1 Identification

Product identifier

Trade name: Elektrolyt COS21D-C

Article number: *71368312*

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 209-117
Fax.: +49 (0)7156 209-222
E-Mail: conducta_service@conducta.endress.com

Emergency telephone number: *0061 13 11 26*

2 Hazard(s) Identification

Classification of the substance or mixture

corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

Label elements
GHS label elements
The product is classified and labelled according to the Globally Harmonised System (GHS).
Hazard pictograms *GHS05*
Signal word *Danger*

Hazard-determining components of labelling:
potassium hydroxide
Hazard statements
Causes severe skin burns and eye damage.
Precautionary statements
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.
Immediately call a POISON CENTER/doctor.
Specific treatment (see on this label).
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*

*
3 Composition and Information on Ingredients

Chemical characterisation: Mixtures
Description: *Mixture of substances listed below with nonhazardous additions.*

(Contd. on page 2)

(Contd. of page 1)

Dangerous components:			
1310-58-3	*potassium hydroxide*	*Skin Corr. 1A, H314; Acute Tox. 4, H302*	*2-6%*

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.*

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.*

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: *Use fire extinguishing methods suitable to surrounding conditions.*
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 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.

(Contd. on page 3)

(Contd. of page 2)

* 7 Handling and Storage

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

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

* 8 Exposure controls and personal protection

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

Control parameters

Ingredients with limit values that require monitoring at the workplace:	
1310-58-3 potassium hydroxide	
NES (Australia)	*Peak limitation: 2 mg/m³*
WES (Australia)	*Peak limitation: 2 mg/m³*

Additional information: *The lists valid during the making 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.

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.

(Contd. on page 4)

(Contd. of page 3)

Penetration time of glove material
The exact break trough 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*

* 9 Physical and Chemical Properties

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/cm³*
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 %*
Other information	*No further relevant information available.*

(Contd. on page 5)

(Contd. of page 4)

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.
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

LD/LC50 values relevant for classification:		
1310-58-3 potassium hydroxide		
Oral	*LD50*	*273 mg/kg (rat)*

Primary irritant effect:
Skin corrosion/irritation *Strong caustic effect on skin and mucous membranes.*
Serious eye damage/irritation
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
Respiratory or skin sensitisation *No sensitising effects known.*
Additional toxicological information:
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
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.*
Behaviour 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 (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.
Results of PBT and vPvB assessment
PBT: *Not applicable.*
vPvB: *Not applicable.*
Other adverse effects *No further relevant information available.*

(Contd. on page 6)

(Contd. of page 5)

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.*

* 14 Transport information

UN-Number
ADG, IMDG, IATA *UN1814*
UN proper shipping name
ADG *UN1814 POTASSIUM HYDROXIDE SOLUTION*
IMDG *POTASSIUM HYDROXIDE SOLUTION*
IATA *Potassium hydroxide solution*
Transport hazard class(es)

ADG

Class *8 (C5) Corrosive substances.*
Label *8*

IMDG, IATA

Class *8 Corrosive substances.*
Label *8*
Packing group
ADG, IMDG, IATA *II*
Environmental hazards: *Not applicable.*
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*
Transport in bulk according to Annex II of Marpol and the IBC Code *Not applicable.*

Transport/Additional information:

ADG
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*

(Contd. on page 7)

(Contd. of page 6)

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 1814 POTASSIUM HYDROXIDE SOLUTION, 8, II*

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Australian Inventory of Chemical Substances
All ingredients are listed.

Standard for the Uniform Scheduling of Medicines and Poisons		
1310-58-3	*potassium hydroxide*	*S5, S6, S10*

GHS label elements
The product is classified and labelled according to the Globally Harmonised System (GHS).
Hazard pictograms *GHS05*
Signal word *Danger*

Hazard-determining components of labelling:
potassium hydroxide
Hazard statements
Causes severe skin burns and eye damage.
Precautionary statements
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.
Immediately call a POISON CENTER/doctor.
Specific treatment (see on this label).
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.*

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
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.**