**Kit Components**

| Product code | Description |
|---|---|
| **CAY140-VxxAAE** | **CA7xAM Reagent Set for ammonium** |

Components:

| | |
|---|---|
| 71251981 | Reagent AM1 for ammonium |
| 71251984 | Reagent AM2 for ammonium |

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

**Product identifier**

**Trade name: Reagent AM1**
**Synonym:** *for ammonium*

**Article number:** *71251981*

**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**

*Acute Tox. 4 H302 Harmful if swallowed.*
*Eye Irrit. 2 H319 Causes serious eye irritation.*

**GHS 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:**
*Sodium salicylate*
*Sodium nitroprusside*
**Hazard statements**
*Harmful if swallowed.*
*Causes serious eye irritation.*
**Precautionary statements**
*Wear eye protection / face protection.*
*IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*
*Rinse mouth.*
*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
*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.*

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**vPvB:** *Not applicable.*

* 
## SECTION 3: Composition or information on ingredients

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

| **Dangerous components:** | | | |
|---|---|---|---|
| *CAS: 54-21-7*<br>*EINECS: 200-198-0* | *Sodium salicylate* | *Acute Tox. 4, H302; Eye Irrit. 2, H319* | *10-20%* |
| *CAS: 13755-38-9*<br>*EINECS: 238-373-9* | *Sodium nitroprusside* | *Acute Tox. 2, H300; Acute Tox. 2, H310* | *0.1-1%* |

**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:**
*Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.*

**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. If symptoms persist, consult a doctor.*

**After swallowing:** *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** *No further relevant information available.*
**Special protective actions for fire fighters** *No further relevant information available.*
**Protective equipment:** *No special measures required.*

## SECTION 6: Accidental release measures

**Personal precautions, protective equipment and emergency procedures** *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 section 13.*
**Reference to other sections**
*No dangerous substances are released.*
*See Section 7 for information on safe handling.*
*See Section 8 for information on personal protection equipment.*
*See Section 13 for disposal information.*

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## SECTION 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.*

**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:** *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 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:** *Not required.*

**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*
*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*

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**Body protection:** *Protective work clothing*

## SECTION 9: Physical and chemical properties

**Information on basic physical and chemical properties**

| | |
|---|---|
| **General Information** | |
| **Physical state** | *Fluid* |
| **Colour:** | *Coloured* |
| **Odour:** | *Characteristic* |
| **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.* |
| **Auto-ignition temperature:** | *>250 °C* |
| **Decomposition temperature:** | *Not determined.* |
| **pH at 20 °C** | *7-9* |
| **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:** | *1.021 g/cm³* |
| **Relative density** | *Not determined.* |
| **Vapour density** | *Not determined.* |

| | |
|---|---|
| **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:** | *77.5 %* |
| **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* |

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| | |
|---|---|
| **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: 54-21-7 Sodium salicylate*** | | |
| *Oral* | *LD50* | *930 mg/kg (rat)* |
| ***CAS: 13755-38-9 Sodium nitroprusside*** | | |
| *Oral* | *LD50* | *20 mg/kg (human)* |
| *Dermal* | *LD50* | *99 mg/kg (rat)* |

**Serious eye damage or irritation** *Causes serious eye irritation.*
**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.*

## 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* |

## 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**

GHS07

**Signal word** *Warning*

**Hazard-determining components of labelling:**
*Sodium salicylate*
*Sodium nitroprusside*
**Hazard statements**
*Harmful if swallowed.*
*Causes serious eye irritation.*
**Precautionary statements**
*Wear eye protection / face protection.*
*IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*
*Rinse mouth.*
*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
*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.*

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**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)*
*ICAO: International Civil Aviation Organisation*
*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. 2: Acute toxicity – Category 2*
*Acute Tox. 4: Acute toxicity – Category 4*
*Eye Irrit. 2: Serious eye damage/eye irritation – Category 2*
*** Data compared to the previous version altered.**

