

13.12.2024

### Kit Components

| Product code | Description |
|--------------|-------------|
|--------------|-------------|

|                      |                            |
|----------------------|----------------------------|
| <b>CY80COD-CC+SX</b> | <b>CA80COD Reagent Set</b> |
|----------------------|----------------------------|

Components:

|           |                    |
|-----------|--------------------|
| 71267373  | CA80COD Reagent RK |
| 71267375  | CA80COD Reagent RB |
| 71267376  | CA80COD Reagent RN |
| 71320381B | CA80COD Reagent RX |

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**Trade name: **CA80COD Reagent RK**

Article number: 71267373

UFI: 8Q60-N0M2-3000-E287

**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:**

00353 01 809 2166 (from 8 am to 10 pm, 7 days a week)

00353 01 809 2566 (24h)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



GHS06 skull and crossbones

Acute Tox. 2      H330 Fatal if inhaled.



GHS08 health hazard

STOT RE 2      H373 May cause damage to organs through prolonged or repeated exposure.



GHS05 corrosion

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

Eye Dam. 1      H318 Causes serious eye damage.



GHS09 environment

Aquatic Chronic 2      H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4      H302 Harmful if swallowed.

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

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

## Trade name: CA80COD Reagent RK

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## Hazard pictograms



GHS05 GHS06 GHS08 GHS09

Signal word *Danger*

## Hazard-determining components of labelling:

*mercury sulphate**sulphuric acid*

## Hazard statements

*H302 Harmful if swallowed.**H330 Fatal if inhaled.**H314 Causes severe skin burns and eye damage.**H373 May cause damage to organs through prolonged or repeated exposure.**H411 Toxic to aquatic life with long lasting effects.*

## 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.**P320 Specific treatment is urgent (see on this label).**P405 Store locked up.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.*

## Additional information:

*Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.*

## 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<br>EINECS: 231-639-5<br>Registration number: 01-2119458838-20-XXXX | <i>sulphuric acid</i><br>⚠ Skin Corr. 1A, H314<br>Specific concentration limits: Skin Corr. 1A; H314: $C \geq 15\%$<br>Skin Irrit. 2; H315: $5\% \leq C < 15\%$<br>Eye Irrit. 2; H319: $5\% \leq C < 15\%$                    | 5-10% |
| CAS: 7783-35-9<br>EINECS: 231-992-5<br>Registration number: 01-2120118583-59-XXXX | <i>mercury sulphate</i><br>⚠ Acute Tox. 2, H300; Acute Tox. 1, H310; Acute Tox. 2, H330; ⚠ STOT RE 2, H373; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410<br>Specific concentration limit: STOT RE 2; H373: $C \geq 0.1\%$ | 5-10% |

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

(Contd. on page 3)

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**Trade name: CA80COD Reagent RK**

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(Contd. of page 2)

## 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.**Remove breathing equipment only after contaminated clothing have been completely removed.**In case of irregular breathing or respiratory arrest provide artificial respiration.***After inhalation:***Supply fresh air or oxygen; call for 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. Then consult a doctor.***After swallowing:***Call for a doctor immediately.**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.*

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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

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## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

*Mount respiratory protective device.**Wear protective equipment. Keep unprotected persons away.**Wear protective clothing.*

### 6.2 Environmental precautions:

*Do not allow product to reach sewage system or any water course.**Inform respective authorities in case of seepage into water course or sewage system.**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 section 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.*

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IRL

Trade name: CA80COD Reagent RK

(Contd. of page 3)

See Section 13 for disposal information.

**SECTION 7: Handling and storage****7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

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: 6.1 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:

**CAS: 7664-93-9 sulphuric acid**OEL (Ireland) Long-term value: 0.05 mg/m<sup>3</sup>  
IOELV, thoracic fractionIOELV (EU) Long-term value: 0.05 mg/m<sup>3</sup>**CAS: 7783-35-9 mercury sulphate**OEL (Ireland) Long-term value: 0.02 mg/m<sup>3</sup>  
as Hg; BOELV, Repr. 1ABOELV (EU) Long-term value: 0.02 mg/m<sup>3</sup>  
as HgIOELV (EU) Long-term value: 0.02 mg/m<sup>3</sup>  
as Hg**DNELs****CAS: 7664-93-9 sulphuric acid**Inhalative DNEL short-term 0.1 mg/m<sup>3</sup> (worker) (local effects)DNEL long-term 0.05 mg/m<sup>3</sup> (worker) (local effects)**PNECs****CAS: 7664-93-9 sulphuric acid**PNEC 8.8 mg/L (Wastewater treatment plant)  
0.25 mg/L (sea water)

PNEC 2.5 µg/L (fresh water)

PNEC 2 µg/kg (marine sediment)

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 section 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.

