



**A25**

Print date 20.03.2025  
Revision date 20.03.2025  
Version 2.6 (en)  
replaces version of 16.11.2022 (2.5)

**\* SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifier**

**Trade name/designation** A25  
**Unique Formula Identifier** UFI: 1F60-40HU-X00H-F8VQ  
**Product category** PC-CLN-OTH Other cleaning, care and maintenance products (excludes biocidal products)

**Hazard components**

potassium hydroxide, isotridecanol, ethoxylated, C10- fatty alcohol, alkoxyated

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

**Sector of uses [SU]**

SU20 Health services  
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
SU3 Industrial uses

**Process categories [PROC]**

PROC7 Industrial spraying  
PROC8a Transfer of substance or mixture (charging and discharging) at non- dedicated facilities  
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)  
PROC13 Treatment of articles by dipping and pouring  
PROC11 Non industrial spraying

**Environmental release categories [ERC]**

ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)  
ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor)  
ERC6b Use of reactive processing aid at industrial site (no inclusion into or onto article)

**Product Categories [PC]**

PC35 Washing and cleaning products

**Use of the substance/mixture**

Aqueous, strongly alkaline, foam-inhibited cleaning concentrate for ultrasonic, immersion and splash cleaning of alkali-resistant parts and medical devices.

**1.3 Details of the supplier of the safety data sheet**

**Supplier**

Elma Schmidbauer GmbH  
Gottlieb-Daimler-Str. 17  
D-78224 Singen (Htwl.)  
Telephone +49 7731 882-0  
Telefax +49 7731 882-266  
E-mail info@elma-ultrasonic.com  
Website www.elma-ultrasonic.com

Department responsible for information:  
Chemie/Labor: Email: chemlab@elma-ultrasonic.com

**\* 1.4 Emergency telephone number**

Vergiftungs-Informations-Zentrale Freiburg (Sprache/Language: DE, +49 761 19240 EN)

**\* SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

| Classification according to Regulation (EC) No 1272/2008 [CLP] | Classification procedure |
|--|--------------------------|
|--|--------------------------|

|                     |  |
|---------------------|--|
| Met. Corr. 1, H290  | Expert judgement and weight of evidence determination. |
| Skin Corr. 1A, H314 | Calculation method.                                    |
| Eye Dam. 1, H318    | Calculation method.                                    |



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**Hazard statements for physical hazards**

H290 May be corrosive to metals.

**Hazard statements for health hazards**

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

**2.2 Label elements**

**Labelling according to Regulation (EC) No 1272/2008 [CLP]**

**Hazard components**

potassium hydroxide, isotridecanol, ethoxylated, C10- fatty alcohol, alkoxyated

**Hazard pictograms**



GHS05

**Signal word**

Danger

**Hazard statements**

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

**Precautionary statements**

P405 Store locked up.

P102 Keep out of reach of children.

P234 Keep only in original packaging.

P260 Do not breathe mist/spray.

P280 Wear protective gloves/protective clothing and eye protection/face protection.

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a doctor.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

**Other labelling**

Labelling for contents according to regulation (EC) No. 648/2004:

5 - 15% amphoteric surfactants

5 - 15% non-ionic surfactants

< 5% phosphates

< 5% polycarboxylates

**\* 2.3 Other hazards**

**\* Adverse human health effects and symptoms**

Acute Tox. 5 (oral) H303: May be harmful if swallowed.

Inhalation of spray may be harmful, may cause strong respiratory irritation and may cause damage to mucous membranes/lung.

This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

**\* Adverse environmental effects**

Aquatic Acute 2 H401: Toxic to aquatic life.

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**Results of PBT and vPvB assessment**

The product does not contain any PBT-/vPvB-substances according to the recipe.



