

03/19/2022

**Kit Components**

Product code	Description
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<b>CY80CR-AF+SG</b>	<b>CA80CR Reagent Set for chromate</b>
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Components:

51508330B	CA80CR Reagent RB
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71260902B	CA80CR Reagent RK
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## 1 Identification

### Product identifier

Trade name: **CA80CR Reagent RB**

Article number: 51508330B

Application of the substance / the mixture *Laboratory chemicals*

### Details of the supplier of the safety data sheet

#### Manufacturer/Supplier:

Endress+Hauser Conducta Inc.  
4123 E. La Palma Ave., Suite 200  
Anaheim  
CA 92807-1813  
USA

#### Information department:

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

Emergency telephone number: 001 18000 222 1222

## \* 2 Hazard(s) identification

### Classification of the substance or mixture



GHS05 Corrosion

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

*Eye Damage 1 H318 Causes serious eye damage.*

### Label elements

#### GHS label elements

*The product is classified and labeled according to the Globally Harmonized System (GHS).*

#### Hazard pictograms



GHS05

Signal word *Danger*

#### Hazard-determining components of labeling:

*sulphuric acid*

#### Hazard statements

*Causes severe skin burns and eye damage.*

#### Precautionary statements

*If on skin (or hair): 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.*

#### Classification system:

#### NFPA ratings (scale 0 - 4)



Health = 3

Fire = 0

Reactivity = 0

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Trade name: CA80CR Reagent RB

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**HMIS-ratings (scale 0 - 4)**

HEALTH	3	Health = 3
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

**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.

**3 Composition/information on ingredients****Chemical characterization: Mixtures**

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

**Dangerous components:**

CAS: 7664-93-9	sulphuric acid	 Skin Corrosion 1A, H314	10-20%
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**Additional information:** For the wording of the listed hazard phrases refer to section 16.

**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 copious amounts of water and provide fresh air. Immediately call a doctor.

**Information for 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.

**5 Fire-fighting measures****Extinguishing media****Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing 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**

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.

**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.

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Trade name: CA80CR Reagent RB

(Contd. of page 2)

**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 neutralizing agent.*

*Dispose contaminated material as waste according to item 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.*

**Protective Action Criteria for Chemicals**

<b>PAC-1:</b>		
CAS: 7664-93-9	sulphuric acid	0.20 mg/m <sup>3</sup>
<b>PAC-2:</b>		
CAS: 7664-93-9	sulphuric acid	8.7 mg/m <sup>3</sup>
<b>PAC-3:</b>		
CAS: 7664-93-9	sulphuric acid	160 mg/m <sup>3</sup>

**7 Handling and storage**

**Precautions for safe handling**

*Ensure good ventilation/exhaustion at the workplace.*

*Prevent formation of aerosols.*

**Information about protection against explosions and fires:**

*Keep respiratory protective device available.*

**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 receptacle tightly sealed.*

**Storage class:** *8 B*

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

**\* 8 Exposure controls/personal protection**

**Additional information about design of technical systems:** *No further data; see item 7.*

**Control parameters**

<b>Components with limit values that require monitoring at the workplace:</b>	
<b>CAS: 7664-93-9 sulphuric acid</b>	
PEL	Long-term value: 1 mg/m <sup>3</sup>
REL	Long-term value: 1 mg/m <sup>3</sup>
TLV	Long-term value: 0.2* mg/m <sup>3</sup>
	*as thoracic fraction, A2

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

**Exposure controls**

**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.*

(Contd. on page 4)

**Trade name: CA80CR Reagent RB**

(Contd. of page 3)

**Breathing equipment:**

*In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.*

**Protection of hands:**

Protective gloves

*To avoid skin problems reduce the wearing of gloves to the required minimum.*

*Only use chemical-protective gloves with CE-labeling 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.*