Store protective clothing separately.

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— IRL —

**Trade name: CA80COD Reagent RK**

(Contd. of page 4)

*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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.***Eyeface protection***Tightly sealed goggles***Body protection:** *Protective work clothing***SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Physical state***Fluid***Colour:***Colourless***Odour:***Odourless***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***<2***Viscosity:****Kinematic viscosity***Not determined.***Dynamic:***Not determined.***Solubility****water:***Fully miscible.***Partition coefficient n-octanol/water (log value)** *Not determined.***Vapour pressure at 20 °C:***23 hPa*

(Contd. on page 6)

## Trade name: CA80COD Reagent RK

(Contd. of page 5)

**Density and/or relative density****Density at 20 °C:**1.15 g/cm<sup>3</sup>**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.****Ignition temperature:**

Product is not selfigniting.

**Explosive properties:**Product does not present an explosion hazard.  
Not determined.**Solvent content:****Water:**

80.0 %

**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.**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

Harmful if swallowed.

Fatal if inhaled.

(Contd. on page 7)

IRL —



Trade name: CA80COD Reagent RK

(Contd. of page 6)

**LD/LC50 values relevant for classification:****CAS: 7783-35-9 mercury sulphate**

Oral LD50 57 mg/kg (rat)

Dermal LD50 625 mg/kg (rat)

**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** May cause damage to organs through prolonged or repeated exposure.**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****Remark:** Toxic for fish**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.

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

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

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

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.

(Contd. on page 8)

— IRL —



Trade name: CA80COD Reagent RK

(Contd. of page 7)

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

## \* SECTION 14: Transport information

## 14.1 UN number or ID number

ADR, IMDG, IATA

UN2922

## 14.2 UN proper shipping name

ADR

UN2922 CORROSIVE LIQUID, TOXIC, N.O.S.  
(MERCURY SULPHATE, SULPHURIC ACID)

IMDG

CORROSIVE LIQUID, TOXIC, N.O.S. (MERCURY  
SULPHATE, SULPHURIC ACID)

IATA

Corrosive liquid, toxic, n.o.s. (containing MERCURY  
SULPHATE, SULPHURIC ACID)

## 14.3 Transport hazard class(es)

ADR



Class

8 (CT1) Corrosive substances.

Label

8+6.1

IMDG



Class

8 Corrosive substances.

Label

8/6.1

IATA



Class

8 Corrosive substances.

Label

8 (6.1)

## 14.4 Packing group

ADR, IMDG, IATA

II

## 14.5 Environmental hazards:

Product contains environmentally hazardous  
substances: mercury sulphate

Marine pollutant:

Yes

Special marking (ADR):

Symbol (fish and tree)

## 14.6 Special precautions for user

Symbol (fish and tree)

Hazard identification number (Kemler code):

Warning: Corrosive substances.

EMS Number:

86

Stowage Category

F-A, S-B

Stowage Code

B

SW2 Clear of living quarters.

## 14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

Transport/Additional information:

ADR

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

(Contd. on page 9)

Trade name: CA80COD Reagent RK

(Contd. of page 8)

Transport category 2  
Tunnel restriction code E

## IMDG

Limited quantities (LQ)  
Excepted quantities (EQ)

1L

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S.

(MERCURY SULPHATE, SULPHURIC ACID), 8 (6.1),

II, ENVIRONMENTALLY HAZARDOUS

UN "Model Regulation":

## \* 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



GHS05 GHS06 GHS08 GHS09

Signal word *Danger*

## Hazard-determining components of labelling:

*mercury sulphate**sulphuric acid*

## Hazard statements

*H302 Harmful if swallowed.**H330 Fatal if inhaled.**H314 Causes severe skin burns and eye damage.**H373 May cause damage to organs through prolonged or repeated exposure.**H411 Toxic to aquatic life with long lasting effects.*

## 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.**P320 Specific treatment is urgent (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.

## Seveso category

*H2 ACUTE TOXIC**E2 Hazardous to the Aquatic Environment*

Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 18

## Regulation (EU) No 649/2012

CAS: 7783-35-9 mercury sulphate

Annex I Part 1  
Annex I Part 3  
Annex V Part 2

(Contd. on page 10)

Trade name: CA80COD Reagent RK

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**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))**

*None of the ingredients is listed.*

**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

3

**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

3

**National regulations:**

**Waterhazard class:** Water hazard class 3 (Self-assessment): extremely 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.*

### 16.1 Relevant phrases

H300 Fatal if swallowed.