# Safety Data Sheet according to Regulation (EC) No 1907/2006 (REACH)

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## SECTION 3: Composition / information on ingredients

### 3.1 Substances

not applicable

### 3.2 Mixtures

#### Hazardous ingredients

| CAS No      | EC No     | Index No     | Substance name                 | Concentration  | Classification according to Regulation (EC) No 1272/2008 [CLP]                      | SCL/ M/ ATE   |
|-------------|-----------|--------------|--------------------------------|----------------|---|---|
| 1310-58-3   | 215-181-3 | 019-002-00-8 | potassium hydroxide            | 5 - 9 weight-% | Met. Corr. 1; H290<br>Acute Tox. 3; H301<br>Skin Corr. 1A; H314<br>Eye Dam. 1; H318 | Skin Corr. 1A; H314: C $\geq$ 5%<br>Skin Corr. 1B; H314: 2% $\leq$ C<5%<br>Skin Irrit. 2; H315: 0.5% $\leq$ C<2%<br>Eye Dam. 1; H318: C $\geq$ 2%<br>Eye Irrit. 2; H319: 0.5% $\leq$ C<2% |
| 7320-34-5   | 230-785-7 |              | tetrapotassium pyrophosphate   | < 5 weight-%   | Eye Irrit. 2; H319  |   |
| 69011-36-5  | 931-138-8 |              | isotridecanol, ethoxylated     | < 5 weight-%   | Acute Tox. 4; H302<br>Eye Dam. 1; H318  | Eye Dam. 1; H318: C>10%<br>Eye Irrit. 2; H319: 1%<C $\leq$ 10%<br><br>ATE(oral): 500 mg/kg  |
| 166736-08-9 |           |              | C10- fatty alcohol, alkoxyated | 1 - 2 weight-% | Acute Tox. 4; H302<br>Eye Dam. 1; H318  | ATE(oral): 500 mg/kg  |
| 27458-92-0  | 248-469-2 |              | isotridecanol                  | < 0.2 weight-% | Skin Irrit. 2; H315<br>Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410             | M=1 (Aquatic Acute 1)<br>M=1 (Aquatic Chronic 1)  |

| REACH No.                | Substance name                 |
|--------------------------|--------------------------------|
| 01-2119487136-33         | potassium hydroxide            |
| 01-2119489369-18         | tetrapotassium pyrophosphate   |
| Not relevant (polymer).  | isotridecanol, ethoxylated     |
| Not relevant (polymer).  | C10- fatty alcohol, alkoxyated |
| Not relevant (impurity). | isotridecanol                  |

#### Additional information

Aqueous strongly alkaline foam-inhibited mixture of potassium hydroxide, amphoteric and non-ionic surfactants, complexing agents and phosphates.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information

Remove contaminated, saturated clothing immediately.  
Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

#### Following inhalation

Provide fresh air.  
In case of inhaling spray mist, consult a physician.  
In the event of symptoms refer for medical treatment.

#### Following skin contact

In case of contact with skin wash off immediately with plenty of water.  
In case of skin irritation, consult a physician.



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**After eye contact**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

**Following ingestion**

Do NOT induce vomiting.  
Call a physician immediately.  
Medical treatment necessary.  
Rinse mouth immediately and drink plenty of water.

**4.2 Most important symptoms and effects, both acute and delayed**

**Effects**

Risk of stomach perforation.

**4.3 Indication of any immediate medical attention and special treatment needed**

**Notes for the doctor**

Keep under medical supervision for at least 48 hours.

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

**Suitable extinguishing media**

Water  
Foam  
Extinguishing powder  
Carbon dioxide (CO<sub>2</sub>)

**5.2 Special hazards arising from the substance or mixture**

**Hazardous combustion products**

In case of fire formation of dangerous gases possible.  
In the event of fire the following can be released:  
Corrosive gases/vapours  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon monoxide  
Phosphorus oxides

**5.3 Advice for firefighters**

No data available

**Additional information**

Co-ordinate fire-fighting measures to the fire surroundings.  
Do not inhale explosion and combustion gases.  
Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

**For non-emergency personnel**

Use personal protection equipment.  
Special danger of slipping by leaking/spilling product.

**For emergency responders**

Remove persons to safety.  
Personal protection equipment  
Use personal protection.  
Use breathing apparatus if exposed to vapours/dust/aerosol.  
Forms slippery surfaces with water.  
Special danger of slipping by leaking/spilling product.



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**6.2 Environmental precautions**

Do not allow to enter into surface water or drains.  
Do not allow to enter into soil/subsoil.

**6.3 Methods and material for containment and cleaning up**

**For containment**

Suitable material for taking up:  
Sand  
Sawdust  
Universal binder  
Kieselguhr  
Flush away residues with water.  
Use chemical neutralizers.  
After taking up the material dispose according to regulation.

