

20.05.2025

Kit Components

Product code	Description
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CY80COD-CC+SX	CA80COD Reagent Set
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Components:

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

SECTION 1: Identification

Other means of identification

Trade name: **CA80COD Reagent RK**

Article number: 71267373

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

No further relevant information available.

Application of the substance / the mixture *Laboratory chemicals*

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Endress+Hauser
Conducta GmbH+Co. KG
Dieselstraße 24
D-70839 Gerlingen

Further information obtainable from:

Phone: +49 (0)7156 209-10117
E-Mail: MSDS.PCC@endress.com

Regional representation:
Endress+Hauser Australia Pty. Ltd.
50 Broughton Road
Artarmon NSW 2064
Australia

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

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

SECTION 2: Hazard(s) Identification

Classification of the substance or mixture



skull and crossbones

Acute toxicity - inhalation – Category 2

H330 Fatal if inhaled.



health hazard

Specific target organ toxicity (repeated exposure) – Category 2

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



corrosion

Skin corrosion/irritation – Category 1A

H314 Causes severe skin burns and eye damage.

Eye damage/irritation – Category 1

H318 Causes serious eye damage.



Acute toxicity - oral – Category 4

H302 Harmful if swallowed.

Label elements

GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

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Trade name: CA80COD Reagent RK

(Contd. of page 1)

Hazard pictograms



GHS05 GHS06 GHS08

Signal word *Danger*

Hazard-determining components of labelling:

*mercury sulphate (5-10 %)**sulphuric acid (5-10 %)*

Hazard statements

*Harmful if swallowed.**Fatal if inhaled.**Causes severe skin burns and eye damage.**May cause damage to organs through prolonged or repeated exposure.*

Precautionary statements

*IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**Immediately call a POISON CENTER/doctor.**Specific treatment is urgent (see on this label).**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

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 and Information on Ingredients

Mixtures

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

Dangerous components:

CAS: 7664-93-9 EINECS: 231-639-5	<i>sulphuric acid</i> ⚠ Skin corrosion/irritation – Category 1A, H314	5-10%
CAS: 7783-35-9 EINECS: 231-992-5	<i>mercury sulphate</i> ⚠ Acute toxicity - oral – Category 2, H300; Acute toxicity - dermal – Category 1, H310; Acute toxicity - inhalation – Category 2, H330; ⚠ Specific target organ toxicity (repeated exposure) – Category 2, H373	5-10%

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

SECTION 4: First Aid Measures

Description of first aid measures

General information:

*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.

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Trade name: CA80COD Reagent RK

(Contd. of page 2)

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.

Most important symptoms and effects, both acute and delayed

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Fire Fighting Measures**Extinguishing media**

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

For safety reasons unsuitable extinguishing agents: *no further information*

Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

Advice for firefighters *No further relevant information available.*

Protective equipment: *Mount respiratory protective device.*

SECTION 6: Accidental Release Measures**Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

Wear protective clothing.

Environmental precautions:

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and Storage**Precautions for safe handling**

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.*

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

(Contd. on page 4)

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Trade name: CA80COD Reagent RK

(Contd. of page 3)

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

*** SECTION 8: Exposure controls and personal protection****Control parameters**

Ingredients with limit values that require monitoring at the workplace:		
CAS: 7664-93-9 sulphuric acid		
WES (Australia)	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³	
IOELV (EU)	Long-term value: 0.05 mg/m ³	
CAS: 7783-35-9 mercury sulphate		
WES (Australia)	Long-term value: 0.025 mg/m ³ , 0.003 ppm as Hg	
BOELV (EU)	Long-term value: 0.02 mg/m ³ as Hg	
IOELV (EU)	Long-term value: 0.02 mg/m ³ as Hg	
DNELs		
CAS: 7664-93-9 sulphuric acid		
Inhalative	DNEL short-term	0.1 mg/m ³ (worker) (local effects)
	DNEL long-term	0.05 mg/m ³ (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.**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.

