

**SECTION 1: Identification of the substance or mixture and of the supplier****1.1 Product identifier****Trade name:** CA80AL Reagent RN**Synonym:** for aluminum; ready to use**Article number:** CY80AL-RN**1.2 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***1.3 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 209-117**Fax.: +49 (0)7156 209-222**E-Mail: MSDS.PCC@endress.com***1.4 Emergency telephone number:** 0064 800 764 766**\* SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008***Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.***Classification according to Directive 67/548/EEC or Directive 1999/45/EC** *Not applicable.***Information concerning particular hazards for human and environment:***The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.***Classification system:***The classification is according to the latest editions of the EU-lists, and extended by company and literature data.***2.2 Label elements****Labelling according to EU guidelines:***Observe the general safety regulations when handling chemicals.**The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.***Safety phrases:***29 Do not empty into drains.***Special labelling of certain preparations:***Safety data sheet available for professional user on request.***2.3 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****3.2 Chemical characterisation: Mixtures****Description:** *aqueous solution*

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**Dangerous components:**

CAS: 18851-33-7	1,10-phenanthroline chloride monohydrate	≤1%
EINECS: 223-325-1	☠ Acute Tox. 3, H301; ☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410	

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

**SECTION 4: First aid measures****4.1 Description of first aid measures**

**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.

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

**4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

**4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**SECTION 5: Fire fighting measures****5.1 Extinguishing media****Suitable extinguishing agents:**

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

**5.2 For safety reasons unsuitable extinguishing agents:** no further information**5.3 Special hazards arising from the substance or mixture** No further relevant information available.**5.4 Advice for firefighters****5.5 Protective equipment:** No special measures required.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures** Wear protective clothing.**6.2 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.

Dilute with plenty of water.

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

**6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

**6.4 Reference to other sections**

No dangerous substances are released.

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****7.1 Handling:**

**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****7.2 Storage:**

**Requirements to be met by storerooms and receptacles:** No special requirements.

**Information about storage in one common storage facility:** Not required.

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**Further information about storage conditions:** *None.***Storage class:** 12**7.3 Specific end use(s)** *No further relevant information available.*

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## SECTION 8: Exposure controls/personal protection

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

### 8.1 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.*

### 8.2 Exposure controls

**Personal protective equipment:****General protective and hygienic measures:** *Wash hands before breaks and at the end of work.***Respiratory protection:** *Not required.***Protection of hands:***To avoid skin problems reduce the wearing of gloves to the required minimum.**The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.**No chemical-protective gloves required.***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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.***Penetration time of glove material***The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.***Eye protection:** *Goggles recommended during refilling***Body protection:** *Protective work clothing*

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

**General Information****Appearance:****Form:** *Fluid***Colour:** *Clear***Odour:** *Characteristic***Odour threshold:** *Not determined.***Important information on protection of health and environment, and on safety.****pH-value:** *Slightly acidic***Change in condition****Melting point/freezing point:** *Undetermined.***Initial boiling point and boiling range:** *100 °C***Flash point:** *Not applicable.***Flammability (solid, gas):** *Not applicable.***Decomposition temperature:** *Not determined.*

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<b>Auto-ignition temperature:</b>	<i>Product is not selfigniting.</i>
<b>Explosive properties:</b>	<i>Product does not present an explosion hazard. Not determined.</i>
<b>Explosion limits:</b>	
<b>Lower:</b>	<i>Not determined.</i>
<b>Upper:</b>	<i>Not determined.</i>
<b>Vapour pressure at 20 °C:</b>	<i>23 hPa</i>
<b>Density:</b>	<i>Not determined.</i>
<b>Relative density</b>	<i>Not determined.</i>
<b>Vapour density</b>	<i>Not determined.</i>
<b>Evaporation rate</b>	<i>Not determined.</i>
<b>Solubility in / Miscibility with water:</b>	<i>Fully miscible.</i>
<b>Partition coefficient: n-octanol/water:</b>	<i>Not determined.</i>
<b>Viscosity:</b>	
<b>Dynamic:</b>	<i>Not determined.</i>
<b>Kinematic:</b>	<i>Not determined.</i>
<b>Solvent content:</b>	
<b>Water:</b>	<i>82.3 %</i>
<b>Solids content:</b>	<i>0.0 %</i>
<b>9.2 Other information</b>	<i>No further relevant information available.</i>

## SECTION 10: Stability and reactivity

**10.1 Reactivity** *No further relevant information available.*

**10.2 Chemical stability**

**Thermal decomposition / conditions to be avoided:**

*No decomposition if used according to specifications.*

**10.3 Possibility of hazardous reactions** *No dangerous reactions known.*

**10.4 Conditions to avoid** *No further relevant information available.*

**10.5 Incompatible materials:** *No further relevant information available.*

**10.6 Hazardous decomposition products:** *No dangerous decomposition products known.*

## SECTION 11: Toxicological information

**11.1 Information on toxicological effects**

**Acute toxicity** *Based on available data, the classification criteria are not met.*

**Primary irritant effect:**

**Skin corrosion/irritation** *Based on available data, the classification criteria are not met.*

**Serious eye damage/irritation** *Based on available data, the classification criteria are not met.*

**Respiratory or skin sensitisation** *Based on available data, the classification criteria are not met.*

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

**Germ cell mutagenicity** *Based on available data, the classification criteria are not met.*

**Carcinogenicity** *Based on available data, the classification criteria are not met.*

**Reproductive toxicity** *Based on available data, the classification criteria are not met.*

**STOT-single exposure** *Based on available data, the classification criteria are not met.*

**STOT-repeated exposure** *Based on available data, the classification criteria are not met.*

**Aspiration hazard** *Based on available data, the classification criteria are not met.*

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**SECTION 12: Ecological information****12.1 Toxicity****Aquatic toxicity:** No further relevant information available.**12.2 Persistence and degradability** No further relevant information available.**12.3 Bioaccumulative potential** No further relevant information available.**12.4 Mobility in soil** No further relevant information available.**Ecotoxicological effects:****Remark:** Harmful to fish**Additional ecological information:****General notes:**

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

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

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

Harmful to aquatic organisms

**12.5 Results of PBT and vPvB assessment****PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects** No further relevant information available.**SECTION 13: Disposal considerations****13.1 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****14.1 UN-Number**

ADR, ADN, IMDG, IATA Void

**14.2 UN proper shipping name**

ADR, ADN, IMDG, IATA Void

**14.3 Transport hazard class(es)**ADR, ADN, IMDG, IATA  
Class Void**14.4 Packing group**

ADR, IMDG, IATA Void

**14.5 Environmental hazards:** Not applicable.**14.6 Special precautions for user** Not applicable.**14.7 Transport in bulk according to Annex II of  
Marpol and the IBC Code** Not applicable.**UN "Model Regulation":** Void**\* SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****New Zealand Inventory of Chemicals**

All ingredients are listed.

**HSNO Approval numbers**

18851-33-7 | 1,10-phenanthroline chloride monohydrate

HSR005441

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**Directive 2012/18/EU****Named dangerous substances - ANNEX I** *None of the ingredients is listed.***National regulations:****Waterhazard class:** *Water hazard class 2 (Self-assessment): hazardous for water.***15.2 Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

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**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-TWRC**Contact:** *MSDS.pcc@endress.com***Abbreviations and acronyms:***IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)**ICAO: International Civil Aviation Organisation**ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)**ADR: Accord 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**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**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**Acute Tox. 3: Acute toxicity - oral – 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**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3***\* Data compared to the previous version altered.**