

SECTION 1: Identification of the substance or mixture and of the supplier**1.1 Product identifier****Trade name:** KCl-Elektrolytlösung CPY4 1,5 mol**Synonym:** *KCl solution CPY4 1.5 M***Article number:** *CPY4-4-6***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 209-10117**E-Mail: MSDS.PCC@endress.com***1.4 Emergency telephone number:** *0064 800 764 766***SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008***health hazard**STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.***Classification according to Directive 67/548/EEC or Directive 1999/45/EC***Xn; Harmful**R22: Harmful if swallowed.***Information concerning particular hazards for human and environment:***The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.***Classification system:***The classification is according to the latest editions of the EU-lists, and extended by company and literature data.***2.2 Label elements****Labelling according to EU guidelines:***Observe the general safety regulations when handling chemicals.**The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.***Code letter and hazard designation of product:***Xn Harmful***Hazard-determining components of labelling:***ethanediol***Risk phrases:***22 Harmful if swallowed.*

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Safety phrases:

23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).

29 Do not empty into drains.

36 Wear suitable protective clothing.

60 This material and its container must be disposed of as hazardous waste.

2.3 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.

SECTION 3: Composition/Information on ingredients**3.2 Mixtures**

Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

CAS: 107-21-1	ethanediol	 Xn R22	30-50%
EINECS: 203-473-3		 STOT RE 2, H373;  Acute Tox. 4, H302	

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**

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.

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: Fire fighting measures****5.1 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**5.2 Special hazards arising from the substance or mixture**

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

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

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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.

SECTION 7: Handling and storage**7.1 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.*

7.2 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

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

SECTION 8: Exposure controls/personal protection**8.1 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.*

8.2 Exposure controls

Appropriate engineering controls *No further data; see item 7.*

Individual protection measures, such as personal protective equipment**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.

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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/face 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**

Physical state	Fluid
Colour:	Colourless
Odour:	Odourless
Odour threshold:	Not determined.
Melting point/freezing point:	Undetermined.
Boiling point or initial boiling point and boiling range	Undetermined.
Flammability	Not applicable.
Lower and upper explosion limit	
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:	
Kinematic viscosity	Not determined.
Dynamic:	Not determined.
Solubility	
water:	Fully miscible.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure at 20 °C:	23 hPa
Density and/or relative density	
Density at 20 °C:	1.1 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.

9.2 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.

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

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 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)

STOT-repeated exposure *May cause damage to organs through prolonged or repeated exposure.***11.2 Information on other hazards****Endocrine disrupting properties***None of the ingredients is listed.***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.***12.5 Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.*

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12.6 Endocrine disrupting properties*The product does not contain substances with endocrine disrupting properties.***12.7 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.***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 or ID number****ADN, IMDG, IATA**

Void

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

Void

14.3 Transport hazard class(es)**ADR, ADN, IMDG, IATA****Class**

Void

14.4 Packing group**ADR, IMDG, IATA**

Void

14.5 Environmental hazards:*Not applicable.***14.6 Special precautions for user***Not applicable.***14.7 Maritime transport in bulk according to IMO****instruments***Not applicable.***UN "Model Regulation":**

Void

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****New Zealand Inventory of Chemicals***All ingredients are listed.***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.***15.2 Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.***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.***16.1 Relevant phrases***H302 Harmful if swallowed.**H373 May cause damage to organs through prolonged or repeated exposure.**R22 Harmful if swallowed.*

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16.3 Recommended restriction of use**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**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**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2**** Data compared to the previous version altered.**