**6.4 Reference to other sections**

Informations for safe handling see chapter 7.  
Informations for personal protective equipment see chapter 8.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

**Protective measures**

Do not inhale aerosols  
Handle and open container with care.  
Use only alkali-resistant equipment.  
When diluting/dissolving, always have the water ready first, then slowly stir in the product.  
The product is not combustible.

**Advices on general occupational hygiene**

Make available sufficient washing facilities  
Remove contaminated, saturated clothing immediately.  
Keep away from food and drink.

**7.2 Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Suitable floor material:  
Alkali-resistant  
Keep only in unopened original container.  
Keep container tightly closed.

**Materials to avoid**

Do not store together with:  
Acid

**Further information on storage conditions**

Keep locked up and out of reach of children.  
Protect from heat and direct solar radiation.  
Do not keep at temperatures below 5°C.  
Do not keep at temperatures above 30°C.  
Storage time: 3 years.

**7.3 Specific end use(s)**

**Recommendation**

Do not use the product itself for injecting or spraying. Use only the diluted application solution for splash cleaning.



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**\* SECTION 8: Exposure controls/personal protection**

**\* 8.1 Control parameters**

**\* Occupational exposure limit values**

| CAS No    | EC No     | Substance name      | occupational exposure limit value   |
|-----------|-----------|---------------------|---|
| 1310-58-3 | 215-181-3 | Potassium hydroxide | Short-term(mg/m <sup>3</sup> ) 2 (1)<br>15 minutes reference period<br>(IE) |
| 1310-58-3 | 215-181-3 | Potassium hydroxide | Short-term(mg/m <sup>3</sup> ) 2<br>(UK)                                    |

**DNEL worker**

| CAS No    | Substance name      | DNEL value          | DNEL type                    | Remark              |
|-----------|---------------------|---------------------|------------------------------|---------------------|
| 1310-58-3 | potassium hydroxide | 1 mg/m <sup>3</sup> | long-term inhalative (local) | Assessment factor 1 |

**8.2 Exposure controls**

**Appropriate engineering controls**

**Technical measures to prevent exposure**  
Splash cleaning only in enclosed systems.

**Personal protection equipment**

**Eye/face protection**  
tightly fitting goggles

**Hand protection**

Gloves (alkali-resistant)  
Glove material specification [make/type, thickness, permeation time/life]: Butyl, 0,5mm, >=8h.  
Glove material specification [make/type, thickness, permeation time/life]: NBR, 0,35mm, >=8h.  
Glove material specification [make/type, thickness, permeation time/life]: FKM, 0,4mm, >=8h.  
Glove material specification [make/type, thickness, permeation time/life]: NR, 0,5mm, >=8h.

**Body protection:**  
Required properties:  
alkali-resistant

**Environmental exposure controls**

**Technical measures to prevent exposure**  
Neutralization is normally necessary before a waste water is discharged into sewage treatment plants.  
Avoid penetration into the subsoil/soil.  
Do not discharge into surface waters.

**Additional information**

Occupational exposure limits for potassium hydroxide.

**SECTION 9: Physical and chemical properties**

**9.1 Information on basic physical and chemical properties**

**Physical state**  
liquid

**Colour**  
yellowish up to brown

**Odour**  
mild



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**Safety relevant basis data**

|  | Value                                   | Method | Source, Remark                         |
|--|---|--------|--|
| Odour threshold:   |   |        | not determined                         |
| Melting point/freezing point                             | solidifying range                       |        | not determined                         |
| Boiling point or initial boiling point and boiling range | ≥ 100 °C                                |        |  |
| flammability   | solid                                   |        | not relevant                           |
| flammability   | gaseous                                 |        | not relevant                           |
| Lower and upper explosion limit                          | Upper explosion limit                   |        | not relevant                           |
| Lower and upper explosion limit                          | Lower explosion limit                   |        | not relevant                           |
| Flash point  |   |        | No flash point up to 100 °C.           |
| Auto-ignition temperature                                | 230 °C                                  |        | Value of isotridecanol.                |
| Decomposition temperature                                | ≥ 100 °C                                |        |  |
| pH   | 12- 12.5 (20°C)<br>Concentration 10 g/L |        | strong alkaline                        |
| Viscosity  | dynamic<br>8.2 mPa*s (20°C)             |        |  |
| Solubility(ies)  | Water solubility                        |        | miscible                               |
| Solubility(ies)  | Solvent                                 |        | not determined                         |
| Partition coefficient n-octanol/water (log value)        | approx. -2                              |        | Value of tetrapotassium pyrophosphate. |
| Vapour pressure  | approx. 23 hPa (20°C)                   |        |  |
| Density and/or relative density                          | approx. 1.15 g/cm <sup>3</sup> (20°C)   |        |  |
| Relative vapour density                                  | 0.62                                    |        | Value of Water.                        |
| particle characteristics                                 |   |        | not applicable (liquid).               |

