

**SECTION 1: Identification of the substance or mixture and of the supplier****Product identifier****Trade name:** KCl-Elektrolytlösung CPY4 1,5 mol**Synonym:** *KCl solution CPY4 1.5 M***Article number:** *CPY4-4-6***Recommended use of the chemical and restrictions on use** *No further relevant information available.***Application of the substance / the mixture** *Laboratory chemicals***Supplier's details****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 phone number** *+27 (0)861 555 777***SECTION 2: Hazard identification****Classification of the substance or mixture***health hazard**STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.***GHS label elements****GHS label elements***The product is classified and labelled according to the Globally Harmonised System (GHS).***Hazard pictograms**

GHS08

**Signal word** *Warning***Hazard-determining components of labelling:***ethanediol***Hazard statements***May cause damage to organs through prolonged or repeated exposure.***Precautionary statements***Do not breathe dust/fume/gas/mist/vapours/spray.**Get medical advice/attention if you feel unwell.**Dispose of contents/container in accordance with local/regional/national/international regulations.***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.*

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

CAS: 107-21-1 EINECS: 203-473-3	ethanediol	 STOT RE 2, H373;  Acute Tox. 4, H302	30-50%
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**Additional information:** For the wording of the listed hazard phrases refer to section 16.**SECTION 4: First-aid measures****Description of necessary 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.**Most important symptoms or effects, acute and delayed** No further relevant information available.**Indication of immediate medical attention and special treatment needed, if necessary**

No further relevant information available.

**SECTION 5: Fire-fighting measures****Suitable extinguishing media****Suitable extinguishing agents:**CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**For safety reasons unsuitable extinguishing agents:** no further information**Specific hazards arising from the chemical**

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

**Special protective actions for fire fighters** No further relevant information available.**Protective equipment:** Mount respiratory protective device.**SECTION 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures**

Mount respiratory protective device.

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).

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.

**SECTION 7: Handling and storage****Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

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**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:** *None.***Storage class:** 12**Specific end use(s)** *No further relevant information available.*

## SECTION 8: Exposure controls or personal protection

**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.***Exposure controls****Appropriate engineering controls** *No further data; see item 7.***Individual protection measures, such as personal protective equipment (PPE)****General protective and hygienic measures:***Keep away from foodstuffs, beverages and feed.**Wash hands before breaks and at the end of work.**Store protective clothing separately.***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.***Hand protection****Protective gloves***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***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.***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 or face protection****Tightly sealed goggles****Body protection:** *Protective work clothing*

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**SECTION 9: Physical and chemical properties****Information on basic physical and chemical properties****General Information**

Physical state	Fluid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.
Melting point/freezing point:	Undetermined.
نقطة الغليان أو نقطة الغليان الأولية ونطاق الغليان	Undetermined.
Flammability	Not applicable.
Upper or lower flammability or explosive limits	
Lower:	3.2 Vol %
Upper:	53 Vol %
Flash point:	Not applicable.
Ignition temperature:	410 °C
Decomposition temperature:	Not determined.
pH at 20 °C	>6
Viscosity:	
Viscosity	Not determined.
Dynamic:	Not determined.
Solubility	
water:	Fully miscible.
Partition coefficient: n-octanol or water	Not determined.
Vapour pressure at 20 °C:	23 hPa
Vapour density + Relative density	
Density at 20 °C:	1.1 g/cm <sup>3</sup>
Relative density	Not determined.
Vapour density	Not determined.

**Other information**

Appearance:	
Form:	Fluid
Important information on protection of health and environment, and on safety.	
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Product does not present an explosion hazard. Not determined.
Solvent content:	
Water:	<40.0 %
Solids content:	0.0 %
Change in condition	
Evaporation rate	Not determined.

**Information with regard to physical hazard classes**

Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void

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<b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
<b>Oxidising liquids</b>	Void
<b>Oxidising solids</b>	Void
<b>Organic peroxides</b>	Void
<b>Corrosive to metals</b>	Void
<b>Desensitised explosives</b>	Void

## SECTION 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.

## SECTION 11: Toxicological information

Information on hazard classes as defined in Regulation (EC) No 1272/2008

**Acute toxicity**

**LD/LC50 values relevant for classification:**

**CAS: 107-21-1 ethanediol**

Oral	LD50	5,840 mg/kg (rat)
Dermal	LD50	9,530 mg/kg (rbt)

**Specific target organ toxicity – repeated exposure**

May cause damage to organs through prolonged or repeated exposure.

**Information on other hazards**

**endocrine disrupting potential**

None of the ingredients is listed.

## SECTION 12: Ecological information

**Toxicity**

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability** No further relevant information available.

**Bioaccumulative potential** No further relevant information available.

**Mobility in soil** No further relevant information available.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

**Other adverse effects**

**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.

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## SECTION 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.*

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## SECTION 14: Transport information

### UN number

ADN, IMDG, IATA *Void*

### UN proper shipping name

ADR, ADN, IMDG, IATA *Void*

### Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class *Void*

### Packing group

ADR, IMDG, IATA *Void*

Environmental hazards: *Not applicable.*

Special precautions for user *Not applicable.*

### Transport in bulk according to Annex II of

MARPOL 73/78 and the IBC Code *Not applicable.*

UN "Model Regulation": *Void*

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## SECTION 15: Regulatory information

### Safety, health and environmental regulations specific for the product in question

#### GHS label elements

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

#### Hazard pictograms



GHS08

#### Signal word *Warning*

#### Hazard-determining components of labelling:

*ethanediol*

#### Hazard statements

*May cause damage to organs through prolonged or repeated exposure.*

#### Precautionary statements

*Do not breathe dust/fume/gas/mist/vapours/spray.*

*Get medical advice/attention if you feel unwell.*

*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.*

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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-TWR**Contact:** *MSDS.pcc@endress.com***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*

*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*

*STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2*

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