H310 Fatal in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H330 Fatal if inhaled.

H373 May cause damage to organs through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

### 16.3 Recommended restriction of use

**Department issuing SDS:** PCC-TWR

**Contact:** MSDS.pcc@endress.com

**Date of previous version:** 06.01.2021

**Version number of previous version:** 7

### 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

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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 1: Acute toxicity – Category 1

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

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— IRL —

# Safety data sheet

Page 11/11

according to Regulation (EC) No 1907/2006, Article 31

Printing date 13.12.2024

Version 8 (replaces version 7)

Revision: 20.09.2024

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**Trade name: CA80COD Reagent RK**

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*Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1*

*Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2*

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

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— IRL —

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**Trade name: **CA80COD Reagent RB**

Article number: 71267375

UFI: 5T60-509F-D00G-3DU9

**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:**

00353 01 809 2166 (from 8 am to 10 pm, 7 days a week)

00353 01 809 2566 (24h)

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008



GHS03 flame over circle

Ox. Liq. 2      H272      May intensify fire; oxidiser.



GHS06 skull and crossbones

Acute Tox. 2      H330      Fatal if inhaled.



GHS08 health hazard

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

Muta. 1B      H340      May cause genetic defects.

Carc. 1B      H350      May cause cancer.

Repr. 1B      H360FD      May damage fertility. May damage the unborn child.

STOT RE 2      H373      May cause damage to the respiratory system through prolonged or repeated exposure.



GHS05 corrosion

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

Eye Dam. 1      H318      Causes serious eye damage.

(Contd. on page 2)

— IRL —

## Trade name: CA80COD Reagent RB

(Contd. of page 1)



GHS09 environment

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

## 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



GHS03



GHS05



GHS06



GHS08



GHS09

Signal word *Danger*

## Hazard-determining components of labelling:

Potassium dichromate

sulphuric acid

## Hazard statements

H272 May intensify fire; oxidiser.

H330 Fatal if inhaled.

H314 Causes severe skin burns and eye damage.

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

H317 May cause an allergic skin reaction.

H340 May cause genetic defects.

H350 May cause cancer.

H360FD May damage fertility. May damage the unborn child.

H335 May cause respiratory irritation.

H373 May cause damage to the respiratory system through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

## 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.

P320 Specific treatment is urgent (see on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

## Additional information:

Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.

Restricted to professional users.

## 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.

(Contd. on page 3)

Trade name: CA80COD Reagent RB

(Contd. of page 2)

vPvB: Not applicable.

**SECTION 3: Composition/information on ingredients****3.2 Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.

| <b>Dangerous components:</b>                                                      |                                                                                                                                                                                                                                                                                                                                                      |        |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| CAS: 7664-93-9<br>EINECS: 231-639-5<br>Registration number: 01-2119458838-20-XXXX | sulphuric acid<br>Skin Corr. 1A, H314<br>Specific concentration limits: Skin Corr. 1A; H314: $C \geq 15\%$<br>Skin Irrit. 2; H315: $5\% \leq C < 15\%$<br>Eye Irrit. 2; H319: $5\% \leq C < 15\%$                                                                                                                                                    | 10-20% |
| CAS: 7778-50-9<br>EINECS: 231-906-6<br>Registration number: 01-2119454792-32-XXXX | Potassium dichromate<br>Ox. Sol. 2, H272; Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Muta. 1B, H340; Carc. 1B, H350; Repr. 1B, H360FD; STOT RE 1, H372; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H312; Skin Sens. 1, H317<br>Specific concentration limit: STOT SE 3; H335: $C \geq 5\%$ | 5-10%  |
| <b>SVHC</b>                                                                       |                                                                                                                                                                                                                                                                                                                                                      |        |
| CAS: 7778-50-9                                                                    | Potassium dichromate                                                                                                                                                                                                                                                                                                                                 |        |

**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.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

**After inhalation:**

Supply fresh air or oxygen; call for 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. 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:** Use fire extinguishing methods suitable to surrounding conditions.**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.

