

19.03.2022

Kit Components

Product code	Description
CY80AM-AA+SB	CA80AM Reagent Set for ammonium

Components:

71232777	CA80AM Reagent RB (R1)
71232798	CA80AM Reagent RK (R2), Component 1
71232802	CA80AM Reagent RK (R2), Component 2

SECTION 1: Identification of the substance or mixture and of the supplier**Product identifier**Trade name: **CA80AM Reagent RB (R1)**

Article number: 71232777

Recommended use of the chemical and restrictions on use *No further relevant information available.*Application of the substance / the mixture *Laboratory chemicals***Supplier's details****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

Emergency phone number +27 (0)861 555 777

SECTION 2: Hazard identification**Classification of the substance or mixture***Acute Tox. 4 H302 Harmful if swallowed.**Eye Irrit. 2 H319 Causes serious eye irritation.***GHS label elements****GHS label elements***The product is classified and labelled according to the Globally Harmonised System (GHS).***Hazard pictograms**

GHS07

Signal word *Warning***Hazard-determining components of labelling:***Sodium salicylate**Sodium nitroprusside***Hazard statements***Harmful if swallowed.**Causes serious eye irritation.***Precautionary statements***If medical advice is needed, have product container or label at hand.**Keep out of reach of children.**Read carefully and follow all instructions.**Wear eye protection / face protection.**IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.**Rinse mouth.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**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.*

Trade name: CA80AM Reagent RB (R1)

(Contd. of page 1)

Results of PBT and vPvB assessmentPBT: *Not applicable.*vPvB: *Not applicable.***SECTION 3: Composition or information on ingredients****Mixtures****Description:** *Mixture of substances listed below with nonhazardous additions.***Dangerous components:**

CAS: 54-21-7 EINECS: 200-198-0	Sodium salicylate	⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	80-100%
CAS: 13755-38-9 EINECS: 238-373-9	Sodium nitroprusside	⚠ Acute Tox. 2, H300; Acute Tox. 2, H310	2-6%

Additional information: *For the wording of the listed hazard phrases refer to section 16.***SECTION 4: First-aid measures****Description of necessary first-aid measures****General information:***Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.***After inhalation:** *Supply fresh air; 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. If symptoms persist, consult a doctor.***After swallowing:** *Call for a doctor immediately.***Most important symptoms or effects, acute and delayed** *No further relevant information available.***Indication of immediate medical attention and special treatment needed, if necessary***No further relevant information available.***SECTION 5: Fire-fighting measures****Suitable 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***Specific hazards arising from the chemical** *No further relevant information available.***Special protective actions for fire fighters** *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:***Dispose contaminated material as waste according to item 13.***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.*

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Trade name: CA80AM Reagent RB (R1)

(Contd. of page 2)

SECTION 7: Handling and storage

Precautions for safe handling *No special precautions are necessary if used correctly.*

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: *Keep container tightly sealed.*

Storage class: 11

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

SECTION 8: Exposure controls or personal protection

Control parameters

Ingredients with limit values that require monitoring at the workplace:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

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

Exposure controls

Appropriate engineering controls *No further data; see item 7.*

Individual protection measures, such as personal protective equipment (PPE)

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: *Not required.*

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

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 or face protection



Tightly sealed goggles

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Trade name: CA80AM Reagent RB (R1)

(Contd. of page 3)

Body protection: *Protective work clothing***SECTION 9: Physical and chemical properties****Information on basic physical and chemical properties****General Information**

Physical state	<i>Solid</i>
Colour:	<i>Light red</i>
Odour:	<i>Odourless</i>
Odour threshold:	<i>Not determined.</i>
Melting point/freezing point:	<i>Undetermined.</i>
نقطة الغليان أو نقطة الغليان الأولية ونطاق الغليان	<i>Undetermined.</i>
Flammability	<i>Not determined.</i>
Upper or lower flammability or explosive limits	
Lower:	<i>Not determined.</i>
Upper:	<i>Not determined.</i>
Flash point:	<i>Not applicable.</i>
Ignition temperature:	<i>>250 °C</i>
Decomposition temperature:	<i>Not determined.</i>
pH	<i>Not applicable.</i>
Viscosity:	
Viscosity	<i>Not applicable.</i>
Dynamic:	<i>Not applicable.</i>
Solubility	
water:	<i>Insoluble.</i>
Partition coefficient: n-octanol or water	<i>Not determined.</i>
Vapour pressure:	<i>Not applicable.</i>
Vapour density + Relative density	
Density:	<i>Not determined.</i>
Relative density	<i>Not determined.</i>
Vapour density	<i>Not applicable.</i>

Other information**Appearance:**

Form:

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

Auto-ignition temperature:

Product is not selfigniting.