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— AUS —

Trade name: CA80COD Reagent RK

(Contd. of page 4)

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****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><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>1.15 g/cm³</i>
Relative density	<i>Not determined.</i>
Vapour density	<i>Not determined.</i>
Particle characteristics	<i>Not applicable.</i>
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>

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Trade name: CA80COD Reagent RK

(Contd. of page 5)

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****Reactivity** No further relevant information available.**Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.**Conditions to avoid** No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:** No dangerous decomposition products known.**SECTION 11: Toxicological Information****Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

Harmful if swallowed.

Fatal if inhaled.

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.**STOT-repeated exposure** May cause damage to organs through prolonged or repeated exposure.**Information on other hazards****Endocrine disrupting properties**

None of the ingredients is listed.

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Trade name: CA80COD Reagent RK

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

The product does not contain substances with endocrine disrupting properties.

Other adverse effects**Additional ecological information:****General notes:**

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

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

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

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

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**Waste treatment methods****Recommendation**

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

Uncleaned packaging:**Recommendation:** Disposal must be made according to official regulations.**Recommended cleansing agents:** Water, if necessary together with cleansing agents.*** SECTION 14: Transport information****UN number or ID number****IMDG, IATA**

UN2922

UN proper shipping name**ADG**

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)

Transport hazard class(es)**ADG****Class**

8 (CT1) Corrosive substances.

Label

8+6.1

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IMDG



Class
Label

8 Corrosive substances.
8/6.1

IATA



Class
Label

8 Corrosive substances.
8 (6.1)

Packing group

ADG, IMDG, IATA

II

Environmental hazards:

Product contains environmentally hazardous substances:
mercury sulphate

Marine pollutant:

Symbol (fish and tree)

Special marking (ADG):

Symbol (fish and tree)

Special precautions for user

Warning: Corrosive substances.

Hazard identification number (Kemler code):

86

EMS Number:

F-A,S-B

Stowage Category

B

Stowage Code

SW2 Clear of living quarters.

Maritime transport in bulk according to IMO instruments

Not applicable.

Transport/Additional information:

ADG

Limited quantities (LQ)

1L

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.
(MERCURY SULPHATE, SULPHURIC ACID), 8 (6.1), II,
ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory of Industrial Chemicals

All ingredients are listed.

Standard for the Uniform Scheduling of Medicines and Poisons

CAS: 7664-93-9 | sulphuric acid

S6

Australia: Priority Existing Chemicals

None of the ingredients is listed.

GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

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Trade name: CA80COD Reagent RK

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Hazard pictograms



GHS05 GHS06 GHS08

Signal word *Danger*

Hazard-determining components of labelling:

*mercury sulphate (5-10 %)**sulphuric acid (5-10 %)*

Hazard statements

*Harmful if swallowed.**Fatal if inhaled.**Causes severe skin burns and eye damage.**May cause damage to organs through prolonged or repeated exposure.*

Precautionary statements

*IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**Immediately call a POISON CENTER/doctor.**Specific treatment is urgent (see on this label).**Store locked up.**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*

National regulations:

Waterhazard class: *Water hazard class 3 (Self-assessment): extremely hazardous for water.***Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

SECTION 16: Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.***Department issuing SDS:** *PCC-TWR***Contact:** *MSDS.pcc@endress.com*

Abbreviations and acronyms:

*ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**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 toxicity - oral - Category 2: Acute toxicity - Category 2**Acute toxicity - oral - Category 4: Acute toxicity - Category 4**Acute toxicity - dermal - Category 1: Acute toxicity - Category 1**Skin corrosion/irritation - Category 1A: Skin corrosion/irritation - Category 1A**Eye damage/irritation - Category 1: Serious eye damage/eye irritation - Category 1*

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Trade name: CA80COD Reagent RK

Specific target organ toxicity (repeated exposure) – Category 2: Specific target organ toxicity (repeated exposure) – Category 2 (Contd. of page 9)

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

— AUS —

SECTION 1: Identification

Other means of identification

Trade name: **CA80COD Reagent RB**

Article number: 71267375

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

No further relevant information available.