(Contd. on page 4)



Trade name: CA80COD Reagent RB

(Contd. of page 3)

**Protective equipment:** *Mount respiratory protective device.***SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures***Mount respiratory protective device.**Wear protective equipment. Keep unprotected persons away.**Wear protective clothing.***6.2 Environmental precautions:***Do not allow product to reach sewage system or any water course.**Inform respective authorities in case of seepage into water course or sewage system.**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 section 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.**Open and handle receptacle with care.**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:** 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:****CAS: 7664-93-9 sulphuric acid**OEL (Ireland) Long-term value: 0.05 mg/m<sup>3</sup>

IOELV, thoracic fraction

IOELV (EU) Long-term value: 0.05 mg/m<sup>3</sup>**CAS: 7778-50-9 Potassium dichromate**OEL (Ireland) Long-term value: 0.005 0.01\* 0.025\*\* mg/m<sup>3</sup>

\*until 17.01.25 \*\*welding/plasma cutting; as Cr

BOELV (EU) Long-term value: 0.005; 0.01\*; 0.025\*\* mg/m<sup>3</sup>

as Cr; \*until 01/17/2025 \*\*processes generating fume

**DNELs****CAS: 7664-93-9 sulphuric acid**Inhalative DNEL short-term 0.1 mg/m<sup>3</sup> (worker) (local effects)

(Contd. on page 5)

**Trade name: CA80COD Reagent RB**

(Contd. of page 4)

|                                     |                                        |                                                 |
|-------------------------------------|----------------------------------------|-------------------------------------------------|
|                                     | DNEL long-term                         | 0.05 mg/m <sup>3</sup> (worker) (local effects) |
| PNECs                               |                                        |                                                 |
| CAS: 7664-93-9 sulphuric acid       |                                        |                                                 |
| PNEC                                | 8.8 mg/L (Wastewater treatment plant)  |                                                 |
|                                     | 0.25 mg/L (sea water)                  |                                                 |
| PNEC                                | 2.5 µg/L (fresh water)                 |                                                 |
| PNEC                                | 2 µg/kg (marine sediment)              |                                                 |
|                                     | 2 µg/kg (freshwater sediment)          |                                                 |
| CAS: 7778-50-9 Potassium dichromate |                                        |                                                 |
| PNEC                                | 0.21 mg/L (Wastewater treatment plant) |                                                 |
|                                     | 0 mg/L (fresh water)                   |                                                 |
| PNEC                                | 0.15 mg/kg (marine sediment)           |                                                 |
|                                     | 0.15 mg/kg (freshwater sediment)       |                                                 |
|                                     | 0.035 mg/kg (soil)                     |                                                 |

**Additional information:** The lists valid during the making were used as basis.

**8.2 Exposure controls**

**Appropriate engineering controls** No further data; see section 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.

Store protective clothing separately.

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

Natural rubber, NR

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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 6)

IRL —

Trade name: CA80COD Reagent RB

(Contd. of page 5)

**Eyeface protection***Tightly sealed goggles***Body protection:** *Protective work clothing***SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information**

|                                                          |                               |
|----------------------------------------------------------|-------------------------------|
| Physical state                                           | <i>Fluid</i>                  |
| Colour:                                                  | <i>Colourless</i>             |
| Odour:                                                   | <i>Odourless</i>              |
| Odour threshold:                                         | <i>Not determined.</i>        |
| Melting point/freezing point:                            | <i>Undetermined.</i>          |
| Boiling point or initial boiling point and boiling range | <i>100 °C</i>                 |
| Flammability                                             | <i>Not applicable.</i>        |
| Lower and upper explosion limit                          |                               |
| Lower:                                                   | <i>Not determined.</i>        |
| Upper:                                                   | <i>Not determined.</i>        |
| Flash point:                                             | <i>Not applicable.</i>        |
| Decomposition temperature:                               | <i>Not determined.</i>        |
| pH at 20 °C                                              | <i>&lt;2</i>                  |
| Viscosity:                                               |                               |
| Kinematic viscosity                                      | <i>Not determined.</i>        |
| Dynamic:                                                 | <i>Not determined.</i>        |
| Solubility                                               |                               |
| water:                                                   | <i>Fully miscible.</i>        |
| Partition coefficient n-octanol/water (log value)        | <i>Not determined.</i>        |
| Vapour pressure at 20 °C:                                | <i>23 hPa</i>                 |
| Density and/or relative density                          |                               |
| Density at 20 °C:                                        | <i>1.114 g/cm<sup>3</sup></i> |
| Relative density                                         | <i>Not determined.</i>        |
| Vapour density                                           | <i>Not determined.</i>        |

