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

*
1.1. Product identifier
Trade name/designation:

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*
1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture:
Washing and cleaning products

Relevant identified uses:

	Life cycle stage [LCS]
PW:	Widespread use by professional workers

1.3. Details of the supplier of the safety data sheet
Supplier (manufacturer/importer/only representative/downstream user/distributor):

etol Eberhard Tripp GmbH
Labor
Allerheiligenstr. 12
77728 Oppenau
Germany
Telephone: +49(0)7804/41-0
Telefax: +49(0)7804/41-168
E-mail: info@etol.de
Website: www.etol.de
E-mail (competent person): wolfgang.gauss@etol.de

1.4. Emergency telephone number
Wolfgang Gauss, +49(0)7804/41-167 (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008 [CLP]-:

Hazard classes and hazard categories	Hazard statements	Classification procedure
Corrosive to metals *(Met. Corr. 1)*	H290: May be corrosive to metals.	On basis of test data.
Skin corrosion/irritation *(Skin Corr. 1)*	H314: Causes severe skin burns and eye damage.	Calculation method.
Serious eye damage/eye irritation *(Eye Dam. 1)*	H318: Causes serious eye damage.	Calculation method.
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	Calculation method.

*
2.2. Label elements
Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:

GHS05
Corrosion

Signal word: Danger

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Hazard components for labelling:
potassium hydroxide; sodium hypochlorite solution

Hazard statements for physical hazards	
H290	May be corrosive to metals.

hazard statements for health hazards	
H314	Causes severe skin burns and eye damage.

Hazard statements for environmental hazards	
H412	Harmful to aquatic life with long lasting effects.

Supplemental hazard information	
EUH031	Contact with acids liberates toxic gas.

Precautionary statements Prevention	
P280	Wear protective gloves/protective clothing and eye/face protection.

Precautionary statements Response	
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
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 POISON CENTER/doctor/....

2.3. Other hazards
No data available

SECTION 3: Composition / information on ingredients

3.2. Mixtures
Hazardous ingredients / Hazardous impurities / Stabilisers:

product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concen-tration
CAS No.: 1310-58-3 **EC No.:** 215-181-3 **Index No.:** 019-002-00-8 **REACH No.:** 01-2119487136-33	**potassium hydroxide** Acute Tox. 4, Skin Corr. 1A  **Danger** H302-H314	5 – 25 weight-%
CAS No.: 7681-52-9 **EC No.:** 231-668-3 **REACH No.:** 01-2119488154-34	**sodium hypochlorite solution** Aquatic Acute 1, Aquatic Chronic 1, Eye Dam. 1, Skin Corr. 1B  **Danger** H314-H410-EUH031 M-factor (acute): 10 M-factor (chronic): 1	0 – 2 weight-%

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures
General information:
In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Remove victim out of the danger area. Remove contaminated, saturated clothing. If unconscious but breathing normally, place in recovery position and seek medical advice. Do not leave affected person unattended. Warning First aider: Pay attention to self-protection!

Following inhalation:
Provide fresh air. In case of respiratory tract irritation, consult a physician.

In case of skin contact:
After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing. Get immediate medical advice/attention. If skin irritation or rash occurs: Get medical advice/attention.

After eye contact:
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

Following ingestion:
Rinse mouth. Let water be drunken in little sips (dilution effect). Get medical advice/attention if you feel unwell. Rinse mouth immediately and drink plenty of water-. Do NOT induce vomiting. Get immediate medical advice/attention.

Self-protection of the first aider:
Use personal protection equipment.

4.2. Most important symptoms and effects, both acute and delayed
Skin corrosion/irritation Serious eye damage/eye irritation

4.3. Indication of any immediate medical attention and special treatment needed
Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media:
Co-ordinate fire-fighting measures to the fire surroundings.
Water
Extinguishing powder
Carbon dioxide (CO_2)

Unsuitable extinguishing media:
Strong water jet

5.2. Special hazards arising from the substance or mixture
The product itself does not burn.

Hazardous combustion products:
In case of fire: Chlorine (Cl_2)

5.3. Advice for firefighters
Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water-.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Personal precautions:
Remove persons to safety.

Protective equipment:
Wear protective gloves/protective clothing/eye protection/face protection.

6.1.2. For emergency responders
Personal protection equipment:
Personal protection equipment: see section 8

6.2. Environmental precautions
Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up
For containment:
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up:
Water

6.4. Reference to other sections
Safe handling: see section 7 Personal protection equipment: see section 8 Disposal: see section 13

6.5. Additional information
Use appropriate container to avoid environmental contamination.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:
Wear personal protection equipment (refer to section 8).

Fire prevent measures:
No special measures are necessary.

Advices on general occupational hygiene
When using do not eat, drink or smoke. Avoid contact with eyes and skin.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:
Keep container tightly closed in a cool, well-ventilated place.
Protect from sunlight.

Requirements for storage rooms and vessels:
Keep/Store only in original container.
Container should not be closed gas-tight.