Application of the substance / the mixture *Laboratory chemicals*

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Endress+Hauser
Conducta GmbH+Co. KG
Dieselstraße 24
D-70839 Gerlingen

Further information obtainable from:

Phone: +49 (0)7156 209-10117
E-Mail: MSDS.PCC@endress.com

Regional representation:
Endress+Hauser Australia Pty. Ltd.
50 Broughton Road
Artarmon NSW 2064
Australia

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

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

SECTION 2: Hazard(s) Identification

Classification of the substance or mixture



flame over circle

Oxidising liquids - Category 2

H272 May intensify fire; oxidizer.



skull and crossbones

Acute toxicity - inhalation – Category 1

H330 Fatal if inhaled.



health hazard

Respiratory sensitisation – Category 1

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

Germ cell mutagenicity – Category 1B

H340 May cause genetic defects.

Carcinogenicity – Category 1B

H350 May cause cancer.

Reproductive toxicity – Category 1B

H360 May damage fertility or the unborn child.

Specific target organ toxicity (repeated exposure) – Category 2

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



corrosion

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Trade name: CA80COD Reagent RB

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Skin corrosion/irritation – Category 1A

H314 Causes severe skin burns and eye damage.

Eye damage/irritation – Category 1

H318 Causes serious eye damage.



Skin sensitisation – Category 1

H317 May cause an allergic skin reaction.

Label elements

GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

Hazard pictograms



GHS03 GHS05 GHS06 GHS08

Signal word *Danger*

Hazard-determining components of labelling:

Potassium dichromate (5-10 %)

sulphuric acid (10-20 %)

Hazard statements

May intensify fire; oxidizer.

Fatal if inhaled.

Causes severe skin burns and eye damage.

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

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

May damage fertility or the unborn child.

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

Precautionary statements

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

Immediately call a POISON CENTER/doctor.

Specific treatment is urgent (see on this label).

Take off contaminated clothing and wash it before reuse.

Store locked up.

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

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 and Information on Ingredients

Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

(Contd. on page 3)

AUS

Trade name: CA80COD Reagent RB

(Contd. of page 2)

Dangerous components:		
CAS: 7664-93-9 EINECS: 231-639-5	sulphuric acid ⚠ Skin corrosion/irritation – Category 1A, H314	10-20%
CAS: 7778-50-9 EINECS: 231-906-6	Potassium dichromate ⚠ Oxidising liquids - Category 2, H272; Oxidising solids - Category 2, H272; ⚠ Acute toxicity - oral – Category 3, H301; Acute toxicity - inhalation – Category 1, H330; ⚠ Respiratory sensitisation – Category 1, H334; Germ cell mutagenicity – Category 1B, H340; Carcinogenicity – Category 1B, H350; Reproductive toxicity – Category 1B, H360; Specific target organ toxicity (repeated exposure) – Category 1, H372; ⚠ Skin corrosion/irritation – Category 1B, H314; ⚠ Acute toxicity - dermal – Category 4, H312; Skin sensitisation – Category 1, H317	5-10%
SVHC		
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

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.

Most important symptoms and effects, both acute and delayed

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Fire Fighting Measures

Extinguishing media

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

For safety reasons unsuitable extinguishing agents: no further information

Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

Advice for firefighters No further relevant information available.

Protective equipment: Mount respiratory protective device.

SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

Wear protective clothing.

Environmental precautions:

Dilute with plenty of water.

