

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****Product identifier****Trade name:** CA80FE Reagent RK**Synonym:** for iron**Article number:** CY80FE-MM+SF**Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the mixture** Laboratory chemicals**Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Endress+Hauser

Conducta GmbH+Co. KG

Dieselstraße 24

D-70839 Gerlingen

**Further information obtainable from:**

Phone: +49 (0)7156 209-10117

E-Mail: MSDS.PCC@endress.com

**Emergency telephone number:** 00971 800 424 ( from 7 am to 3 pm, from Sunday to Thursday)**SECTION 2: Hazards identification****Classification of the substance or mixture**

skull and crossbones

Acute Tox. 3 H301 Toxic if swallowed.



corrosion

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

Eye Dam. 1 H318 Causes serious eye damage.



Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

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

**Label elements****GHS label elements**

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

**Hazard pictograms**

GHS05 GHS06

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

ammonium thioglycolate

thioglycolic acid

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**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 [or 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.***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/information on ingredients****Mixtures****Description:** *Mixture of substances listed below with nonhazardous additions.***Dangerous components:**

CAS: 5421-46-5 EINECS: 226-540-9	ammonium thioglycolate ☠ Acute Tox. 3, H301; ☠ Met. Corr. 1, H290; ⚠ Skin Sens. 1, H317	10-20%
CAS: 68-11-1 EINECS: 200-677-4	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.***SECTION 4: First aid measures****Description of first aid measures****General information:***Immediately remove any clothing soiled by the product.**Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.**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.**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; call for medical help immediately.**Drink plenty of water and provide fresh air. Call for a doctor immediately.***Most important symptoms and effects, both acute and delayed***No further relevant information available.*

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**Indication of any immediate medical attention and special treatment needed***No further relevant information available.***SECTION 5: Firefighting measures****Extinguishing media****Suitable extinguishing agents:***CO<sub>2</sub>, 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.***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.***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:** 6.1 B**Specific end use(s)** *No further relevant information available.***SECTION 8: Exposure controls/personal protection****Control parameters****Ingredients with limit values that require monitoring at the workplace:****CAS: 68-11-1 thioglycolic acid**

REL (USA)

Long-term value: 4 mg/m<sup>3</sup>, 1 ppm

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TLV (USA)	Long-term value: 1 ppm and salts, Skin, DSEN
WEL (Great Britain)	Long-term value: 3.8 mg/m <sup>3</sup> , 1 ppm

**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****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**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.***Eye/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:***Yellow***Odour:***Characteristic***Odour threshold:***Not determined.***Melting point/freezing point:***Undetermined.***Boiling point or initial boiling point and boiling range***100 °C***Flammability***Not applicable.*

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## Lower and upper explosion limit

Lower: *Not determined.*Upper: *Not determined.*Flash point: *Not applicable.*Decomposition temperature: *Not determined.*

pH at 20 °C 3-5

Viscosity:

Kinematic viscosity *Not determined.*Dynamic: *Not determined.*

Solubility

water: *Fully miscible.*Partition coefficient n-octanol/water (log value) *Not determined.*

Vapour pressure at 20 °C: 23 hPa

Density and/or relative density

Density at 20 °C: 1.093 g/cm<sup>3</sup>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: 64.5 %

Solids content: 0.0 %

Change in condition

Evaporation rate *Not determined.*

## Information with regard to physical hazard classes

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

## SECTION 10: Stability and reactivity

Reactivity *No further relevant information available.*

Chemical stability

Thermal decomposition / conditions to be avoided:

*No decomposition if used according to specifications.*

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**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***Toxic if swallowed.**Harmful in contact with skin or if inhaled.***Skin corrosion/irritation** *Causes severe skin burns and eye damage.***Serious eye damage/irritation** *Causes serious eye damage.***Respiratory or skin sensitisation** *May cause an allergic skin reaction.***Information on other hazards****Endocrine disrupting properties***None of the ingredients is listed.*

## SECTION 12: Ecological information

**Toxicity****Aquatic toxicity:** *No further relevant information available.***Persistence and degradability** *No further relevant information available.***Bioaccumulative potential** *No further relevant information available.***Mobility in soil** *No further relevant information available.***Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***Endocrine disrupting properties***The product does not contain substances with endocrine disrupting properties.***Other adverse effects****Additional ecological information:****General notes:***Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water**Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.**Must not reach sewage water or drainage ditch undiluted or unneutralised.*

## SECTION 13: Disposal considerations

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

## \* SECTION 14: Transport information

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

UN2922

**UN proper shipping name****ADR**UN2922 CORROSIVE LIQUID, TOXIC, N.O.S.  
(ammonium thioglycolate, THIOGLYCOLIC ACID)

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# Safety data sheet

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according to 1907/2006/EC, Article 31

Printing date 20.03.2022

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Revision: 20.03.2022

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**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)****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***II***ADR, IMDG, IATA****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.***Maritime transport in bulk according to IMO instruments***Not applicable.***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 2922 CORROSIVE LIQUID, TOXIC, N.O.S.**(AMMONIUM THIOGLYCOLATE, THIOGLYCOLIC ACID),**8 (6.1), II*

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

GHS05 GHS06

**Signal word** *Danger***Hazard-determining components of labelling:***ammonium thioglycolate**thioglycolic acid***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 [or 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.***Directive 2012/18/EU****Named dangerous substances - ANNEX I** *None of the ingredients is listed.***National regulations:****Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly hazardous for water.***Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***SECTION 16: Other information***This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.***Department issuing SDS:** *PCC-TWR***Contact:** *MSDS.pcc@endress.com***Abbreviations and acronyms:***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**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)**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Met. Corr. 1: Corrosive to metals – Category 1**Acute Tox. 3: Acute toxicity – Category 3**Acute Tox. 4: Acute toxicity – Category 4**Skin Corr. 1B: Skin corrosion/irritation – Category 1B**Eye Dam. 1: Serious eye damage/eye irritation – Category 1*

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*Skin Sens. 1: Skin sensitisation – Category 1*

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

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