**9.2 Other information**

**Information with regard to physical hazard classes**

**Explosives**

**Assessment/classification**

The mixture does not contain any explosive substances (CLP I 2.1.4.3 a).

CLP I 2.1.4.3 a: The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with explosive properties.

**flammable gases**

**Assessment/classification**

not applicable (liquid).

**Aerosols**

**Assessment/classification**

not relevant - no aerosol.

The classification criteria for this hazard class are not met by definition.

**Oxidising gas**

**Assessment/classification**

not applicable (liquid).



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**Gases under pressure**

**Assessment/classification**  
not applicable (liquid - no dissolved gas).

**flammable liquids**

**Assessment/classification**  
not flammable, not combustible (No flash point below 100°C).

**flammable solids**

**Assessment/classification**  
not applicable (liquid).

**Self-reactive substances and mixtures**

**Assessment/classification**  
The mixture does not contain any self-reactive substances (CLP I 2.8.4.2 a).  
CLP I 2.8.4.2 a: There are no chemical groups present in the molecule associated with explosive or self reactive properties.

**Pyrophoric liquids**

**Assessment/classification**  
The mixture does not contain any pyrophoric substances - not spontaneously flammable (CLP I 2.9.4.1).  
CLP I 2.9.4.1: The classification procedure for pyrophoric liquids need not be applied when experience in manufacture or handling shows that the substance or mixture does not ignite spontaneously on coming into contact with air at normal temperatures (i.e. the substance is known to be stable at room temperature for prolonged periods of time (days)).

**Pyrophoric solids**

**Assessment/classification**  
not applicable (liquid).

**self-heating substances and mixtures**

**Assessment/classification**  
The mixture does not contain any self-heating substances.

**Substances or mixtures which, in contact with water, emit flammable gases**

**Assessment/classification**  
not relevant - in contact with water releases no flammable gases (CLP I 2.12.4.1).  
CLP I 2.12.4.1: The classification procedure for this class need not be applied if: (a) the chemical structure of the substance or mixture does not contain metals or metalloids; or (b) experience in production or handling shows that the substance or mixture does not react with water, e.g. the substance is manufactured with water or washed with water; or (c) the substance or mixture is known to be soluble in water to form a stable mixture.

**Oxidising liquids**

**Assessment/classification**  
The mixture does not contain any oxidising substances.

**Oxidising solids**

**Assessment/classification**  
not applicable (liquid).

**Organic peroxides**

**Assessment/classification**  
The mixture does not contain any organic peroxides.

**Corrosive to metals**

**Safety characteristics**

|                                    | Value       | Method, Result   | Source, Remark |
|------------------------------------|-------------|--|----------------|
| Corrosion rate (mm aluminium/year) | > 6.25 mm/a | Expert judgement and weight of evidence determination. |                |
| Corrosion rate (mm steel/year)     |             |  | not available  |



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**Assessment/classification**

The mixture is classified as corrosive to metals (Met. Corr. 1 H290).

**Desensitised explosives**

**Assessment/classification**

The mixture does not contain any desensitised explosive substances.

**Other safety characteristics**

|                      | Value | Method | Source, Remark            |
|----------------------|-------|--------|---------------------------|
| Evaporation rate     |       |        | Water: 0.36 (ASTM D3539). |
| Solvent content      | 0 %   |        |                           |
| Explosive properties |       |        | none                      |
| Oxidising properties |       |        | none                      |

**Other information**

No further relevant informations available.