(Contd. on page 4)

— AUS —

Trade name: CA80COD Reagent RB

(Contd. of page 3)

*Do not allow to enter sewers/ surface or ground water.***Methods and material for containment and cleaning up:***Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).**Use neutralising agent.**Dispose contaminated material as waste according to section 13.**Ensure adequate ventilation.***Reference to other sections***See Section 7 for information on safe handling.**See Section 8 for information on personal protection equipment.**See Section 13 for disposal information.***SECTION 7: Handling and Storage****Precautions for safe handling***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.***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**Specific end use(s)** *No further relevant information available.***SECTION 8: Exposure controls and personal protection****Control parameters****Ingredients with limit values that require monitoring at the workplace:****CAS: 7664-93-9 sulphuric acid**WES (Australia) Short-term value: 3 mg/m³Long-term value: 1 mg/m³IOELV (EU) Long-term value: 0.05 mg/m³**CAS: 7778-50-9 Potassium dichromate**WES (Australia) Long-term value: 0.05 mg/m³

Sen, as Cr

BOELV (EU) Long-term value: 0.005; 0.01*; 0.025** mg/m³
as Cr; *until 01/17/2025**processes generating fume**DNELs****CAS: 7664-93-9 sulphuric acid**Inhalative DNEL short-term 0.1 mg/m³ (worker) (local effects)DNEL long-term 0.05 mg/m³ (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)

(Contd. on page 5)

Trade name: CA80COD Reagent RB

(Contd. of page 4)

PNEC	0 mg/L (fresh water)
	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.

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.

Eyeface protection

Tightly sealed goggles

Body protection: Protective work clothing

SECTION 9: Physical and Chemical Properties**Information on basic physical and chemical properties****General Information**

Physical state

Fluid

Colour:

Colourless

Odour:

Odourless

Odour threshold:

Not determined.

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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
Density and/or relative density	
Density at 20 °C:	1.114 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Particle characteristics	Not applicable.
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:	80.6 %
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	May intensify fire; oxidizer.
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

(Contd. on page 7)

— AUS —

Trade name: CA80COD Reagent RB

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SECTION 10: Stability and Reactivity**Reactivity** No further relevant information available.**Chemical stability****Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.**Conditions to avoid** No further relevant information available.**Incompatible materials:** No further relevant information available.**Hazardous decomposition products:** No dangerous decomposition products known.**SECTION 11: Toxicological Information**

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

Acute toxicity 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 or the unborn child.**STOT-repeated exposure**

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

Information on other hazards**Endocrine disrupting properties**

None of the ingredients is listed.

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

The product does not contain substances with endocrine disrupting properties.

Other adverse effects**Additional ecological information:****General notes:**

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.

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.

(Contd. on page 8)

Trade name: CA80COD Reagent RB

(Contd. of page 7)

SECTION 13: Disposal considerations**Waste treatment methods****Recommendation***Must not be disposed together with household garbage. Do not allow product to reach sewage system.***Uncleaned packaging:****Recommendation:** *Disposal must be made according to official regulations.***Recommended cleansing agents:** *Water, if necessary together with cleansing agents.**** SECTION 14: Transport information****UN number or ID number**

UN2922

IMDG, IATA**UN proper shipping name****ADG**

UN2922 CORROSIVE LIQUID, TOXIC, N.O.S.

(SULPHURIC ACID, Potassium dichromate)

IMDG

CORROSIVE LIQUID, TOXIC, N.O.S. (SULPHURIC

ACID, Potassium dichromate), MARINE POLLUTANT

IATA

Corrosive liquid, toxic, n.o.s. (containing SULPHURIC

ACID, Potassium dichromate)

Transport hazard class(es)**ADG****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)

Packing group**ADG, IMDG, IATA**

II

Environmental hazards:*Product contains environmentally hazardous substances:**Potassium dichromate**Symbol (fish and tree)**Symbol (fish and tree)**Warning: Corrosive substances.***Marine pollutant:****Special marking (ADG):****Special precautions for user****Hazard identification number (Kemler code):** 86**EMS Number:**

F-A,S-B

Segregation groups

(SGG1a) Strong acids

Stowage Category

B

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Stowage Code SW2 Clear of living quarters.