Explosive properties:

*Product does not present an explosion hazard.
Not determined.***Change in condition**

Evaporation rate

*Not applicable.***Information with regard to physical hazard classes**

Explosives	<i>Void</i>
Flammable gases	<i>Void</i>
Aerosols	<i>Void</i>
Oxidising gases	<i>Void</i>
Gases under pressure	<i>Void</i>
Flammable liquids	<i>Void</i>
Flammable solids	<i>Void</i>
Self-reactive substances and mixtures	<i>Void</i>
Pyrophoric liquids	<i>Void</i>
Pyrophoric solids	<i>Void</i>
Self-heating substances and mixtures	<i>Void</i>
Substances and mixtures, which emit flammable gases in contact with water	<i>Void</i>
Oxidising liquids	<i>Void</i>

(Contd. on page 5)

Trade name: CA80AM Reagent RB (R1)

(Contd. of page 4)

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.

LD/LC50 values relevant for classification:

CAS: 54-21-7 Sodium salicylate

Oral	LD50	930 mg/kg (rat)
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CAS: 13755-38-9 Sodium nitroprusside

Oral	LD50	20 mg/kg (human)
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Dermal	LD50	99 mg/kg (rat)
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Serious eye damage or irritation Causes serious eye irritation.

Information on other hazards

endocrine disrupting potential

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.

SECTION 13: Disposal considerations

Waste treatment methods

Recommendation

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

(Contd. on page 6)

Trade name: CA80AM Reagent RB (R1)

(Contd. of page 5)

Uncleaned packaging:**Recommendation:** *Disposal must be made according to official regulations.***SECTION 14: Transport information**

UN number	
ADN, IMDG, IATA	Void
UN proper shipping name	
ADR, ADN, IMDG, IATA	Void
Transport hazard class(es)	
ADR, ADN, IMDG, IATA	
Class	Void
Packing group	
ADR, IMDG, IATA	Void
Environmental hazards:	Not applicable.
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.
UN "Model Regulation":	Void

SECTION 15: Regulatory information**Safety, health and environmental regulations specific for the product in question****GHS label elements***The product is classified and labelled according to the Globally Harmonised System (GHS).***Hazard pictograms**

GHS07

Signal word *Warning***Hazard-determining components of labelling:***Sodium salicylate**Sodium nitroprusside***Hazard statements***Harmful if swallowed.**Causes serious eye irritation.***Precautionary statements***If medical advice is needed, have product container or label at hand.**Keep out of reach of children.**Read carefully and follow all instructions.**Wear eye protection / face protection.**IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.**Rinse mouth.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**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.*

(Contd. on page 7)

Trade name: CA80AM Reagent RB (R1)

(Contd. of page 6)

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 2: Acute toxicity – Category 2

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

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

SECTION 1: Identification of the substance or mixture and of the supplier**Product identifier**Trade name: **CA80AM Reagent RK (R2), Component 1**

Article number: 71232798

Recommended use of the chemical and restrictions on use *No further relevant information available.*Application of the substance / the mixture *Laboratory chemicals***Supplier's details****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

Emergency phone number +27 (0)861 555 777

SECTION 2: Hazard identification**Classification of the substance or mixture**

corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.

GHS 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:***Sodium hydroxide***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 [or 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.*

Trade name: CA80AM Reagent RK (R2), Component 1

(Contd. of page 1)

vPvB: Not applicable.

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

Dangerous components:		
CAS: 1310-73-2 EINECS: 215-185-5	Sodium hydroxide Skin Corr. 1A, H314; Acute Tox. 4, H302 Specific concentration limits: Skin Corr. 1A; H314: $C \geq 5\%$ Skin Corr. 1B; H314: $2\% \leq C < 5\%$ Skin Irrit. 2; H315: $0.5\% \leq C < 2\%$ Eye Irrit. 2; H319: $0.5\% \leq C < 2\%$	2-6%

Additional information: For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First-aid measures****Description of necessary 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 or effects, acute and delayed** No further relevant information available.**Indication of immediate medical attention and special treatment needed, if necessary**

No further relevant information available.