**SECTION 10: Stability and reactivity**

**10.1 Reactivity**

Exothermic reaction with:

Acid

No further hazardous reactions known if used as directed.

**10.2 Chemical stability**

Stable at ambient temperature.

**10.3 Possibility of hazardous reactions**

Exothermic reaction with:

Acid

Reactions with light metals, with evolution of hydrogen.

**10.4 Conditions to avoid**

Heat and direct solar radiation.

**10.5 Incompatible materials**

Reactions with strong acids.

Oxidising agent, strong

Corrodes aluminium.

**10.6 Hazardous decomposition products**

No decomposition if used as directed.

**\* SECTION 11: Toxicological information**

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

**\* Acute toxicity**

**Animal data**

|                     | Effective dose   | Method, Evaluation           | Source, Remark  |
|---------------------|------------------|------------------------------|---|
| Acute oral toxicity | 2000- 2100 mg/kg | ATE: Acute Toxicity Estimate | The acute oral toxicity is corresponding to GHS-category 5. |



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|                           | Effective dose   | Method, Evaluation           | Source, Remark |
|---------------------------|--|------------------------------|----------------|
|                           | CAS No1310-58-3<br>potassium hydroxide<br>LD50: 273 mg/kg<br>Species Rat |                              |                |
|                           | CAS No69011-36-5<br>isotridecanol, ethoxylated<br>500 mg/kg              | ATE: Acute Toxicity Estimate |                |
|                           | CAS No166736-08-9 C10-<br>fatty alcohol, alkoxyated<br>LD50: 500 mg/kg   | ATE: Acute Toxicity Estimate |                |
| Acute dermal toxicity     | > 5000 mg/kg   | ATE: Acute Toxicity Estimate |                |
| Acute inhalation toxicity | Acute inhalation toxicity<br>(vapour)                                    |                              | not relevant   |

\* **Assessment/classification**  
May be harmful if swallowed.

**Skin corrosion/irritation**

**Animal data**

| Result / Evaluation | Method             | Source, Remark |
|---------------------|--------------------|----------------|
| strongly corrosive. | Calculation method |                |

**Serious eye damage/irritation**

**Animal data**

| Result / Evaluation | Method              | Source, Remark |
|---------------------|---------------------|----------------|
| strongly corrosive. | Calculation method. |                |

**Sensitisation to the respiratory tract**

**Assessment/classification**

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

**Skin sensitisation**

**Animal data**

| Result / Evaluation | Dose / Concentration | Method              | Source, Remark |
|---------------------|----------------------|---------------------|----------------|
| not sensitising.    |                      | Calculation method. |                |

**Germ cell mutagenicity**

**Assessment/classification**

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

**Carcinogenicity**

**Assessment/classification**

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

**Reproductive toxicity**

**Assessment/classification**

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

**Overall Assessment on CMR properties**

The mixture is not classified as mutagen / not classified as carcinogen / not classified as reproductive toxicant.

**STOT-single exposure**

**STOT SE 1 and 2**

**Other information**

The mixture is not classified as specific target organ toxicant (single exposure).



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**Assessment/classification**

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

**STOT SE 3**

**Irritation to respiratory tract**

**Assessment/classification**

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

**Narcotic effects**

**Assessment/classification**

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

**STOT-repeated exposure**

**Other information**

The mixture is not classified as specific target organ toxicant (repeated exposure).

**Assessment/classification**

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

**Aspiration hazard**

**Remark**

The mixture is not classified as aspiration hazardous.  
Based on available data, the classification criteria are not met.

**11.2 Information on other hazards**

**Information on other hazards**

|                                 | Effective dose | Method,Evaluation | Source, Remark   |
|---------------------------------|----------------|-------------------|--|
| Endocrine disrupting properties |                |                   | This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria. |

**Other information**

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).  
Inhalation of spray may cause strong respiratory irritation and may cause damage to mucous membranes/lung.  
Aerosols of product effect toxic in case of inhaling (Acute Tox. 4 H332: Harmful if inhaled.).  
Causes severe burns.