Maritime transport in bulk according to IMO instruments Not applicable.

Transport/Additional information:

ADG

Limited quantities (LQ) 1L

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

Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory of Industrial Chemicals

All ingredients are listed.

Standard for the Uniform Scheduling of Medicines and Poisons

CAS: 7664-93-9 | sulphuric acid

S6

Australia: Priority Existing Chemicals

None of the ingredients is listed.

GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

Hazard pictograms



GHS03 GHS05 GHS06 GHS08

Signal word Danger

Hazard-determining components of labelling:

Potassium dichromate (5-10 %)

sulphuric acid (10-20 %)

Hazard statements

May intensify fire; oxidizer.

Fatal if inhaled.

Causes severe skin burns and eye damage.

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

May cause an allergic skin reaction.

May cause genetic defects.

May cause cancer.

May damage fertility or the unborn child.

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

Precautionary statements

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

Immediately call a POISON CENTER/doctor.

(Contd. on page 10)

AUS

Trade name: CA80COD Reagent RB

(Contd. of page 9)

*Specific treatment is urgent (see on this label).**Take off contaminated clothing and wash it before reuse.**Store locked up.**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***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****Substances of very high concern (SVHC) according to REACH, Article 57**

CAS: 7778-50-9 | Potassium dichromate

Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.***SECTION 16: Other information***This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.***Department issuing SDS:** *PCC-TWR***Contact:** *MSDS.pcc@endress.com***Abbreviations and acronyms:***ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**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**SVHC: Substances of Very High Concern**vPvB: very Persistent and very Bioaccumulative**Oxidising liquids - Category 2: Oxidizing liquids – Category 2**Oxidising solids - Category 2: Oxidizing solids – Category 2**Acute toxicity - oral – Category 3: Acute toxicity – Category 3**Acute toxicity - dermal – Category 4: Acute toxicity – Category 4**Acute toxicity - inhalation – Category 1: Acute toxicity – Category 1**Skin corrosion/irritation – Category 1A: Skin corrosion/irritation – Category 1A**Skin corrosion/irritation – Category 1B: Skin corrosion/irritation – Category 1B**Eye damage/irritation – Category 1: Serious eye damage/eye irritation – Category 1**Respiratory sensitisation – Category 1: Respiratory sensitisation – Category 1**Skin sensitisation – Category 1: Skin sensitisation – Category 1**Germ cell mutagenicity – Category 1B: Germ cell mutagenicity – Category 1B**Carcinogenicity – Category 1B: Carcinogenicity – Category 1B**Reproductive toxicity – Category 1B: Reproductive toxicity – Category 1B**Specific target organ toxicity (repeated exposure) – Category 1: Specific target organ toxicity (repeated exposure) – Category 1**Specific target organ toxicity (repeated exposure) – Category 2: Specific target organ toxicity (repeated exposure) – Category 2**** Data compared to the previous version altered.**

SECTION 1: Identification

Other means of identification

Trade name: **CA80COD Reagent RN**

Article number: 71267376

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

No further relevant information available.

Application of the substance / the mixture *Laboratory chemicals*

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Endress+Hauser
Conducta GmbH+Co. KG
Dieselstraße 24
D-70839 Gerlingen

Further information obtainable from:

Phone: +49 (0)7156 209-10117
E-Mail: MSDS.PCC@endress.com

Regional representation:
Endress+Hauser Australia Pty. Ltd.
50 Broughton Road
Artarmon NSW 2064
Australia

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

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

SECTION 2: Hazard(s) Identification

Classification of the substance or mixture



corrosion

Skin corrosion/irritation – Category 1A H314 Causes severe skin burns and eye damage.

Eye damage/irritation – Category 1 H318 Causes serious eye damage.

