

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 209-10117
E-Mail: MSDS.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 Toxicity - Oral 3 H301 Toxic if swallowed.



GHS05 Corrosion

*Skin Corrosion 1B H314 Causes severe skin burns and eye damage.
Eye Damage 1 H318 Causes serious eye damage.*



GHS07

*Acute Toxicity - Dermal 4 H312 Harmful in contact with skin.
Acute Toxicity - Inhalation 4 H332 Harmful if inhaled.
Sensitization - Skin 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.
Harmful in contact with skin or if inhaled.*

Trade name: CA80FE Reagent RK

(Contd. of page 1)

*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 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)****HMIS-ratings (scale 0 - 4)****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: 5421-46-5	ammonium thioglycolate ⚠ Acute Toxicity - Oral 3, H301; ⚠ Corrosive to Metals 1, H290; ⚠ Sensitization - Skin 1, H317	10-20%
CAS: 68-11-1	thioglycolic acid ⚠ Acute Toxicity - Oral 3, H301; Acute Toxicity - Dermal 3, H311; Acute Toxicity - Inhalation 3, H331; ⚠ Skin Corrosion 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.**Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.**In case of irregular breathing or respiratory arrest provide artificial respiration.***After inhalation:***Supply fresh air and to be sure call for a 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.*

(Contd. on page 3)

Trade name: CA80FE Reagent RK

(Contd. of page 2)

*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.***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** *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.***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 section 13.**Ensure adequate ventilation.***Reference to other sections***See Section 7 for information on safe handling.**See Section 8 for information on personal protection equipment.**See Section 13 for disposal information.***Protective Action Criteria for Chemicals****PAC-1:**

CAS: 68-11-1	thioglycolic acid	3 ppm
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PAC-2:

CAS: 68-11-1	thioglycolic acid	33 ppm
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PAC-3:

CAS: 68-11-1	thioglycolic acid	200 ppm
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7 Handling and storage**Precautions for safe handling***Ensure good ventilation/exhaustion at the workplace.**Prevent formation of aerosols.*

(Contd. on page 4)

Trade name: CA80FE Reagent RK

(Contd. of page 3)

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:** 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 section 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.***CAS: 68-11-1 thioglycolic acid**REL Long-term value: 4 mg/m³, 1 ppm
SkinTLV Long-term value: 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.**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:	<i>Fluid</i>
Color:	<i>Yellow</i>
Odor:	<i>Characteristic</i>
Odor threshold:	<i>Not determined.</i>

pH-value at 20 °C (68 °F): *3-5***Change in condition**

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

Flash point: *Not applicable.***Flammability:** *Not applicable.***Decomposition temperature:** *Not determined.***Ignition temperature:** *Product is not selfigniting.***Danger of explosion:** *Product does not present an explosion hazard.
Not determined.***Explosion limits:**

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

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:	<i>Not determined.</i>
Kinematic:	<i>Not determined.</i>

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**Harmful**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 3 (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 bodies of water or drainage ditch undiluted or unneutralized.**Danger to drinking water if even extremely small quantities leak into the ground.***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 UN2922
DOT, IMDG, IATA
UN proper shipping name Corrosive liquids, toxic, n.o.s. (ammonium thioglycolate, Thioglycolic acid)
DOT CORROSIVE LIQUID, TOXIC, N.O.S. (ammonium thioglycolate, THIOGLYCOLIC ACID)
IMDG Corrosive liquid, toxic, n.o.s. (containing ammonium thioglycolate, THIOGLYCOLIC ACID)
IATA

Transport hazard class(es)

DOT



Class 8 Corrosive substances
Label 8, 6.1

IMDG



Class 8 Corrosive substances
Label 8/6.1

IATA



Class 8 Corrosive substances
Label 8 (6.1)
Packing group II
DOT, IMDG, IATA Not applicable.
Environmental hazards: Warning: Corrosive substances
Special precautions for user 86
Hazard identification number (Kemler code): F-A,S-B
EMS Number: (SGG1) Acids
Segregation groups B
Stowage Category SW2 Clear of living quarters.
Stowage Code
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

(Contd. on page 8)

Trade name: CA80FE Reagent RK

(Contd. of page 7)

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)

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.

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*

(Contd. on page 9)

— USA —

Trade name: CA80FE Reagent RK

(Contd. of page 8)

Hazard statements*Toxic if swallowed.**Harmful 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 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 3 (Self-assessment): extremely 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** *09/20/2024 / 3***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 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**Corrosive to Metals 1: Corrosive to metals – Category 1**Acute Toxicity - Oral 3: Acute toxicity – Category 3**Acute Toxicity - Dermal 4: Acute toxicity – Category 4**Skin Corrosion 1B: Skin corrosion/irritation – Category 1B**Eye Damage 1: Serious eye damage/eye irritation – Category 1**Sensitization - Skin 1: Skin sensitisation – Category 1**** Data compared to the previous version altered.**