**SECTION 12: Ecological information**

**12.1 Toxicity**

**Aquatic toxicity**

|                                  | Effective dose  | Method,Evaluation | Source, Remark |
|----------------------------------|---|-------------------|----------------|
| Acute (short-term) fish toxicity | LC50: 10- 15 mg/L   | calculated.       |                |
|                                  | CAS No27458-92-0<br>isotridecanol<br>LC50: 0.55 mg/L<br>Species Danio rerio<br>(zebrafish)<br>Test duration 96 h                        | OECD 203          |                |
|                                  | CAS No166736-08-9 C10-<br>fatty alcohol, alkoxylated<br>LC50: >10- 100 mg/L<br>Species Danio rerio<br>(zebrafish)<br>Test duration 96 h | OECD 203          |                |



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|  | Effective dose   | Method, Evaluation | Source, Remark |
|--|--|--------------------|----------------|
| Chronic (long-term) fish toxicity                      | CAS No69011-36-5<br>isotridecanol, ethoxylated<br>LC50: >1- 10 mg/L<br>Species Cyprinus carpio<br>(Common Carp)<br>Test duration 96 h      | OECD 203           |                |
|  | CAS No69011-36-5<br>isotridecanol, ethoxylated<br>NOEC 1.73 mg/L   | QSAR               |                |
| Acute (short-term) toxicity to crustacea               | EC50 9- 10 mg/L  | calculated.        |                |
| Chronic (long-term) toxicity to aquatic invertebrate   | CAS No27458-92-0<br>isotridecanol<br>EC50 0.391 mg/L<br>Species Daphnia magna<br>(Big water flea)<br>Test duration 48 h                    | OECD 202           |                |
|  | CAS No166736-08-9 C10-<br>fatty alcohol, alkoxyated<br>EC50 >1- 10 mg/L<br>Species Daphnia magna<br>(Big water flea)<br>Test duration 48 h | OECD 202           |                |
|  | CAS No69011-36-5<br>isotridecanol, ethoxylated<br>EC50 >1- 10 mg/L<br>Species Daphnia magna<br>(Big water flea)<br>Test duration 48 h      | OECD 202           |                |
|  | CAS No27458-92-0<br>isotridecanol<br>NOEC 0.0036 mg/L<br>Species Daphnia magna<br>(Big water flea)<br>Test duration 21 d                   | OECD 211           |                |
| Acute (short-term) toxicity to algae and cyanobacteria | CAS No69011-36-5<br>isotridecanol, ethoxylated<br>EC10 2.6 mg/L<br>Species Daphnia magna<br>(Big water flea)<br>Test duration 21 d         | OECD 211           |                |
|  | EC50 2.8 mg/L  | calculated.        |                |
|  | CAS No27458-92-0<br>isotridecanol<br>EC50 0.297 mg/L<br>Species Desmodesmus<br>subspicatus<br>Test duration 72 h                           | OECD 201           |                |
| Acute (short-term) toxicity to algae and cyanobacteria | CAS No166736-08-9 C10-<br>fatty alcohol, alkoxyated<br>EC50 >10- 100 mg/L<br>Species Scenedesmus<br>subspicatus<br>Test duration 72 h      |                    |                |
|  | CAS No69011-36-5<br>isotridecanol, ethoxylated<br>EC50 >1- 10 mg/L<br>Species Scenedesmus<br>subspicatus<br>Test duration 72 h             | OECD 201           |                |



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|   | Effective dose  | Method, Evaluation | Source, Remark |
|---|---|--------------------|----------------|
| Chronic (long-term) toxicity to aquatic algae and cyanobacteria | CAS No69011-36-5<br>isotridecanol, ethoxylated<br>EC10: >1- 10 mg/L<br>Species <i>Desmodesmus subspicatus</i><br>Test duration 72 h | OECD 201           |                |
| Toxicity to other aquatic plants/organisms                      | not determined  |                    |                |
| Toxicity to microorganisms                                      | not determined  |                    |                |

### Assessment/classification

Toxic to aquatic life.