Label elements

GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

Hazard pictograms



GHS05

Signal word *Danger*

Hazard-determining components of labelling:

sulphuric acid (80-100 %)

silver sulfate (0.1-1 %)

Hazard statements

Causes severe skin burns and eye damage.

(Contd. on page 2)

Trade name: CA80COD Reagent RN

(Contd. of page 1)

Precautionary statements

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

Immediately call a POISON CENTER/doctor.

Specific treatment (see on this label).

Store locked up.

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

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 and Information on Ingredients****Mixtures**

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

Dangerous components:			
CAS: 7664-93-9 EINECS: 231-639-5	sulphuric acid	 Skin corrosion/irritation – Category 1A, H314	80-100%
CAS: 10294-26-5 EINECS: 233-653-7	silver sulfate	 Eye damage/irritation – Category 1, H318	0.1-1%

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

SECTION 4: First Aid Measures**Description of first aid measures**

General information: *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.*

Most important symptoms and effects, both acute and delayed

No further relevant information available.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

SECTION 5: Fire Fighting Measures**Extinguishing media**

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

For safety reasons unsuitable extinguishing agents: *no further information*

Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

Advice for firefighters *No further relevant information available.*

Protective equipment: *Mount respiratory protective device.*

(Contd. on page 3)

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Trade name: CA80COD Reagent RN

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SECTION 6: Accidental Release Measures**Personal precautions, protective equipment and emergency procedures***Mount respiratory protective device.**Wear protective equipment. Keep unprotected persons away.**Wear protective clothing.***Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.***Methods and material for containment and cleaning up:***Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).**Use neutralising agent.**Dispose contaminated material as waste according to section 13.**Ensure adequate ventilation.***Reference to other sections***See Section 7 for information on safe handling.**See Section 8 for information on personal protection equipment.**See Section 13 for disposal information.***SECTION 7: Handling and Storage****Precautions for safe handling***Ensure good ventilation/exhaustion at the workplace.**Prevent formation of aerosols.***Information about fire - and explosion protection:** *Keep respiratory protective device available.***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**Specific end use(s)** *No further relevant information available.***SECTION 8: Exposure controls and personal protection****Control parameters****Ingredients with limit values that require monitoring at the workplace:****CAS: 7664-93-9 sulphuric acid**

WES (Australia)	Short-term value: 3 mg/m ³
	Long-term value: 1 mg/m ³
IOELV (EU)	Long-term value: 0.05 mg/m ³

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

Inhalative	DNEL short-term	0.1 mg/m ³ (worker) (local effects)
	DNEL long-term	0.05 mg/m ³ (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.*

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Trade name: CA80COD Reagent RN

(Contd. of page 3)

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****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.***Lower and upper explosion limit****Lower:***Not determined.***Upper:***Not determined.***Flash point:***Not applicable.***Decomposition temperature:***Not determined.*

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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 ³
Relative density	Not determined.
Vapour density	Not determined.
Particle characteristics	Not applicable.
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

Reactivity No further relevant information available.

Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.

Conditions to avoid No further relevant information available.

Incompatible materials: No further relevant information available.

(Contd. on page 6)

Trade name: CA80COD Reagent RN

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

SECTION 11: Toxicological Information

Information on hazard classes as defined in Regulation (EC) No 1272/2008**Acute toxicity** *Based on available data, the classification criteria are not met.***Skin corrosion/irritation** *Causes severe skin burns and eye damage.***Serious eye damage/irritation** *Causes serious eye damage.***Information on other hazards****Endocrine disrupting properties***None of the ingredients is listed.*

SECTION 12: Ecological Information

Toxicity**Aquatic toxicity:** *No further relevant information available.***Persistence and degradability** *No further relevant information available.***Bioaccumulative potential** *No further relevant information available.***Mobility in soil** *No further relevant information available.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***Endocrine disrupting properties***The product does not contain substances with endocrine disrupting properties.***Other adverse effects****Additional ecological information:****General notes:***Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water**Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.**Must not reach sewage water or drainage ditch undiluted or unneutralised.**Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.*