SECTION 5: Fire-fighting measures**Suitable 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**Specific hazards arising from the chemical**

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

Special protective actions for fire fighters 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 item 13.

Ensure adequate ventilation.

(Contd. on page 3)

Trade name: CA80AM Reagent RK (R2), Component 1

(Contd. of page 2)

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 or personal protection****Control parameters****Ingredients with limit values that require monitoring at the workplace:****CAS: 1310-73-2 Sodium hydroxide**OEL | Short-term value: 4 mg/m³**Additional information:** The lists valid during the making were used as basis.**Exposure controls****Appropriate engineering controls** No further data; see item 7.**Individual protection measures, such as personal protective equipment (PPE)****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.

(Contd. on page 4)

Trade name: CA80AM Reagent RK (R2), Component 1

(Contd. of page 3)

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 or face 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:	Red
Odour:	Odourless
Odour threshold:	Not determined.
Melting point/freezing point:	Undetermined.
نقطة الغليان أو نقطة الغليان الأولية ونطاق الغليان	100 °C
Flammability	Not applicable.
Upper or lower flammability or explosive limits	
Lower:	Not determined.
Upper:	Not determined.
Flash point:	Not applicable.
Decomposition temperature:	Not determined.
pH at 20 °C	>13
Viscosity:	
Viscosity	Not determined.
Dynamic:	Not determined.
Solubility	
water:	Fully miscible.
Partition coefficient: n-octanol or water	Not determined.
Vapour pressure at 20 °C:	23 hPa
Vapour density + Relative density	
Density:	Not determined.
Relative density	Not determined.
Vapour density	Not determined.

Other information**Appearance:**

Form:

Fluid

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

Auto-ignition temperature:

Product is not selfigniting.

Explosive properties:

Product does not present an explosion hazard.
Not determined.

Solvent content:

Water:

92.8 %

Solids content:

0.0 %

Change in condition

Evaporation rate

Not determined.

Information with regard to physical hazard classes

Explosives

Void

Flammable gases

Void

(Contd. on page 5)

Trade name: CA80AM Reagent RK (R2), Component 1

(Contd. of page 4)

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**LD/LC50 values relevant for classification:****CAS: 1310-73-2 Sodium hydroxide**

Oral LD50 2,000 mg/kg (rat)

Inhalative LC50/4 h 125 mg/l (Fish)

Skin corrosion or irritation *Causes severe skin burns and eye damage.***Serious eye damage or irritation** *Causes serious eye damage.***Information on other hazards****endocrine disrupting potential***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.*

(Contd. on page 6)

Trade name: CA80AM Reagent RK (R2), Component 1

(Contd. of page 5)

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 increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, 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

IMDG, IATA

UN1824

UN proper shipping name

ADR

UN1824 SODIUM HYDROXIDE SOLUTION

IMDG

SODIUM HYDROXIDE SOLUTION

IATA

Sodium hydroxide solution

Transport hazard class(es)

ADR



Class

8 (C5) Corrosive substances.

Label

8

IMDG, IATA



Class

8 Corrosive substances.

Label

8

Packing group

ADR, 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

Alkalis

Stowage Category

A

Segregation Code

SG35 Stow "separated from" SGG1-acids

Transport in bulk according to Annex II of

MARPOL 73/78 and the IBC Code

Not applicable.

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Trade name: CA80AM Reagent RK (R2), Component 1

(Contd. of page 6)

Transport/Additional information:**ADR****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 1824 SODIUM HYDROXIDE SOLUTION, 8, II**SECTION 15: Regulatory information****Safety, health and environmental regulations specific for the product in question****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:***Sodium hydroxide***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 [or 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 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)*

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Safety data Sheet

in accordance with SANS

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Printing date 19.03.2022

Version 12 (replaces version 11)

Revision: 19.03.2022

Trade name: CA80AM Reagent RK (R2), Component 1

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LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

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

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

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

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SECTION 1: Identification of the substance or mixture and of the supplier**Product identifier**Trade name: **CA80AM Reagent RK (R2), Component 2**