### 12.2 Persistence and degradability

|                | Value  | Method                                     | Source, Remark   |
|----------------|--|--|--|
| Biodegradation | Degradation rate $\geq$ 70 %                     | calculated.                                | DOC reduction<br>Moderately/partially biodegradable.   |
| Biodegradation | Degradation rate 100 %                           | Neutralization, pH-measurement             | Alkaline properties can be eliminated up to 100% by neutralization.  |
| Biodegradation |  |  | CAS No1310-58-3<br>potassium hydroxide<br><br>Inorganic product which is not eliminable from water through biological cleaning processes.          |
| Biodegradation |  |  | CAS No7320-34-5<br>tetrapotassium pyrophosphate<br><br>Inorganic product which is not eliminable from water through biological cleaning processes. |
| Biodegradation | Degradation rate > 60 %<br>Test duration 28 d    | OECD 301B/ ISO 9439/<br>EEC 92/69/V, C.4-C | CAS No69011-36-5<br>isotridecanol, ethoxylated   |
| Biodegradation | Degradation rate > 60 %<br>Test duration 28 d    | OECD 301B/ ISO 9439/<br>EEC 92/69/V, C.4-C | CAS No166736-08-9 C10-<br>fatty alcohol, alkoxyated  |
| Biodegradation | Degradation rate 90- 100 %<br>Test duration 28 d | OECD 301F/ ISO 9408/<br>EEC 92/69/V, C.4-D | CAS No27458-92-0<br>isotridecanol  |

### 12.3 Bioaccumulative potential

#### Assessment/classification

isotridecanol, ethoxylated: Bioaccumulation is improbable.  
tetrapotassium pyrophosphate: Bioaccumulation is improbable.  
potassium hydroxide: Accumulation in organisms is not expected.  
C10- fatty alcohol, alkoxyated: Accumulation in organisms is not expected.  
isotridecanol: Has the potential to bioaccumulate (log Pow: 5.57).

### 12.4 Mobility in soil

#### Assessment/classification

isotridecanol, ethoxylated: Koc: >5000, strong adsorption on soil, immobile.  
potassium hydroxide: Dissolves in water. Highly mobile in soil.  
tetrapotassium pyrophosphate: moderately mobile in soil (Koc: ~150).  
C10- fatty alcohol, alkoxyated: Adsorption on soil is possible.  
isotridecanol: not available.



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**12.5 Results of PBT and vPvB assessment**

The product does not contain any PBT-/vPvB-substances according to the recipe.

**12.6 Endocrine disrupting properties**

|                                 | Effective dose | Method,Evaluation | Source, Remark   |
|---------------------------------|----------------|-------------------|--|
| Endocrine disrupting properties |                |                   | This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria. |

**12.7 Other adverse effects**

|                                  | Value | Method | Source, Remark  |
|----------------------------------|-------|--------|---|
| Ozone depletion potential (ODP): |       |        | Based on available data, the classification criteria are not met. |

**Additional ecotoxicological information**

|                              | Value           | Method      | Source, Remark   |
|------------------------------|-----------------|-------------|--|
| Chemical oxygen demand (COD) | 0.3- 0.35 gO2/g | calculated. |  |
| AOX                          |                 |             | The product does not contain any organically bound halogens according to the recipe. |

**Additional information**

The surfactants in our product meet the criteria for biodegradation as laid down in Annex III of the Regulation (EC) No 648/2004 on detergents.  
Acute aquatic environmental hazards: Aquatic Acute 2 H401: Toxic to aquatic life. After neutralization: Aquatic Acute 3 H402: Harmful to aquatic life.  
The mixture is not classified as chronic hazardous to the aquatic environment.  
Do not allow uncontrolled discharge of product into the environment.  
No further relevant informations available.

**\* SECTION 13: Disposal considerations**

**\* 13.1 Waste treatment methods**

**Waste codes/waste designations according to EWC/AVV**

| Waste code product | Waste name                                 |
|--------------------|--|
| 200129 *           | detergents containing hazardous substances |

| Waste code packaging | Waste name   |
|----------------------|--|
| 150110 *             | packaging containing residues of or contaminated by hazardous substances |

**\* Appropriate disposal / Product**

Do not dispose with household waste. Do not discharge into the drains.  
Dispose of waste according to applicable legislation.

**Appropriate disposal / Package**

Non-contaminated packages may be recycled.  
Handle contaminated packages in the same way as the substance itself.