SECTION 13: Disposal considerations

Waste treatment methods**Recommendation***Must not be disposed together with household garbage. Do not allow product to reach sewage system.***Uncleaned packaging:****Recommendation:** *Disposal must be made according to official regulations.*

* SECTION 14: Transport information

UN number or ID number**IMDG, IATA**

UN1830

UN proper shipping name**ADG**

UN1830 SULPHURIC ACID

IMDG

SULPHURIC ACID

IATA

Sulphuric acid

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Transport hazard class(es)

ADG



Class

8 (C1) Corrosive substances.

Label

8

IMDG, IATA



Class

8 Corrosive substances.

Label

8

Packing group

ADG, IMDG, IATA

II

Environmental hazards:

Not applicable.

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.

Maritime transport in bulk according to IMO instruments

Not applicable.

Transport/Additional information:

ADG

Limited quantities (LQ)

1L

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

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory of Industrial Chemicals

All ingredients are listed.

Standard for the Uniform Scheduling of Medicines and Poisons

CAS: 7664-93-9 | sulphuric acid

S6

Australia: Priority Existing Chemicals

None of the ingredients is listed.

GHS label elements

The product is classified and labelled according to the Globally Harmonised System (GHS).

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Trade name: CA80COD Reagent RN

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Hazard pictograms

GHS05

Signal word *Danger***Hazard-determining components of labelling:***sulphuric acid (80-100 %)**silver sulfate (0.1-1 %)***Hazard statements***Causes severe skin burns and eye damage.***Precautionary statements***IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**Immediately call a POISON CENTER/doctor.**Specific treatment (see on this label).**Store locked up.**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.***National regulations:****Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.***Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***SECTION 16: Other information***This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.***Department issuing SDS:** PCC-TWR**Contact:** MSDS.pcc@endress.com**Abbreviations and acronyms:***ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**DNEL: Derived No-Effect Level (REACH)**PNEC: Predicted No-Effect Concentration (REACH)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Skin corrosion/irritation – Category 1A: Skin corrosion/irritation – Category 1A**Eye damage/irritation – Category 1: Serious eye damage/eye irritation – Category 1**** Data compared to the previous version altered.**

SECTION 1: Identification

Other means of identification

Trade name: **CA80COD Reagent RX**

Article number: 71320381B

CAS Number:

57-50-1

EC number:

200-334-9

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

No further relevant information available.

Application of the substance / the mixture *Laboratory chemicals*

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Endress+Hauser

Conducta GmbH+Co. KG

Dieselstraße 24

D-70839 Gerlingen

Further information obtainable from:

Phone: +49 (0)7156 209-10117

E-Mail: MSDS.PCC@endress.com

Regional representation:

Endress+Hauser Australia Pty. Ltd.

50 Broughton Road

Artarmon NSW 2064

Australia

Phone: 1300 363 707

Phone: +61 2 8877 7000

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

SECTION 2: Hazard(s) Identification

Classification of the substance or mixture

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

Label elements

GHS label elements *Void*

Hazard pictograms *Void*

Signal word *Void*

Hazard statements *Void*

Other hazards

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 and Information on Ingredients

Substances

CAS No. Description

CAS: 57-50-1 *sucrose*

(Contd. on page 2)

— AUS —

Trade name: CA80COD Reagent RX

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Identification number(s)

EC number: 200-334-9

SECTION 4: First Aid Measures

Description of first aid measures

General information: *No special measures required.***After inhalation:** *Supply fresh air; consult doctor in case of complaints.***After skin contact:** *Generally the product does not irritate the skin.***After eye contact:** *Rinse opened eye for several minutes under running water.***After swallowing:** *If symptoms persist consult doctor.***Most important symptoms and effects, both acute and delayed***No further relevant information available.***Indication of any immediate medical attention and special treatment needed***No further relevant information available.*