**9.2 Other information**

|                                                                               |                                                      |
|-------------------------------------------------------------------------------|------------------------------------------------------|
| Appearance:                                                                   |                                                      |
| Form:                                                                         | <i>Fluid</i>                                         |
| Important information on protection of health and environment, and on safety. |                                                      |
| Ignition temperature:                                                         | <i>Product is not selfigniting.</i>                  |
| Explosive properties:                                                         | <i>Product does not present an explosion hazard.</i> |
|                                                                               | <i>Not determined.</i>                               |
| Solvent content:                                                              |                                                      |
| Water:                                                                        | <i>80.6 %</i>                                        |
| Solids content:                                                               | <i>0.0 %</i>                                         |
| Change in condition                                                           |                                                      |
| Evaporation rate                                                              | <i>Not determined.</i>                               |

**Information with regard to physical hazard classes**

|                      |             |
|----------------------|-------------|
| Explosives           | <i>Void</i> |
| Flammable gases      | <i>Void</i> |
| Aerosols             | <i>Void</i> |
| Oxidising gases      | <i>Void</i> |
| Gases under pressure | <i>Void</i> |

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Trade name: CA80COD Reagent RB

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|                                                                           |                               |
|---------------------------------------------------------------------------|-------------------------------|
| 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                                                         | May intensify fire; oxidiser. |
| 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** Fatal if inhaled.

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

**CAS: 7778-50-9 Potassium dichromate**

Oral LD50 190 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**

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

May cause an allergic skin reaction.

**Germ cell mutagenicity** May cause genetic defects.

**Carcinogenicity** May cause cancer.

**Reproductive toxicity** May damage fertility. May damage the unborn child.

**STOT-single exposure** May cause respiratory irritation.

**STOT-repeated exposure**

May cause damage to the respiratory system through prolonged or repeated exposure.

**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.

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— IRL —

## Trade name: CA80COD Reagent RB

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**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****Remark:** *Toxic for fish***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.**Must not reach sewage water or drainage ditch undiluted or unneutralised.**Danger to drinking water if even extremely small quantities leak into the ground.**Also poisonous for fish and plankton in water bodies.**Toxic for aquatic organisms**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.***\* SECTION 14: Transport information****14.1 UN number or ID number****ADR, IMDG, IATA**

UN2922

**14.2 UN proper shipping name****ADR**UN2922 CORROSIVE LIQUID, TOXIC, N.O.S.  
(SULPHURIC ACID, Potassium dichromate)**IMDG**CORROSIVE LIQUID, TOXIC, N.O.S. (SULPHURIC ACID, Potassium dichromate), MARINE POLLUTANT  
Corrosive liquid, toxic, n.o.s. (containing SULPHURIC ACID, Potassium dichromate)**IATA****14.3 Transport hazard class(es)****ADR****Class**

8 (CT1) Corrosive substances.

**Label**

8+6.1

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— IRL —

# Safety data sheet

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according to Regulation (EC) No 1907/2006, Article 31

Printing date 13.12.2024

Version 11 (replaces version 10)

Revision: 20.09.2024

Trade name: CA80COD Reagent RB

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## IMDG

**Class**  
**Label**8 Corrosive substances.  
8/6.1

## IATA

**Class**  
**Label**8 Corrosive substances.  
8 (6.1)**14.4 Packing group****ADR, IMDG, IATA****14.5 Environmental hazards:**II  
Product contains environmentally hazardous  
substances: Potassium dichromate**Marine pollutant:**

Yes

**Special marking (ADR):**

Symbol (fish and tree)

**14.6 Special precautions for user**

Symbol (fish and tree)

**Hazard identification number (Kemler code):**

Warning: Corrosive substances.

**EMS Number:**

86

**Segregation groups**

F-A,S-B

**Stowage Category**

(SGG1a) Strong acids

**Stowage Code**

B

**14.7 Maritime transport in bulk according to IMO  
instruments**

SW2 Clear of living quarters.

Not applicable.

**Transport/Additional information:****ADR****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

**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 2922 CORROSIVE LIQUID, TOXIC, N.O.S.

(SULPHURIC ACID, POTASSIUM DICHROMATE), 8  
(6.1), II, ENVIRONMENTALLY HAZARDOUS

## 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.

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IRL



## Trade name: CA80COD Reagent RB

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## Hazard pictograms



GHS03 GHS05 GHS06 GHS08 GHS09

Signal word *Danger*

## Hazard-determining components of labelling:

*Potassium dichromate**sulphuric acid*

## Hazard statements

H272 May intensify fire; oxidiser.

