

**SECTION 1: Identification of the substance/mixture and of the company/  
undertaking****1.1 Product identifier****Trade name:** Elektrolyt COS21D-C**Article number:** 71368312**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: [conducta\\_service@conducta.endress.com](mailto:conducta_service@conducta.endress.com)***1.4 Emergency telephone number:** 00356 21 22 40 71**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008****GHS05 corrosion***Skin Corr. 1A H314 Causes severe skin burns and eye damage.**Eye Dam. 1 H318 Causes serious eye damage.***2.2 Label elements****Labelling according to Regulation (EC) No 1272/2008***The product is classified and labelled according to the CLP regulation.***Hazard pictograms** *GHS05***Signal word** *Danger***Hazard-determining components of labelling:***potassium hydroxide***Hazard statements***H314 Causes severe skin burns and eye damage.***Precautionary statements***P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].**P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P310 Immediately call a POISON CENTER/doctor.**P321 Specific treatment (see on this label).**P405 Store locked up.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***2.3 Other hazards****Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.*

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**SECTION 3: Composition/information on ingredients****3.2 Chemical characterisation: Mixtures****Description:** Mixture of substances listed below with nonhazardous additions.**Dangerous components:**

1310-58-3	potassium hydroxide	⚠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H302	2-6%
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**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****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.**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: Firefighting measures****5.1 Extinguishing media****Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.**5.2 For safety reasons unsuitable extinguishing agents:** no further information**5.3 Special hazards arising from the substance or mixture**

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

**5.4 Advice for firefighters****5.5 Protective equipment:** Mount respiratory protective device.**SECTION 6: Accidental release measures****6.1 Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

Wear protective equipment. Keep unprotected persons away.

Wear protective clothing.

**6.2 Environmental precautions:**

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).

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**6.4 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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## SECTION 7: Handling and storage

### 7.1 Handling:

#### 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

### 7.2 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

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

## 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:**

**1310-58-3 potassium hydroxide**

WEL (Great Britain) Short-term value: 2 mg/m<sup>3</sup>

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

### 8.2 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.

#### 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.

#### 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-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.

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## 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:



Tightly sealed goggles

Body protection: Protective work clothing

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

#### Appearance:

Form:	Fluid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.
pH-value at 20 °C:	~13

#### 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.

Auto-ignition temperature: Product is not selfigniting.

Explosive properties: Product does not present an explosion hazard.  
Not determined.

#### Explosion limits:

Lower:	Not determined.
Upper:	Not determined.

Vapour pressure at 20 °C: 20 hPa

Density at 20 °C:	1.1 g/cm <sup>3</sup>
Relative density	Not determined.
Vapour 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: >95.0 %

Solids content: <5.0 %

9.2 Other information: No further relevant information available.

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**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.***LD/LC50 values relevant for classification:****1310-58-3 potassium hydroxide**

Oral | LD50 | 273 mg/kg (rat)

**Primary irritant effect:****Skin corrosion/irritation***Causes severe skin burns and eye damage.***Serious eye damage/irritation***Causes serious eye damage.***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.***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.***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.**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.***12.5 Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.***12.6 Other adverse effects** *No further relevant information available.*

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## 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, IMDG, IATA

UN1814

### 14.2 UN proper shipping name

ADR

UN1814 POTASSIUM HYDROXIDE SOLUTION

IMDG

POTASSIUM HYDROXIDE SOLUTION

IATA

Potassium hydroxide solution

### 14.3 Transport hazard class(es)

ADR



Class

8 (C5) Corrosive substances.

Label

8

IMDG, IATA



Class

8 Corrosive substances.

Label

8

### 14.4 Packing group

ADR, IMDG, IATA

II

### 14.5 Environmental hazards:

Not applicable.

### 14.6 Special precautions for user

Warning: Corrosive substances.

### Danger code (Kemler):

80

### EMS Number:

F-A,S-B

### Segregation groups

Alkalis

### Stowage Category

A

### Segregation Code

SG35 Stow "separated from" SGG1-acids

### 14.7 Transport in bulk according to Annex II of

Marpol and the IBC Code

Not applicable.

### Transport/Additional information:

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

Transport category

2

Tunnel restriction code

E

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**IMDG****Limited quantities (LQ)**  
**Excepted quantities (EQ)**1L  
Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

**UN "Model Regulation":**

UN 1814 POTASSIUM HYDROXIDE SOLUTION, 8, II

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**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Directive 2012/18/EU****Named dangerous substances - ANNEX I** *None of the ingredients is listed.***REGULATION (EC) No 1907/2006 ANNEX XVII** *Conditions of restriction: 3***National regulations:****Waterhazard class:** *Water hazard class 1 (Self-assessment): slightly 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:***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)**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.**