Article number: 71232802

CAS Number:

51580-86-0

EC number:

220-767-7

Index number:

613-030-01-7

Recommended use of the chemical and restrictions on use *No further relevant information available.***Application of the substance / the mixture** *Laboratory chemicals***Supplier's details****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***Emergency phone number** +27 (0)861 555 777**SECTION 2: Hazard identification****Classification of the substance or mixture***environment**Aquatic Acute 1 H400 Very toxic to aquatic life.**Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.**Acute Tox. 4 H302 Harmful if swallowed.**Eye Irrit. 2 H319 Causes serious eye irritation.**STOT SE 3 H335 May cause respiratory irritation.***GHS label elements****GHS label elements***The substance is classified and labelled according to the Globally Harmonised System (GHS).***Hazard pictograms**

GHS07 GHS09

Signal word *Warning***Hazard-determining components of labelling:***Sodium dichloroisocyanurate dihydrate***Hazard statements***Harmful if swallowed.*

Trade name: CA80AM Reagent RK (R2), Component 2

(Contd. of page 1)

Causes serious eye irritation.

May cause respiratory irritation.

Very toxic to aquatic life with long lasting effects.

Precautionary statements

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wear eye protection / face protection.

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.

Additional information:

Contact with acids liberates toxic gas.

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 or information on ingredients**Substances****CAS No. Description**

CAS: 51580-86-0 Sodium dichloroisocyanurate dihydrate

Identification number(s)

EC number: *220-767-7*

Index number: *613-030-01-7*

SECTION 4: First-aid measures**Description of necessary first-aid measures****General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation: *Supply fresh air; 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. If symptoms persist, consult a doctor.

After swallowing: *Call for a doctor immediately.*

Most important symptoms or effects, acute and delayed *No further relevant information available.*

Indication of immediate medical attention and special treatment needed, if necessary

No further relevant information available.

SECTION 5: Fire-fighting measures**Suitable 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*

Specific hazards arising from the chemical *No further relevant information available.*

Special protective actions for fire fighters *No further relevant information available.*

Protective equipment: *Mount respiratory protective device.*

(Contd. on page 3)

— ZA —

Trade name: CA80AM Reagent RK (R2), Component 2

(Contd. of page 2)

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Wear protective clothing.

Environmental precautions:

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

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

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

Methods and material for containment and cleaning up:

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.

SECTION 7: Handling and storage

Precautions for safe handling Ensure good ventilation/exhaustion at the workplace.

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: Do not store together with acids.

Further information about storage conditions: Keep container tightly sealed.

Storage class: 11

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

SECTION 8: Exposure controls or personal protection

Control parameters

Ingredients with limit values that require monitoring at the workplace: Not required.

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

Exposure controls

Appropriate engineering controls No further data; see item 7.

Individual protection measures, such as personal protective equipment (PPE)

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.

(Contd. on page 4)

Trade name: CA80AM Reagent RK (R2), Component 2

(Contd. of page 3)

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Nitrile rubber, NBR

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 or face 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

Solid

Colour:

Not determined.

Odour:

Odourless

Odour threshold:

Not determined.

Melting point/freezing point:

250 °C

نقطة الغليان أو نقطة الغليان الأولية ونطاق الغليان

Undetermined.

Flammability

Product is not flammable.

Upper or lower flammability or explosive limits

Lower:

Not determined.

Upper:

Not determined.

Flash point:

Not applicable.

Ignition temperature:

250 °C

Decomposition temperature:

Not determined.

pH

6.7

Viscosity:

Viscosity

Not applicable.

Dynamic:

Not applicable.

Solubility

water at 25 °C:

250 g/l

Partition coefficient: n-octanol or water

Not determined.

Vapour pressure:

Not applicable.

Vapour density + Relative density

Density:

Not determined.

Relative density

Not determined.

Bulk density:

980 kg/m³

Vapour density

Not applicable.

Other information

Appearance:

Form:

Solid material

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

Auto-ignition temperature:

Not determined.

Explosive properties:

Product does not present an explosion hazard.

Not determined.