H330 Fatal if inhaled.

H314 Causes severe skin burns and eye damage.

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

H317 May cause an allergic skin reaction.

H340 May cause genetic defects.

H350 May cause cancer.

H360FD May damage fertility. May damage the unborn child.

H335 May cause respiratory irritation.

H373 May cause damage to the respiratory system through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.

## 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.

P320 Specific treatment is urgent (see on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

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.

## Seveso category

H2 ACUTE TOXIC

P8 OXIDISING LIQUIDS AND SOLIDS

E2 Hazardous to the Aquatic Environment

Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t

Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

## LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)

CAS: 7778-50-9 | Potassium dichromate

Sunset date: 2017-09-21

REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 28, 29, 30, 47, 72

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

CAS: 7778-50-9 | Potassium dichromate

## REGULATION (EU) 2019/1148

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

None of the ingredients is listed.

## Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

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Trade name: CA80COD Reagent RB

(Contd. of page 10)

|                                                                                                                                               |                |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------|---|
| <b>Regulation (EC) No 273/2004 on drug precursors</b>                                                                                         |                |   |
| CAS: 7664-93-9                                                                                                                                | sulphuric acid | 3 |
| <b>Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors</b> |                |   |
| CAS: 7664-93-9                                                                                                                                | sulphuric acid | 3 |

**National regulations:**

**Additional classification according to Decree on Hazardous Materials, Annex II:**  
*Carcinogenic hazardous material group III (dangerous).*

**Information about limitation of use:**

*Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.*

**Waterhazard class:** *Water hazard class 3 (Self-assessment): extremely hazardous for water.*

**Other regulations, limitations and prohibitive regulations**

|                                                                              |                      |  |
|------------------------------------------------------------------------------|----------------------|--|
| <b>Substances of very high concern (SVHC) according to REACH, Article 57</b> |                      |  |
| CAS: 7778-50-9                                                               | Potassium dichromate |  |

**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.*

**16.1 Relevant phrases**

H272 May intensify fire; oxidiser.  
H301 Toxic if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H330 Fatal if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H340 May cause genetic defects.  
H350 May cause cancer.  
H360FD May damage fertility. May damage the unborn child.  
H372 Causes damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

**16.3 Recommended restriction of use**

**Department issuing SDS:** PCC-TWR

**Contact:** MSDS.pcc@endress.com

**Date of previous version:** 06.01.2021

**Version number of previous version:** 10

**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  
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)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted No-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic

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**Trade name: CA80COD Reagent RB**

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*SVHC: Substances of Very High Concern**vPvB: very Persistent and very Bioaccumulative**Ox. Liq. 2: Oxidizing liquids – Category 2**Ox. Sol. 2: Oxidizing solids – Category 2**Acute Tox. 3: Acute toxicity – Category 3**Acute Tox. 4: Acute toxicity – Category 4**Acute Tox. 2: Acute toxicity – Category 2**Skin Corr. 1A: Skin corrosion/irritation – Category 1A**Skin Corr. 1B: Skin corrosion/irritation – Category 1B**Eye Dam. 1: Serious eye damage/eye irritation – Category 1**Resp. Sens. 1: Respiratory sensitisation – Category 1**Skin Sens. 1: Skin sensitisation – Category 1**Muta. 1B: Germ cell mutagenicity – Category 1B**Carc. 1B: Carcinogenicity – Category 1B**Repr. 1B: Reproductive toxicity – Category 1B**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1**Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2***\* Data compared to the previous version altered.**

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**Trade name: **CA80COD Reagent RN**

Article number: 71267376

UFI: 8V60-N0YU-P00Y-RREC

**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:***00353 01 809 2166 (from 8 am to 10 pm, 7 days a week)**00353 01 809 2566 (24h)***SECTION 2: Hazards identification****2.1 Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008

*GHS05 corrosion**Skin Corr. 1A H314 Causes severe skin burns and eye damage.**Eye Dam. 1 H318 Causes serious eye damage.**Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.***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***GHS05*Signal word *Danger***Hazard-determining components of labelling:***sulphuric acid**silver sulfate***Hazard statements***H314 Causes severe skin burns and eye damage.**H412 Harmful to aquatic life with long lasting effects.***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.*

(Contd. on page 2)

## Trade name: CA80COD Reagent RN

(Contd. of page 1)

|      |                                                                                                     |
|------|-----------------------------------------------------------------------------------------------------|
| 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. |

