

1 Identification**Product identifier****Trade name:** CA80FE Reagent RK**Synonym:** for iron**Article number:** CY80FE-MM+SF**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 209-117

Fax.: +49 (0)7156 209-222

E-Mail: Service.PCC@endress.com

Emergency telephone number: 001 18000 222 1222**2 Hazard(s) identification****Classification of the substance or mixture**

GHS06 Skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS05 Corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

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

Label elements**GHS label elements**

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

Hazard pictograms GHS05, GHS06, GHS07**Signal word** Danger**Hazard-determining components of labeling:**

ammonium thioglycolate

thioglycolic acid

Hazard statements

Toxic if swallowed, in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Precautionary statements

If swallowed: Immediately call a poison center/doctor.

Specific treatment (see on this label).

Trade name: CA80FE Reagent RK

(Contd. of page 1)

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.

Take off immediately all contaminated clothing and wash it before reuse.

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

HMIS-ratings (scale 0 - 4)

Health = 3

Fire = 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:		
5421-46-5	ammonium thioglycolate Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Met. Corr. 1, H290; Skin Sens. 1, H317	10-20%
68-11-1	thioglycolic acid Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; Skin Corr. 1B, H314	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.

Remove breathing apparatus 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:

Do not induce vomiting; immediately call for medical help.

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

(Contd. on page 3)

Trade name: **CA80FE Reagent RK**

(Contd. of page 2)

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:

CO2, 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

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.

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

PAC-1:		
68-11-1	thioglycolic acid	3 ppm
PAC-2:		
68-11-1	thioglycolic acid	33 ppm
PAC-3:		
68-11-1	thioglycolic acid	200 ppm

*** 7 Handling and storage**

Handling:

Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

Information about protection against explosions and fires:

Keep respiratory protective device available.

(Contd. on page 4)

Trade name: CA80FE Reagent RK

(Contd. of page 3)

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 receptacle tightly sealed.*

Storage class: *6.1 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

Components with limit values that require monitoring at the workplace:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

68-11-1 thioglycolic acid	
REL	Long-term value: 4 mg/m ³ , 1 ppm Skin
TLV	Long-term value: 3.8 mg/m ³ , 1 ppm and salts, Skin, DSEN

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.*
- Store protective clothing separately.*
- 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*
- Natural rubber, NR*

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

Penetration time of glove material

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

(Contd. on page 5)

Trade name: CA80FE Reagent RK

(Contd. of page 4)

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:

Form:	Fluid
Color:	Yellow
Odor:	Characteristic
Odor threshold:	Not determined.

pH-value at 20 °C (68 °F): 3.5

Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)

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:

Lower:	Not determined.
Upper:	Not determined.

Vapor pressure at 20 °C (68 °F): 23 hPa (17.3 mm Hg)

Density at 20 °C (68 °F): 1.093 g/cm³ (9.121 lbs/gal)

Relative density: Not determined.

Vapor density: Not determined.

Evaporation rate: Not determined.

Solubility in / Miscibility with

Water: Fully miscible.

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

Viscosity:

Dynamic:	Not determined.
Kinematic:	Not determined.

Solvent content:

Water: 64.5 %

Solids content: 0.0 %

Other information: No further relevant information available.

* 10 Stability and reactivity

Reactivity: No further relevant information available.

(Contd. on page 6)

Trade name: CA80FE Reagent RK

(Contd. of page 5)

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:** *Caustic effect on skin and mucous membranes.***on the eye:***Strong caustic effect.**Strong irritant with the danger of severe eye injury.***Sensitization:** *Sensitization possible through skin contact.***Additional toxicological information:***The product shows the following dangers according to internally approved calculation methods for preparations:**Toxic**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.***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.***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.*

(Contd. on page 7)

— USA —

Trade name: CA80FE Reagent RK

(Contd. of page 6)

*14 Transport information

UN-Number
DOT, ADR, IMDG, IATA UN2922
UN proper shipping name
DOT Corrosive liquids, toxic, n.o.s. (ammonium thioglycolate, Thioglycolic acid)
ADR UN2922 CORROSIVE LIQUID, TOXIC, N.O.S. (ammonium thioglycolate, THIOGLYCOLIC ACID)
IMDG CORROSIVE LIQUID, TOXIC, N.O.S. (ammonium thioglycolate, THIOGLYCOLIC ACID)
IATA Corrosive liquid, toxic, n.o.s. (containing ammonium thioglycolate, THIOGLYCOLIC ACID)

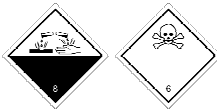
Transport hazard class(es)

DOT



Class Label 8 Corrosive substances
 8, 6.1

ADR



Class Label 8 (CT1) Corrosive substances
 8+6.1

IMDG



Class Label 8 Corrosive substances
 8/6.1

IATA



Class Label 8 Corrosive substances
 8 (6.1)

Packing group

DOT, ADR, IMDG, IATA II

Environmental hazards: Not applicable.

Special precautions for user Warning: Corrosive substances

Hazard identification number (Kemler code): 86

EMS Number: F-A,S-B

Segregation groups Acids

Stowage Category B

Stowage Code SW2 Clear of living quarters.

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

(Contd. on page 8)

Trade name: CA80FE Reagent RK

(Contd. of page 7)

Transport/Additional information:

DOT

Quantity limitations

On passenger aircraft/rail: 1 L
On cargo aircraft only: 30 L

ADR

Limited quantities (LQ)

1L

Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

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.
(AMMONIUM THIOGLYCOLATE, THIOGLYCOLIC ACID),
8 (6.1), 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):

None of the ingredients is listed.

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 established by ACGIH)

None of the ingredients is listed.

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.

(Contd. on page 9)

Trade name: CA80FE Reagent RK

(Contd. of page 8)

GHS label elements

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

Hazard pictograms GHS05, GHS06, GHS07

Signal word *Danger*

Hazard-determining components of labeling:

ammonium thioglycolate

thioglycolic acid

Hazard statements

Toxic if swallowed, in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Precautionary statements

If swallowed: Immediately call a poison center/doctor.

Specific treatment (see on this label).

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.

Take off immediately all contaminated clothing and wash it before reuse.

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 - TWRC

Contact: *MSDS.pcc@endress.com*

Date of preparation / last revision 01/06/2021 / 1

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)

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport 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

ACGIH: American Conference of Governmental Industrial Hygienists

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

Met. Corr. 1: Corrosive to metals – Category 1

Acute Tox. 3: Acute toxicity – Category 3

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

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

Skin Sens. 1: Skin sensitisation – Category 1

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