**Eye protection:**

Tightly sealed goggles

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

## 9 Physical and chemical properties

**Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	<i>Fluid</i>
<b>Color:</b>	<i>Colorless</i>
<b>Odor:</b>	<i>Odorless</i>
<b>Odor threshold:</b>	<i>Not determined.</i>

**pH-value at 20 °C (68 °F):** *<1*

**Change in condition**

<b>Melting point/Melting range:</b>	<i>Undetermined.</i>
<b>Boiling point/Boiling range:</b>	<i>Undetermined.</i>

**Flash point:** *Not applicable.*

**Flammability (solid, gaseous):** *Not applicable.*

**Decomposition temperature:** *Not determined.*

**Auto igniting:** *Product is not selfigniting.*

**Danger of explosion:** *Product does not present an explosion hazard.  
Not determined.*

**Explosion limits:**

<b>Lower:</b>	<i>Not determined.</i>
<b>Upper:</b>	<i>Not determined.</i>

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**Trade name: CA80CR Reagent RB**

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<b>Vapor pressure at 20 °C (68 °F):</b>	23 hPa (17.3 mm Hg)
<b>Density at 20 °C (68 °F):</b>	1.056 g/cm <sup>3</sup> (8.812 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Fully miscible.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Solvent content:</b>	
<b>Water:</b>	89.6 %
<b>Solids content:</b>	0.0 %
<b>Other information</b>	No further relevant information available.

**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.

**11 Toxicological information****Information on toxicological effects****Acute toxicity:****Primary irritant effect:**

**on the skin:** Strong caustic effect on skin and mucous membranes.

**on the eye:**

Strong caustic effect.

Strong irritant with the danger of severe eye injury.

**Sensitization:** No sensitizing effects known.

**Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Corrosive

Irritant

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

**12 Ecological information****Toxicity**

**Aquatic toxicity:** No further relevant information available.

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

**Behavior in environmental systems:**

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

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

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## Trade name: CA80CR Reagent RB

(Contd. of page 5)

**Additional ecological information:****General notes:***Water hazard class 1 (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 bodies of water or drainage ditch undiluted or unneutralized.**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.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***Other adverse effects** *No further relevant information available.***13 Disposal considerations****Waste treatment methods****Recommendation:***Must not be disposed of together with household garbage. Do not allow product to reach sewage system.***Uncleaned packagings:****Recommendation:** *Disposal must be made according to official regulations.***Recommended cleansing agent:** *Water, if necessary with cleansing agents.***14 Transport information****UN-Number****DOT, IMDG, IATA**

UN2796

**UN proper shipping name****DOT, IMDG**

SULPHURIC ACID

**IATA**

Sulphuric acid

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

8 Corrosive substances

**Label**

8

**IMDG, IATA****Class**

8 Corrosive substances

**Label**

8

**Packing group****DOT, 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**

Strong acids

**Stowage Category**

B

**Segregation Code**

SG36 Stow "separated from" SGG18-alkalis.

SG49 Stow "separated from" SGG6-cyanides

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**Trade name: CA80CR Reagent RB**

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**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** *Not applicable.*

**Transport/Additional information:**

**DOT**

**Quantity limitations** *On passenger aircraft/rail: 1 L  
On cargo aircraft only: 30 L*

**IMDG**

**Limited quantities (LQ)** *1L*  
**Excepted quantities (EQ)** *Code: E2  
Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml*

