

## 1 Identification

### Product identifier

Trade name: **Electrolyte COS22 Standard**

Article number: *COS22Z-xxxx+E1*

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](mailto:MSDS.PCC@endress.com)*

Emergency telephone number: *001 18000 222 1222*

## \* 2 Hazard(s) identification

### Classification of the substance or mixture



*GHS07*

*Skin Irritation 2 H315 Causes skin irritation.*

*Eye Irritation 2A H319 Causes serious eye irritation.*

### Label elements

#### GHS label elements

*The product is classified and labeled according to the Globally Harmonized System (GHS).*

#### Hazard pictograms



*GHS07*

Signal word *Warning*

#### Hazard-determining components of labeling:

*potassium hydroxide*

#### Hazard statements

*Causes skin irritation.*

*Causes serious eye irritation.*

#### Precautionary statements

*Wear protective gloves / eye protection / face protection.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

*If skin irritation occurs: Get medical advice/attention.*

*Take off contaminated clothing and wash it before reuse.*

*If eye irritation persists: Get medical advice/attention.*

#### Classification system:

#### NFPA ratings (scale 0 - 4)



*Health = 2*

*Fire = 0*

*Reactivity = 0*

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**HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

**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: 1310-58-3	potassium hydroxide	≤1%
 Skin Corrosion 1A, H314;  Acute Toxicity - Oral 4, H302		

**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. If symptoms persist, consult a doctor.

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

CO<sub>2</sub>, 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** No further relevant information available.

**Advice for firefighters** No further relevant information available.

**Protective equipment:** No special measures required.

**6 Accidental release measures**

**Personal precautions, protective equipment and emergency procedures** Wear protective clothing.

**Environmental precautions:** Dilute with plenty of water.

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**Methods and material for containment and cleaning up:***Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).***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**

<b>PAC-1:</b>		
CAS: 1310-58-3	potassium hydroxide	0.18 mg/m <sup>3</sup>
<b>PAC-2:</b>		
CAS: 1310-58-3	potassium hydroxide	2 mg/m <sup>3</sup>
<b>PAC-3:</b>		
CAS: 1310-58-3	potassium hydroxide	54 mg/m <sup>3</sup>

**7 Handling and storage****Precautions for safe handling** *No special precautions are necessary if used correctly.***Information about protection against explosions and fires:** *No special measures required.***Storage:****Requirements to be met by storerooms and receptacles:** *Do not use light alloy receptacles.***Information about storage in one common storage facility:** *Not required.***Further information about storage conditions:** *Keep receptacle tightly sealed.***Storage class:** 8 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 item 7.***Control parameters**

<b>Components with limit values that require monitoring at the workplace:</b>	
<b>CAS: 1310-58-3 potassium hydroxide</b>	
REL	Ceiling limit value: 2 mg/m <sup>3</sup>
TLV	Ceiling limit value: 2 mg/m <sup>3</sup>

**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 and skin.***Breathing equipment:** *Not required.***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

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*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 protection:***Tightly sealed goggles***Body protection:** *Protective work clothing***\* 9 Physical and chemical properties****Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	<i>Fluid</i>
<b>Color:</b>	<i>Colorless</i>
<b>Odor:</b>	<i>Odorless</i>
<b>Odor threshold:</b>	<i>Not determined.</i>
<b>pH-value at 20 °C (68 °F):</b>	<i>&gt;12</i>

**Change in condition**

<b>Melting point/Melting range:</b>	<i>-4 °C (24.8 °F)</i>
<b>Boiling point/Boiling range:</b>	<i>100 °C (212 °F)</i>

**Flash point:** *Not applicable.***Flammability (solid, gaseous):** *Not applicable.***Decomposition temperature:** *Not determined.***Auto igniting:** *Product is not selfigniting.***Danger of explosion:** *Product does not present an explosion hazard.  
Not determined.***Explosion limits:**

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

**Vapor pressure at 20 °C (68 °F):** *23 hPa (17.3 mm Hg)***Density at 20 °C (68 °F):** *1.005 g/cm<sup>3</sup> (8.387 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:** *Not determined.***Kinematic:** *Not determined.*

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**Solvent content:****Water:** 92.0 %**Solids content:** 0.0 %**Other information**

No further relevant information available.

**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** Reacts with various metals.**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 that are relevant for classification:****CAS: 1310-58-3 potassium hydroxide**

Oral | LD50 | 273 mg/kg (rat)

**Primary irritant effect:****on the skin:** Irritant to skin and mucous membranes.**on the eye:** Irritating effect.**Sensitization:** No sensitizing effects known.**Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

**\*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:**

Not hazardous for water.

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.

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### 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.*

### \*14 Transport information

**UN-Number**

DOT, IMDG, IATA

UN1814

**UN proper shipping name**

DOT

Potassium hydroxide, solution

IMDG

POTASSIUM HYDROXIDE SOLUTION

IATA

Potassium hydroxide solution

**Transport hazard class(es)**

DOT



**Class**

8 Corrosive substances

**Label**

8

**IMDG, IATA**



**Class**

8 Corrosive substances

**Label**

8

**Packing group**

DOT, IMDG, IATA

III

**Environmental hazards:**

Not applicable.

**Special precautions for user**

Warning: Corrosive substances

**Hazard identification number (Kemler code):**

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**

MARPOL73/78 and the IBC Code

Not applicable.

**Transport/Additional information:**

DOT

**Quantity limitations**

On passenger aircraft/rail: 5 L

On cargo aircraft only: 60 L

**IMDG**

Limited quantities (LQ)

5L

Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

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UN "Model Regulation":

UN 1814 POTASSIUM HYDROXIDE SOLUTION, 8, III

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**\*15 Regulatory information****Safety, health and environmental regulations/legislation specific for the substance or mixture***No further relevant information available.***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**

GHS07

**Signal word** *Warning***Hazard-determining components of labeling:***potassium hydroxide***Hazard statements***Causes skin irritation.**Causes serious eye irritation.***Precautionary statements***Wear protective gloves / eye protection / face protection.*

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*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

*If skin irritation occurs: Get medical advice/attention.*

*Take off contaminated clothing and wash it before reuse.*

*If eye irritation persists: Get medical advice/attention.*

**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** 04/01/2022 / 2

**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)*

*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 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)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*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*

*Acute Toxicity - Oral 4: Acute toxicity – Category 4*

*Skin Corrosion 1A: Skin corrosion/irritation – Category 1A*

*Skin Irritation 2: Skin corrosion/irritation – Category 2*

*Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A*

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