SECTION 5: Fire Fighting Measures

Extinguishing media

Suitable extinguishing agents:

*CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.***For safety reasons unsuitable extinguishing agents:** *no further information***Special hazards arising from the substance or mixture** *No further relevant information available.***Advice for firefighters** *No further relevant information available.***Protective equipment:** *No special measures required.*

* SECTION 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures *Wear protective clothing.***Environmental precautions:** *Do not allow to enter sewers/ surface or ground water.***Methods and material for containment and cleaning up:** *Pick up mechanically.*

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

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.*

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

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*** SECTION 8: Exposure controls and personal protection****Control parameters****Ingredients with limit values that require monitoring at the workplace:****CAS: 57-50-1 sucrose**WES (Australia) Long-term value: 10 mg/m³
inhalable dust**Additional information:** The lists valid during the making were used as basis.**Exposure controls****Appropriate engineering controls** No further data; see section 7.**Individual protection measures, such as personal protective equipment****General protective and hygienic measures:**

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

Respiratory protection: Not required.**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****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/cm³**Relative density**

Not determined.

Vapour density

Not applicable.

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Safety Data Sheet

according to WHS Regulations

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Particle characteristics	Not determined.
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

Reactivity No further relevant information available.

Chemical stability

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Possibility of hazardous reactions No dangerous reactions known.

Conditions to avoid No further relevant information available.

Incompatible materials: No further relevant information available.

Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological Information

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

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

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.

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Reproductive toxicity *Based on available data, the classification criteria are not met.***STOT-single exposure** *Based on available data, the classification criteria are not met.***STOT-repeated exposure** *Based on available data, the classification criteria are not met.***Aspiration hazard** *Based on available data, the classification criteria are not met.***Information on other hazards****Endocrine disrupting properties***Substance is not listed.**** SECTION 12: Ecological Information****Toxicity****Aquatic toxicity:** *No further relevant information available.***Persistence and degradability** *No further relevant information available.***Bioaccumulative potential** *No further relevant information available.***Mobility in soil** *No further relevant information available.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***Endocrine disrupting properties***The product does not contain substances with endocrine disrupting properties.***Other adverse effects****Additional ecological information:****General notes:***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****Waste treatment methods****Recommendation** *Smaller quantities can be disposed of with household waste.***Uncleaned packaging:****Recommendation:** *Disposal must be made according to official regulations.***Recommended cleansing agents:** *Water, if necessary together with cleansing agents.***SECTION 14: Transport information****UN number or ID number****ADN, IMDG, IATA***Void***UN proper shipping name****ADG, ADN, IMDG, IATA***Void***Transport hazard class(es)****ADG, ADN, IMDG, IATA****Class***Void***Packing group****ADG, IMDG, IATA***Void***Environmental hazards:****Marine pollutant:***No***Special precautions for user***Not applicable.***Maritime transport in bulk according to IMO instruments***Not applicable.***Transport/Additional information:***Not dangerous according to the above specifications.***UN "Model Regulation":***Void*

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*** SECTION 15: Regulatory information**

Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory of Industrial Chemicals*Substance is listed.***Standard for the Uniform Scheduling of Medicines and Poisons***Substance is not listed.***Australia: Priority Existing Chemicals***Substance is not listed.***GHS label elements** *Void***Hazard pictograms** *Void***Signal word** *Void***Hazard statements** *Void***Directive 2012/18/EU****Named dangerous substances - ANNEX I** *Substance is not listed.***National regulations:****Waterhazard class:** *Water hazard class 1 (Assessment by list): slightly hazardous for water.***Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***SECTION 16: Other information***This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.***Department issuing SDS:** *PCC-TWR***Contact:** *MSDS.pcc@endress.com***Abbreviations and acronyms:***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**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.**

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