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

**Product identifier**

**Trade name: Reagent AM2**
**Synonym:** *for ammonium*

**Article number:** *71251984*

**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**

*corrosion*

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

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

GHS05

**Signal word** *Danger*

**Hazard-determining components of labelling:**
*Sodium hydroxide*
**Hazard statements**
*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.*
*Dispose of contents/container in accordance with local/regional/national/international regulations.*
**Other hazards**
**Results of PBT and vPvB assessment**
**PBT:** *Not applicable.*
**vPvB:** *Not applicable.*

(Contd. on page 2)

(Contd. of page 1)

* 
## SECTION 3: Composition or information on ingredients

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

| **Dangerous components:** | | |
|---|---|---|
| *CAS: 1310-73-2*<br>*EINECS: 215-185-5* | *Sodium hydroxide*<br>*Skin Corr. 1A, H314; Acute Tox. 4, H302*<br>*Specific concentration limits: Skin Corr. 1A; H314: C ≥ 5 %*<br>*Skin Corr. 1B; H314: 2 % ≤ C < 5 %*<br>*Skin Irrit. 2; H315: 0.5 % ≤ C < 2 %*<br>*Eye Irrit. 2; H319: 0.5 % ≤ C < 2 %* | *2-6%* |
| *CAS: 2893-78-9*<br>*EINECS: 220-767-7* | *sodium salt of dichloroisocyanuric acid*<br>*Ox. Sol. 2, H272; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302; Eye Irrit. 2, H319; STOT SE 3, H335, EUH031*<br>*Specific concentration limit: STOT SE 3; C ≥ 10 %*<br>*EUH031: C ≥ 10 %* | *0.1-1%* |

**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.*

**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:** *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.*

## 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).*

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*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: 1310-73-2 Sodium 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.*

**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*

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*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:** | *Characteristic* |
| **Odour threshold:** | *Not determined.* |
| **Melting point/freezing point:** | *0 °C* |
| **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:** | *380 °C* |
| **pH at 20 °C** | *12-14* |
| **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:** | *1.012 g/cm³* |
| **Relative density** | *Not determined.* |
| **Vapour density** | *Not determined.* |
| **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:** | *96.6 %* |
| **Solids content:** | *0.0 %* |
| **Change in condition** | |
| **Evaporation rate** | *Not determined.* |
| **Information with regard to physical hazard classes** | |
| **Explosives** | *Void* |

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| | |
|---|---|
| **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** *Based on available data, the classification criteria are not met.*

| **LD/LC50 values relevant for classification:** | | |
|---|---|---|
| ***CAS: 1310-73-2 Sodium hydroxide*** | | |
| *Oral* | *LD50* | *2,000 mg/kg (rat)* |
| *Inhalative* | *LC50/4 h* | *125 mg/l (fish)* |
| ***CAS: 2893-78-9 sodium salt of dichloroisocyanuric acid*** | | |
| *Oral* | *LD50* | *1,400 mg/kg (rat)* |

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

(Contd. on page 6)

(Contd. of page 5)

**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** *UN1824*
**UN proper shipping name**
**ADR** *UN1824 SODIUM HYDROXIDE SOLUTION*
**IMDG** *SODIUM HYDROXIDE SOLUTION*
**IATA** *Sodium hydroxide solution*
**Transport hazard class(es)**

**ADR**

**Class** *8 (C5) Corrosive substances.*
**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*

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**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 1824 SODIUM 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

**Signal word** *Danger*

**Hazard-determining components of labelling:**
*Sodium hydroxide*
**Hazard statements**
*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.*
*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:**
*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*

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*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*
*Ox. Sol. 2: Oxidizing solids – Category 2*
*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*
*Eye Irrit. 2: Serious eye damage/eye irritation – Category 2*
*STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*
*Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1*
*Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1*
*** Data compared to the previous version altered.**