**UN "Model Regulation":** *UN 2796 SULPHURIC ACID, 8, II*

**\*15 Regulatory information**

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

**Section 355 (extremely hazardous substances):**

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

**Section 313 (Specific toxic chemical listings):**

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

**TSCA (Toxic Substances Control Act):**

*All components have the value ACTIVE.*

**Hazardous Air Pollutants**

*None of the ingredients is listed.*

**Proposition 65**

**Chemicals known to cause cancer:**

*None of the ingredients is listed.*

**Chemicals known to cause reproductive toxicity for females:**

*None of the ingredients is listed.*

**Chemicals known to cause reproductive toxicity for males:**

*None of the ingredients is listed.*

**Chemicals known to cause developmental toxicity:**

*None of the ingredients is listed.*

**Carcinogenicity categories**

**EPA (Environmental Protection Agency)**

*None of the ingredients is listed.*

**TLV (Threshold Limit Value)**

*CAS: 7664-93-9 | sulphuric acid* A2

**MAK (German Maximum Workplace Concentration)**

*CAS: 7664-93-9 | sulphuric acid* 4

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

*None of the ingredients is listed.*

**GHS label elements**

*The product is classified and labeled according to the Globally Harmonized System (GHS).*

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**Trade name: CA80CR Reagent RB**

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**Hazard pictograms**

GHS05

**Signal word** *Danger***Hazard-determining components of labeling:***sulphuric acid***Hazard statements***Causes severe skin burns and eye damage.***Precautionary statements***If on skin (or hair): 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.***National regulations:****Water hazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.***Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***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***Date of preparation / last revision** *03/19/2022 / 2***Abbreviations and acronyms:***RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)**IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)**ICAO: International Civil Aviation Organisation**ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)**ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**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)**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Skin Corrosion 1A: Skin corrosion/irritation – Category 1A**Eye Damage 1: Serious eye damage/eye irritation – Category 1***\* Data compared to the previous version altered.**

## 1 Identification

### Product identifier

Trade name: **CA80CR Reagent RK**

Article number: 71260902B

Application of the substance / the mixture *Laboratory chemicals*

### Details of the supplier of the safety data sheet

#### Manufacturer/Supplier:

Endress+Hauser Conducta Inc.  
4123 E. La Palma Ave., Suite 200  
Anaheim  
CA 92807-1813  
USA

#### Information department:

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

Emergency telephone number: 001 18000 222 1222

## 2 Hazard(s) identification

### Classification of the substance or mixture



GHS02 Flame

Flammable Liquids 2

H225 Highly flammable liquid and vapor.



GHS07

Eye Irritation 2A

H319 Causes serious eye irritation.

Specific Target Organ Toxicity - Single Exposure 3 H336 May cause drowsiness or dizziness.

### Label elements

#### GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

#### Hazard pictograms



GHS02 GHS07

Signal word *Danger*

#### Hazard-determining components of labeling:

*propan-2-ol*

#### Hazard statements

*Highly flammable liquid and vapor.*

*Causes serious eye irritation.*

*May cause drowsiness or dizziness.*

#### Precautionary statements

*Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*

*If on skin (or hair): 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.*

*Store locked up.*

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

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USA

Trade name: CA80CR Reagent RK

(Contd. of page 1)

**Classification system:****NFPA ratings (scale 0 - 4)****HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

**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.

**3 Composition/information on ingredients****Chemical characterization: Mixtures**

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

Dangerous components:		
CAS: 67-63-0	propan-2-ol ⚠ Flammable Liquids 2, H225; ⚠ Eye Irritation 2A, H319; Specific Target Organ Toxicity - Single Exposure 3, H336	20-40%
CAS: 67-68-5	dimethyl sulfoxide	10-20%

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

**4 First-aid measures****Description of first aid measures**

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

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:** Immediately rinse with water.

**After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:** If symptoms persist consult doctor.

**Information for 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.

**5 Fire-fighting measures****Extinguishing media****Suitable extinguishing agents:**

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**For safety reasons unsuitable extinguishing agents:** Water with full jet

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

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

(Contd. on page 3)

Trade name: CA80CR Reagent RK

(Contd. of page 2)

**Protective equipment:** No special measures required.

## 6 Accidental release measures

**Personal precautions, protective equipment and emergency procedures***Wear protective equipment. Keep unprotected persons away.**Wear protective clothing.***Environmental precautions:***Prevent seepage into sewage system, workpits and cellars.**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).**Dispose contaminated material as waste according to item 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.***Protective Action Criteria for Chemicals****PAC-1:**