Solids content:

100.0 %

(Contd. on page 5)

— ZA —

Trade name: CA80AM Reagent RK (R2), Component 2

(Contd. of page 4)

Change in condition**Evaporation rate***Not applicable.***Information with regard to physical hazard classes**

Explosives	<i>Void</i>
Flammable gases	<i>Void</i>
Aerosols	<i>Void</i>
Oxidising gases	<i>Void</i>
Gases under pressure	<i>Void</i>
Flammable liquids	<i>Void</i>
Flammable solids	<i>Void</i>
Self-reactive substances and mixtures	<i>Void</i>
Pyrophoric liquids	<i>Void</i>
Pyrophoric solids	<i>Void</i>
Self-heating substances and mixtures	<i>Void</i>
Substances and mixtures, which emit flammable gases in contact with water	<i>Void</i>
Oxidising liquids	<i>Void</i>
Oxidising solids	<i>Void</i>
Organic peroxides	<i>Void</i>
Corrosive to metals	<i>Void</i>
Desensitised explosives	<i>Void</i>

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.***LD/LC50 values relevant for classification:****CAS: 51580-86-0 Sodium dichloroisocyanurate dihydrate**

Oral | LD50 | 550-1,600 mg/kg (rat)

Dermal | LD50 | >5,000 mg/kg (rabbit)

Serious eye damage or irritation *Causes serious eye irritation.***Specific target organ toxicity – single exposure** *May cause respiratory irritation.***Information on other hazards****endocrine disrupting potential***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.*

(Contd. on page 6)

Trade name: CA80AM Reagent RK (R2), Component 2

(Contd. of page 5)

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

Remark: *Very toxic for fish*

Additional ecological information:

General notes:

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

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

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

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

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

IMDG, IATA

UN3077

UN proper shipping name

ADR

UN3077 ENVIRONMENTALLY HAZARDOUS
SUBSTANCE, SOLID, N.O.S. (Sodium
dichloroisocyanurate dihydrate)

IMDG

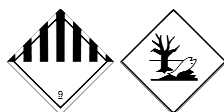
ENVIRONMENTALLY HAZARDOUS SUBSTANCE,
SOLID, N.O.S. (Sodium dichloroisocyanurate dihydrate),
MARINE POLLUTANT

IATA

Environmentally hazardous substance, solid, n.o.s.
(containing Sodium dichloroisocyanurate dihydrate)

Transport hazard class(es)

ADR



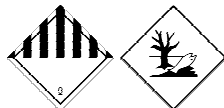
Class

9 (M7) Miscellaneous dangerous substances and articles.

Label

9

IMDG, IATA



Class

9 Miscellaneous dangerous substances and articles.

Label

9

Packing group

ADR, IMDG, IATA

III

Environmental hazards:

Marine pollutant:

Yes

Symbol (fish and tree)

(Contd. on page 7)

Trade name: CA80AM Reagent RK (R2), Component 2

(Contd. of page 6)

Special marking (ADR):	Symbol (fish and tree)
Special marking (IATA):	Symbol (fish and tree)
Special precautions for user	Warning: Miscellaneous dangerous substances and articles.
Hazard identification number (Kemler code):	60
EMS Number:	F-A,S-F
Stowage Category	A
Stowage Code	SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

Transport/Additional information:

ADR	
Limited quantities (LQ)	5 kg
Transport category	3
Tunnel restriction code	E

IMDG

Limited quantities (LQ)	5 kg
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
UN "Model Regulation":	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SODIUM DICHLOORISOCYANURATE DIHYDRATE), 9, III

SECTION 15: Regulatory information**Safety, health and environmental regulations specific for the product in question****GHS label elements**

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

Hazard pictograms

GHS07 GHS09

Signal word Warning**Hazard-determining components of labelling:**

Sodium dichloroisocyanurate dihydrate

Hazard statements

Harmful if swallowed.

Causes serious eye irritation.

May cause respiratory irritation.

Very toxic to aquatic life with long lasting effects.

Precautionary statements

Avoid breathing dust/fume/gas/mist/vapours/spray.

Wear eye protection / face protection.

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.

Directive 2012/18/EU

Named dangerous substances - ANNEX I Substance is not listed.

Seveso category E1 Hazardous to the Aquatic Environment

Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t

(Contd. on page 8)

Trade name: CA80AM Reagent RK (R2), Component 2

(Contd. of page 7)

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

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

Acute Tox. 4: Acute toxicity – Category 4

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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

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

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