**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<br>EINECS: 231-639-5<br>Registration number: 01-2119458838-20-XXXX | sulphuric acid<br>⚠ Skin Corr. 1A, H314<br>Specific concentration limits: Skin Corr. 1A; H314: $C \geq 15\%$<br>Skin Irrit. 2; H315: $5\% \leq C < 15\%$<br>Eye Irrit. 2; H319: $5\% \leq C < 15\%$ | 80-100% |
| CAS: 10294-26-5<br>EINECS: 233-653-7                                              | silver sulfate<br>⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400 (M=1000);<br>Aquatic Chronic 1, H410 (M=100)                                                                                          | 0.1-1%  |

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

**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.

(Contd. on page 3)

Trade name: CA80COD Reagent RN

(Contd. of page 2)

**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.

Wear protective equipment. Keep unprotected persons away.

Wear protective clothing.

### 6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.

Inform respective authorities in case of seepage into water course or sewage system.

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 section 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.

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 sulphuric acid**

OEL (Ireland) Long-term value: 0.05 mg/m<sup>3</sup>  
IOELV, thoracic fraction

IOELV (EU) Long-term value: 0.05 mg/m<sup>3</sup>

### DNELs

**CAS: 7664-93-9 sulphuric acid**

Inhalative DNEL short-term 0.1 mg/m<sup>3</sup> (worker) (local effects)

DNEL long-term 0.05 mg/m<sup>3</sup> (worker) (local effects)

### PNECs

**CAS: 7664-93-9 sulphuric acid**

PNEC 8.8 mg/L (Wastewater treatment plant)

0.25 mg/L (sea water)

PNEC 2.5 µg/L (fresh water)

(Contd. on page 4)

**Trade name: CA80COD Reagent RN**

(Contd. of page 3)

|      |                               |
|------|-------------------------------|
| PNEC | 2 µg/kg (marine sediment)     |
|      | 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 section 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.*

*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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.*

**Eyeface protection**

*Tightly sealed goggles*

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

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Physical state**

*Fluid*

**Colour:**

*Colourless*

**Odour:**

*Odourless*

**Odour threshold:**

*Not determined.*

**Melting point/freezing point:**

*Undetermined.*

**Boiling point or initial boiling point and boiling range**

*295 °C*

**Flammability**

*Not applicable.*

(Contd. on page 5)

— IRL —

Trade name: CA80COD Reagent RN

(Contd. of page 4)

**Lower and upper explosion limit****Lower:** *Not determined.***Upper:** *Not determined.***Flash point:** *Not applicable.***Decomposition temperature:** *Not determined.***pH at 20 °C** *<0***Viscosity:****Kinematic viscosity** *Not determined.***Dynamic:** *Not determined.***Solubility****water:** *Not miscible or difficult to mix.***Partition coefficient n-octanol/water (log value)** *Not determined.***Vapour pressure:** *Not determined.***Density and/or relative density****Density at 20 °C:** *1.852 g/cm<sup>3</sup>***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.****Ignition temperature:** *Product is not selfigniting.***Explosive properties:** *Product does not present an explosion hazard.  
Not determined.***Solvent content:****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.*

(Contd. on page 6)



Trade name: CA80COD Reagent RN

(Contd. of page 5)

**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.**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****Remark:** Harmful to fish**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.

Harmful to aquatic organisms

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

(Contd. on page 7)

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Trade name: CA80COD Reagent RN

(Contd. of page 6)

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

UN1830

14.2 UN proper shipping name

ADR

UN1830 SULPHURIC ACID

IMDG

SULPHURIC ACID

IATA

Sulphuric acid

14.3 Transport hazard class(es)

ADR



Class

8 (C1) Corrosive substances.

Label

8

IMDG, IATA



Class

8 Corrosive substances.

Label

8

14.4 Packing group

ADR, IMDG, IATA

II

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

(SGG1) Acids

Stowage Category

C

Stowage Code

SW15 For metal drums, stowage category B.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable.