CAS: 67-63-0 propan-2-ol 400 ppm

CAS: 67-68-5 dimethyl sulfoxide 150 ppm

**PAC-2:**

CAS: 67-63-0 propan-2-ol 2000\* ppm

CAS: 67-68-5 dimethyl sulfoxide 290 ppm

**PAC-3:**

CAS: 67-63-0 propan-2-ol 12000\*\* ppm

CAS: 67-68-5 dimethyl sulfoxide 1,800 ppm

## 7 Handling and storage

**Precautions for safe handling***Ensure good ventilation/exhaustion at the workplace.**Prevent formation of aerosols.***Information about protection against explosions and fires:***Keep ignition sources away - Do not smoke.**Protect against electrostatic charges.***Storage:****Requirements to be met by storerooms and receptacles:** *Store in a cool location.***Information about storage in one common storage facility:** *Not required.***Further information about storage conditions:***Keep receptacle tightly sealed.**Store in cool, dry conditions in well sealed receptacles.***Storage class:** 3**Specific end use(s)** *No further relevant information available.*

## \* 8 Exposure controls/personal protection

**Additional information about design of technical systems:** *No further data; see item 7.***Control parameters****Components with limit values that require monitoring at the workplace:****CAS: 67-63-0 propan-2-ol**PEL Long-term value: 980 mg/m<sup>3</sup>, 400 ppm

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**Trade name: CA80CR Reagent RK**

(Contd. of page 3)

REL	Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
TLV	Short-term value: 400 ppm Long-term value: 200 ppm BEI, A4
<b>CAS: 67-68-5 dimethyl sulfoxide</b>	
WEEL	Long-term value: 250 ppm
<b>Ingredients with biological limit values:</b>	
<b>CAS: 67-63-0 propan-2-ol</b>	
BEI	40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)

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

**Exposure controls**

**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.*

**Breathing equipment:**

*In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.*

**Protection of hands:**



Protective gloves

*To avoid skin problems reduce the wearing of gloves to the required minimum.  
Only use chemical-protective gloves with CE-labeling 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*

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

**Penetration time of glove material**

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

**Eye protection:**



Tightly sealed goggles

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

(Contd. on page 5)

Trade name: CA80CR Reagent RK

(Contd. of page 4)

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

##### Appearance:

Form:	Fluid
Color:	Colorless
Odor:	Characteristic
Odor threshold:	Not determined.
pH-value:	Neutral

#### Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	82 °C (179.6 °F)

Flash point: < 23 °C (< 73.4 °F)

Flammability (solid, gaseous): Not applicable.

Ignition temperature: 270 °C (518 °F)

Decomposition temperature: Not determined.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

#### Explosion limits:

Lower:	1.8 Vol %
Upper:	12 Vol %

Vapor pressure at 20 °C (68 °F): 43 hPa (32.3 mm Hg)

Density at 20 °C (68 °F): 0.923 g/cm<sup>3</sup> (7.702 lbs/gal)

Relative density: Not determined.

Vapor density: Not determined.

Evaporation rate: Not determined.

#### Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

Partition coefficient (n-octanol/water): Not determined.

#### Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

#### Solvent content:

Organic solvents:	45.7 %
Water:	54.2 %

Solids content: 0.0 %

Other information: No further relevant information available.

## 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.

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Trade name: CA80CR Reagent RK

(Contd. of page 5)

Hazardous decomposition products: No dangerous decomposition products known.

## 11 Toxicological information

### Information on toxicological effects

#### Acute toxicity:

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

##### CAS: 67-63-0 propan-2-ol

Oral	LD50	5,045 mg/kg (rat)
Dermal	LD50	12,800 mg/kg (rbt)
Inhalative	LC50/4 h	30 mg/l (rat)

##### CAS: 67-68-5 dimethyl sulfoxide

Oral	LD50	14,500 mg/kg (rat)
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#### Primary irritant effect:

on the skin: No irritant effect.

on the eye: Irritating effect.

