

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 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: +1 604 682 5050

* 2 Hazard identification

Classification of the substance or mixture



GHS07

Skin Irritation - Category 2 H315 Causes skin irritation.

Eye Irritation - Category 2A H319 Causes serious eye irritation.

Label elements

GHS label elements

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

Hazard pictograms



GHS07

Signal word *Warning*

Hazard-determining components of labelling:

potassium hydroxide

Hazard statements

Causes skin irritation.

Causes serious eye irritation.

Precautionary statements

Wear protective gloves/protective clothing/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.

Other hazards

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

* 3 Composition/Information on ingredients



Chemical characterisation: Mixtures

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

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Trade name: Electrolyte COS22 Standard

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Dangerous components:	
CAS: 1310-58-3	potassium hydroxide  Skin Corrosion - Category 1A, H314;  Acute Toxicity (Oral) - Category 4, H302
	0.1-1% *

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:**

CO₂, 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.

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.

7 Handling and storage

Precautions for safe handling No special precautions are necessary if used correctly.

Information about fire - and explosion protection: 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 container tightly sealed.

Storage class: 8 B

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Trade name: Electrolyte COS22 Standard

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

8 Exposure controls/ 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:

CAS: 1310-58-3 potassium hydroxide

EL Ceiling: 2 mg/m³EV Ceiling: 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 and skin.

Respiratory protection: 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-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 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

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— CDN —

Trade name: Electrolyte COS22 Standard

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Odour:	<i>Odourless</i>
Odour threshold:	<i>Not determined.</i>
pH-value at 20 °C:	<i>>12</i>
Change in condition	
Melting point/freezing point:	<i>-4 °C</i>
Initial boiling point and boiling range:	<i>100 °C</i>
Flash point:	<i>Not applicable.</i>
Flammability (solid, gas):	<i>Not applicable.</i>
Decomposition temperature:	<i>Not determined.</i>
Auto-ignition temperature:	<i>Product is not selfigniting.</i>
Explosive properties:	<i>Product does not present an explosion hazard. Not determined.</i>
Explosion limits:	
Lower:	<i>Not determined.</i>
Upper:	<i>Not determined.</i>
Vapour pressure at 20 °C:	<i>23 hPa</i>
Density at 20 °C:	<i>1.005 g/cm³</i>
Relative density	<i>Not determined.</i>
Vapour density	<i>Not determined.</i>
Evaporation rate	<i>Not determined.</i>
Solubility in / Miscibility with water:	<i>Fully miscible.</i>
Partition coefficient: n-octanol/water:	<i>Not determined.</i>
Viscosity:	
Dynamic:	<i>Not determined.</i>
Kinematic:	<i>Not determined.</i>
Solvent content:	
Water:	<i>92.0 %</i>
Solids content:	<i>0.0 %</i>
Other information	<i>No further relevant information available.</i>

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 relevant for classification:

CAS: 1310-58-3 potassium hydroxide

Oral	LD50	273 mg/kg (rat)
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Primary irritant effect:**Skin corrosion/irritation** *Irritant to skin and mucous membranes.***Serious eye damage/irritation** *Irritating effect.***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:**Irritant****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:***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.***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**

UN1814

IMDG, IATA**UN proper shipping name****ADR**

UN1814 POTASSIUM HYDROXIDE SOLUTION

IMDG

POTASSIUM HYDROXIDE SOLUTION

IATA

Potassium hydroxide solution

Transport hazard class(es)**ADR****Class**

8 (C5) Corrosive substances.

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— CDN —

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Label 8

IMDG, IATA



Class 8 Corrosive substances.
Label 8
Packing group
ADR, 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 Marpol and the IBC Code Not applicable.

Transport/Additional information:

ADR
Limited quantities (LQ) 5L
Transport category 3
Tunnel restriction code E

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
UN "Model Regulation": UN 1814 POTASSIUM HYDROXIDE SOLUTION, 8, III

*15 Regulatory information

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

GHS label elements

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Hazard pictograms



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*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 the latest revision of the safety data sheet** 04/01/2022 / 2**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)**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**** Data compared to the previous version altered.**