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Directive 2012/18/EU

Named dangerous substances - ANNEX I None of the ingredients is listed. REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

**REGULATION (EU) 2019/1148** 

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

CAS: 7664-93-9 sulphuric acid

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

#### Regulation (EC) No 273/2004 on drug precursors

CAS: 7664-93-9 sulphuric acid

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

CAS: 7664-93-9 sulphuric acid

#### National regulations:

Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water. 15.2 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.

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3

Limit value: >15-≤40 % 20-40%

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DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent

PNEC: Predicted No-Effect Concentration (REACH)

Skin Corr. 1A: Skin corrosion/irritation – Category 1A Eye Dam. 1: Serious eye damage/eye irritation – Category 1 \* Data compared to the previous version altered.

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

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16.3 Recommended restriction of use
Department issuing SDS: PCC-TWR
Contact: MSDS.pcc@endress.com
Date of previous version: 24.08.2021
Version number of previous version: 3
Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the
International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
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)