Sensitization: No sensitizing effects known.

#### Additional toxicological information:

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

#### Carcinogenic categories

#### IARC (International Agency for Research on Cancer)

CAS: 67-63-0 propan-2-ol

3

## 12 Ecological information

### Toxicity

Aquatic toxicity: No further relevant information available.

Persistence and degradability No further relevant information available.

#### Behavior in environmental systems:

Bioaccumulative potential No further relevant information available.

Mobility in soil No further relevant information available.

#### Additional ecological information:

##### General notes:

Water hazard class 1 (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.

#### Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

## 13 Disposal considerations

### Waste treatment methods

#### Recommendation:

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

#### Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

(Contd. on page 7)



Trade name: CA80CR Reagent RK

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**14 Transport information**

UN-Number  
 DOT, IMDG, IATA  
 UN proper shipping name  
 DOT  
 IMDG  
 IATA  
 Transport hazard class(es)  
 DOT

UN1219

*Isopropanol (Isopropylalcohol) solution*  
*ISOPROPANOL (ISOPROPYL ALCOHOL) solution*  
*Isopropanol (isopropyl alcohol) solution*



Class  
 Label

*3 Flammable liquids*  
 3

IMDG, IATA



Class  
 Label

*3 Flammable liquids*  
 3

Packing group

DOT, IMDG, IATA

II

Environmental hazards:

Not applicable.

Special precautions for user

Warning: Flammable liquids

Hazard identification number (Kemler code):

33

EMS Number:

F-E, S-D

Stowage Category

B

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Transport/Additional information:

DOT

Quantity limitations

*On passenger aircraft/rail: 5 L*  
*On cargo aircraft only: 60 L*

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 1219 ISOPROPANOL (ISOPROPYL ALCOHOL)*  
*SOLUTION, 3, II*

**15 Regulatory information**

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

Section 355 (extremely hazardous substances):

*None of the ingredient is listed.*

Section 313 (Specific toxic chemical listings):

CAS: 67-63-0 | *propan-2-ol*

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Trade name: CA80CR Reagent RK

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**TSCA (Toxic Substances Control Act):***All components have the value ACTIVE.***Hazardous Air Pollutants***None of the ingredients is listed.***Proposition 65****Chemicals known to cause cancer:***None of the ingredients is listed.***Chemicals known to cause reproductive toxicity for females:***None of the ingredients is listed.***Chemicals known to cause reproductive toxicity for males:***None of the ingredients is listed.***Chemicals known to cause developmental toxicity:***None of the ingredients is listed.***Carcinogenicity categories****EPA (Environmental Protection Agency)***None of the ingredients is listed.***TLV (Threshold Limit Value)**CAS: 67-63-0 | *propan-2-ol*

A4

**MAK (German Maximum Workplace Concentration)***None of the ingredients is listed.***NIOSH-Ca (National Institute for Occupational Safety and Health)***None of the ingredients is listed.***GHS label elements***The product is classified and labeled according to the Globally Harmonized System (GHS).***Hazard pictograms**

GHS02 GHS07

**Signal word** *Danger***Hazard-determining components of labeling:***propan-2-ol***Hazard statements***Highly flammable liquid and vapor.**Causes serious eye irritation.**May cause drowsiness or dizziness.***Precautionary statements***Keep away from heat/sparks/open flames/hot surfaces. - No smoking.**If on skin (or hair): 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.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.***National regulations:****Water hazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.***Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

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**Trade name: CA80CR Reagent RK**

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## 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

**Date of preparation / last revision** 03/19/2022 / 2

**Abbreviations and acronyms:**

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

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

*ICAO: International Civil Aviation Organisation*

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

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

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*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)*

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*TLV: Threshold Limit Value*

*PEL: Permissible Exposure Limit*

*REL: Recommended Exposure Limit*

*BEI: Biological Exposure Limit*

*Flammable Liquids 2: Flammable liquids – Category 2*

*Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A*

*Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3*

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