SECTION 1: Identification of the substance or mixture and of the supplier

Product identifier

Trade name: **Cleaning solution alkaline**

Article number: *CAY746-VxxAAE*

Recommended use of the chemical and restrictions on use *No further relevant information available.*

Application of the substance / the mixture
Cleaning agent/ Cleaner
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

corrosion

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

Acute Tox. 4 H302 Harmful if swallowed.

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

GHS05 GHS07

Signal word *Danger*

Hazard-determining components of labelling:
potassium hydroxide
Hazard statements
Harmful if swallowed.
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.

(Contd. on page 2)

(Contd. of page 1)

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.*

SECTION 3: Composition or information on ingredients

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

Dangerous components:		
CAS: 1310-58-3 *EINECS: 215-181-3*	*potassium hydroxide* *Skin Corr. 1A, H314; Acute Tox. 4, H302* *Specific concentration limits: Skin Corr. 1A; H314: C ≥ 5 %* *Skin Corr. 1B; H314: 2 % ≤ C < 5 %* *Skin Irrit. 2; H315: 0.5 % ≤ C < 2 %* *Eye Irrit. 2; H319: 0.5 % ≤ C < 2 %*	*20-40%*

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

General information:
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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:
Call for a doctor immediately.
Drink plenty of water and provide fresh air. Call for a doctor immediately.
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:
CO2, 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.*

(Contd. on page 3)

(Contd. of page 2)

SECTION 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 section 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.
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.*

SECTION 8: Exposure controls or personal protection

Control parameters

Ingredients with limit values that require monitoring at the workplace:	
CAS: 1310-58-3 potassium hydroxide	
OEL	*Short-term value: 4 mg/m³*

Additional information: *The lists valid during the making were used as basis.*

Exposure controls
Appropriate engineering controls *No further data; see section 7.*
Individual protection measures, such as personal protective equipment (PPE)

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.

(Contd. on page 4)

(Contd. of page 3)

Hand protection

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.

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 or face protection

Tightly sealed goggles

Body protection: *Protective work clothing*

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	*100 °C*
Flammability	*Not applicable.*
Upper or lower flammability or explosive limits	
Lower:	*Not determined.*
Upper:	*Not determined.*
Flash point:	*Not applicable.*
Decomposition temperature:	*Not determined.*
pH at 20 °C	*13*
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:	*1.364 g/cm³*
Relative density	*Not determined.*
Vapour density	*Not determined.*

(Contd. on page 5)

(Contd. of page 4)

Other information
Appearance:
Form: *Fluid*
Important information on protection of health and environment, and on safety.
Ignition temperature: *Product is not selfigniting.*
Explosive properties: *Product does not present an explosion hazard.*
Not determined.
Solvent content:
Water: *70.0 %*
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*
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

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 *Harmful if swallowed.*

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

Skin corrosion or irritation *Causes severe skin burns and eye damage.*
Serious eye damage or irritation *Causes serious eye damage.*

(Contd. on page 6)

(Contd. of page 5)

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.
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.

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.*

*

SECTION 14: Transport information

UN number
IMDG, IATA *UN1814*
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.*

(Contd. on page 7)

(Contd. of page 6)

Label *8*

IMDG, IATA

Class *8 Corrosive substances.*
Label *8*
Packing group
ADR, IMDG, IATA *II*
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 *(SGG18) Alkalis*
Stowage Category *A*
Segregation Code *SG35 Stow "separated from" SGG1-acids*
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code *Not applicable.*

Transport/Additional information:

ADR
Limited quantities (LQ) *1L*
Transport category *2*
Tunnel restriction code *E*

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*

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

GHS05 GHS07

Signal word *Danger*

Hazard-determining components of labelling:
potassium hydroxide
Hazard statements
Harmful if swallowed.
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.

(Contd. on page 8)

(Contd. of page 7)

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.*

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
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.**