**\* Other disposal recommendations**

Application solution / cleaning solution :  
Suitable for neutralization are acetic acid (60%, liquid) or citric acid (solid powder, crystallized) if a stainless steel bath is used.  
Product is allowed to discharge into sewage treatment plants, but in accordance with official regulations.



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**SECTION 14: Transport information**

|   | Land transport (ADR/RID)     | Sea transport (IMDG)         | Air transport (ICAO-TI / IATA-DGR) |
|---|------------------------------|------------------------------|------------------------------------|
| <b>14.1 UN number or ID number</b>                                  | UN 1814                      | UN 1814                      | UN 1814                            |
| <b>14.2 UN proper shipping name</b>                                 | POTASSIUM HYDROXIDE SOLUTION | POTASSIUM HYDROXIDE SOLUTION | Potassium hydroxide solution       |
| <b>14.3 Transport hazard class(es)</b>                              | 8                            | 8                            | 8                                  |
| <b>14.4 Packing group</b>   | II                           | II                           | II                                 |
| <b>14.5 Environmental hazards</b>                                   | No                           | No                           | No                                 |
| <b>14.6 Special precautions for user</b>                            | none                         |                              |                                    |
| <b>14.7 Maritime transport in bulk according to IMO instruments</b> | not relevant                 |                              |                                    |

**Land transport (ADR/RID)**

UN number or ID number UN 1814  
UN proper shipping name POTASSIUM HYDROXIDE SOLUTION  
Transport hazard class(es) 8  
Hazard label(s) 8  
Classification code C5  
Packing group II  
Environmental hazards No  
Limited quantity (LQ) 1 L  
Special provisions -  
Tunnel restriction code E

**Sea transport (IMDG)**

UN number or ID number UN 1814  
UN proper shipping name POTASSIUM HYDROXIDE SOLUTION  
Transport hazard class(es) 8  
Packing group II  
Environmental hazards No  
Limited quantity (LQ) 1 L  
Marine pollutant No  
EmS F-A, S-B

**Air transport (ICAO-TI / IATA-DGR)**

UN number or ID number UN 1814  
UN proper shipping name Potassium hydroxide solution  
Transport hazard class(es) 8  
Packing group II  
Environmental hazards No



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\* **SECTION 15: Regulatory information**

\* **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

\* **EU legislation**

**Authorisations**

not relevant

**Restrictions on use**

Regulation (EC) No 1907/2006 (REACH), Annex XVII No 3 - not relevant if used as directed.

Regulation (EC) No 1907/2006 (REACH), Annex XVII No 75 - not relevant if used as directed.

**Restrictions of occupation**

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

\* **Other regulations (EU)**

\* **To follow:**

Regulation (EC) No. 648/2004 (Detergents regulation)

Directive 2012/18/EU, Annex I: not mentioned.

**Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive] VOC**

VOC content, delivery state 0 %

**15.2 Chemical Safety Assessment**

**National regulations**

For this mixture a chemical safety assessment were not carried out.

**SECTION 16: Other information**

**Abbreviations and acronyms**

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

ASTM: American Society for Testing and Materials

ATE: Acute Toxicity Estimate

AVV: Waste Shipment Ordinance (DE)

DNEL: derived no-effect level

DOC: Dissolved Organic Carbon

DGR: Dangerous Goods Regulations (IATA)

EmS: emergency procedures

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization

JArbSchG: Youth Labor Protection Act (DE)

OECD: Organisation for Economic Cooperation and Development

PBT: persistent and bioaccumulative and toxic

PNEC: Predicted No Effect Concentration

RID: Dangerous goods regulations for transport by rail

SCL: Specific concentration limit

TRGS: Technical Rules for Hazardous Substances

TI: Technical Instruction

VOC: Volatile organic compounds

vPvB: very persistent, very bioaccumulative

**Key literature references and sources for data**

Own measurements.

European Chemicals Agency, <http://echa.europa.eu/>.

Informations from our suppliers.

**Additional information**

National and local regulations concerning chemicals shall be observed.

These data are given according to our actual knowledge about this product. This data sheet does not correspond to an assurance by virtue of a contract for properties of the product.



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**Relevant H- and EUH-phrases (Number and full text)**

H290 May be corrosive to metals.  
H301 Toxic if swallowed.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

**Indication of changes**

\* Data changed compared with the previous version