Transport/Additional information:

ADR

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

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 1830 SULPHURIC ACID, 8, II

(Contd. on page 8)

IRL

Trade name: CA80COD Reagent RN

(Contd. of page 7)

**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**

GHS05

**Signal word** *Danger***Hazard-determining components of labelling:***sulphuric acid**silver sulfate***Hazard statements***H314 Causes severe skin burns and eye damage.**H412 Harmful to aquatic life with long lasting effects.***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 | Limit value: >15-≤40 % | 80-100% |
|----------------|----------------|------------------------|---------|

**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 | 3 |
|----------------|----------------|---|

**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 | 3 |
|----------------|----------------|---|

**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.*

(Contd. on page 9)

— IRL —

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**Trade name: CA80COD Reagent RN**

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(Contd. of page 8)

**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.*

**16.1 Relevant phrases**

*H314 Causes severe skin burns and eye damage.*

*H315 Causes skin irritation.*

*H318 Causes serious eye damage.*

*H319 Causes serious eye irritation.*

*H400 Very toxic to aquatic life.*

*H410 Very toxic to aquatic life with long lasting effects.*

**16.3 Recommended restriction of use**

**Department issuing SDS:** PCC-TWR

**Contact:** MSDS.pcc@endress.com

**Date of previous version:** 06.01.2021

**Version number of previous version:** 9

**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*

*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)*

*DNEL: Derived No-Effect Level (REACH)*

*PNEC: Predicted No-Effect Concentration (REACH)*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Skin Corr. 1A: Skin corrosion/irritation – Category 1A*

*Eye Dam. 1: Serious eye damage/eye irritation – Category 1*

*Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1*

*Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1*

*Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*

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

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

### 1.1 Product identifier

Trade name: **CA80COD Reagent RX**

Article number: 71320381B

CAS Number:

57-50-1

EC number:

200-334-9

Registration number

*A registration number for this substance is not available because the substance or its use is exempted from registration, the annual tonnage does not require registration or registration is foreseen 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](mailto:MSDS.PCC@endress.com)

### 1.4 Emergency telephone number:

00353 01 809 2166 (from 8 am to 10 pm, 7 days a week)

00353 01 809 2566 (24h)

## 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: 57-50-1 *sucrose*

Identification number(s)

EC number: 200-334-9

(Contd. on page 2)

— IRL —

**Trade name: CA80COD Reagent RX**

(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:***CO<sub>2</sub>, 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***Do not dry clean dust covered objects and floors. Wash thoroughly with plenty of water.**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.*

(Contd. on page 3)

— IRL —

Trade name: CA80COD Reagent RX

(Contd. of page 2)

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:****CAS: 57-50-1 sucrose**

|               |                                                                                 |
|---------------|---------------------------------------------------------------------------------|
| OEL (Ireland) | Short-term value: 20 mg/m <sup>3</sup><br>Long-term value: 10 mg/m <sup>3</sup> |
|---------------|---------------------------------------------------------------------------------|

Additional information: *The lists valid during the making were used as basis.***8.2 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.***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 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****9.1 Information on basic physical and chemical properties****General Information**

|                                                          |                           |
|----------------------------------------------------------|---------------------------|
| 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.           |
| pH                                                       | Not applicable.           |
| Viscosity:                                               |                           |
| Kinematic viscosity                                      | Not applicable.           |
| Dynamic:                                                 | Not applicable.           |
| Solubility                                               |                           |
| water:                                                   | Soluble.                  |
| Partition coefficient n-octanol/water (log value)        | Not determined.           |
| Vapour pressure:                                         | Not applicable.           |
| Density and/or relative density                          |                           |
| Density at 20 °C:                                        | 0.94 g/cm <sup>3</sup>    |
| Relative density                                         | Not determined.           |
| Vapour density                                           | Not applicable.           |

(Contd. on page 4)



Trade name: CA80COD Reagent RX

(Contd. of page 3)

Particle characteristics

See section 3.

**9.2 Other information**

Appearance:

Form:

Crystalline powder

Important information on protection of health and environment, and on safety.

Ignition temperature:

Not determined.

Explosive properties:

Product does not present an explosion hazard.

Not determined.

Molecular weight

342.3 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 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.**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: 57-50-1 sucrose

Oral LD50 29,700 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.

(Contd. on page 5)

Trade name: CA80COD Reagent RX

(Contd. of page 4)

**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.**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

Void

**14.2 UN proper shipping name**

ADR, ADN, IMDG, IATA

Void

**14.3 Transport hazard class(es)**

ADR, ADN, IMDG, IATA

Class

Void

**14.4 Packing group**

ADR, IMDG, IATA

Void

**14.5 Environmental hazards:****Marine pollutant:**

No

**14.6 Special precautions for user**

Not applicable.

**14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

**Transport/Additional information:**Not dangerous according to the above specifications.  
(Contd. on page 6)

Trade name: CA80COD Reagent RX

UN "Model Regulation":

Void

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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:** 06.01.2021**Version number of previous version:** 7**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)**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 previous version altered.**