Storage class: 8B – Non-combustible corrosive substances

7.3. Specific end use(s)
No data available

SECTION 8: Exposure controls/personal protection

*

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
TRGS 900 (DE)	Hydrocarbons, TRGS 900	① 0 mg/m³ ⑤ Mass fraction (wt %): 0

8.1.2. Biological limit values
No data available

8.1.3. DNEL-/PNEC-values

Substance name	DNEL value	① DNEL type ② Exposure route
potassium hydroxide CAS No.: 1310-58-3 EC No.: 215-181-3	1 mg/m³	① DNEL worker ② Long-term – inhalation, local effects
sodium hypochlorite solution CAS No.: 7681-52-9 EC No.: 231-668-3	1.55 mg/m³	① DNEL worker ② Long-term – inhalation, systemic effects
sodium hypochlorite solution CAS No.: 7681-52-9 EC No.: 231-668-3	3.1 mg/m³	① DNEL worker ② Acute - inhalation, systemic effects
sodium hypochlorite solution CAS No.: 7681-52-9 EC No.: 231-668-3	1.55 mg/m³	① DNEL worker ② Long-term – inhalation, local effects
sodium hypochlorite solution CAS No.: 7681-52-9 EC No.: 231-668-3	3.1 mg/m³	① DNEL worker ② Acute - inhalation, local effects

Substance name	PNEC Value	① PNEC type
sodium hypochlorite solution CAS No.: 7681-52-9 EC No.: 231-668-3	0.21 µg/l	① PNEC aquatic, freshwater
sodium hypochlorite solution CAS No.: 7681-52-9 EC No.: 231-668-3	0.042 µg/l	① PNEC aquatic, marine water
sodium hypochlorite solution CAS No.: 7681-52-9 EC No.: 231-668-3	0.03 mg/l	① PNEC sewage treatment plant
sodium hypochlorite solution CAS No.: 7681-52-9 EC No.: 231-668-3	11.1 mg/kg	① PNEC secondary poisoning

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No data available

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection DIN EN 166

Skin protection:

Tested protective gloves must be worn EN ISO 374 Suitable material: NBR (Nitrile rubber) >0,2mm Breakthrough time: 480min In the case of wanting to use the gloves again, clean them before taking off and air them well. Breakthrough times and swelling properties of the material must be taken into consideration.

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid
Colour: light yellow
Odour: Chlorine

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Safety relevant basis data

parameter		at °C	Method	Remark
pH	14	20 °C		
Melting point	*not determined*			
Freezing point	*not determined*			
Initial boiling point and boiling range	> 90 °C			
Decomposition temperature	*not determined*			
Flash point	*not applicable*			
Evaporation rate	*not determined*			
Auto-ignition temperature	*not determined*			
Upper/lower flammability or explosive limits	*not determined*			
Vapour pressure	*not determined*			
Vapour density	*not determined*			
Density	≈ 1.4 g/cm³	20 °C		
Bulk density	*not determined*			
Water solubility	completely miscible	20 °C		
Partition coefficient: n-octanol/ water	*not determined*			
Dynamic viscosity	*not determined*			
Kinematic viscosity	*not determined*	40 °C		

9.2. Other information
No data available

SECTION 10: Stability and reactivity

10.1. Reactivity
May be corrosive to metals. The product itself does not burn.

10.2. Chemical stability
Contact with acids liberates toxic gas.

* **10.3. Possibility of hazardous reactions**
Exothermic reaction with: Acids

10.4. Conditions to avoid
Protect from sunlight.

* **10.5. Incompatible materials**
Slowly corrodes aluminium and zink under hydrogen evolution.

10.6. Hazardous decomposition products
In case of fire: Chlorine

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Substance name	Toxicological information
potassium hydroxide CAS No.: 1310-58-3 EC No.: 215-181-3	**LD_{50} oral:** =273 mg/kg (Rat)
sodium hypochlorite solution CAS No.: 7681-52-9 EC No.: 231-668-3	**LD_{50} oral:** =1,100 mg/kg (Rat) **LD_{50} dermal:** >20,000 mg/kg (Rabbit) **LC_{50} Acute inhalation toxicity (vapour):** >10.5 mg/l (Rabbit)

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Acute oral toxicity:
Based on available data, the classification criteria are not met.

Acute dermal toxicity:
Based on available data, the classification criteria are not met.

Acute inhalation toxicity:
Based on available data, the classification criteria are not met.

Skin corrosion/irritation:
Causes severe burns.

Serious eye damage/irritation:
Causes serious eye damage.

Respiratory or skin sensitisation:
Based on available data, the classification criteria are not met.

Germ cell mutagenicity:
Based on available data, the classification criteria are not met.

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

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

STOT-single exposure:
Based on available data, the classification criteria are not met.

STOT-repeated exposure:
Based on available data, the classification criteria are not met.

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

Additional information:
No data available

SECTION 12: Ecological information

12.1. Toxicity

Substance name	Toxicological information
potassium hydroxide CAS No.: 1310-58-3 EC No.: 215-181-3	**LC_{50}:** =80 mg/l 4 d (fish-, Gambusia affinis (Mosquito fish-)) **NOEC:** =56 mg/l 4 d (fish-, Gambusia affinis (Mosquito fish-))
sodium hypochlorite solution CAS No.: 7681-52-9 EC No.: 231-668-3	**LC_{50}:** =0.06 mg/l 4 d (fish-) **NOEC:** =0.04 mg/l 12 d (fish-)

Aquatic toxicity:
Harmful to aquatic life with long lasting effects.

12.2. Persistence and degradability

Substance name	Biodegradation	Remark
potassium hydroxide CAS No.: 1310-58-3 EC No.: 215-181-3	not applicable	
sodium hypochlorite solution CAS No.: 7681-52-9 EC No.: 231-668-3	not applicable	

12.3. Bioaccumulative potential

Substance name	Log K_{OW}	Bioconcentration factor (BCF)
potassium hydroxide CAS No.: 1310-58-3 EC No.: 215-181-3	-3.88	
sodium hypochlorite solution CAS No.: 7681-52-9	-3.42	

Substance name	Log K_{OW}	Bioconcentration factor (BCF)
EC No.: 231-668-3		

12.4. Mobility in soil
No data available

12.5. Results of PBT and vPvB assessment

Substance name	Results of PBT and vPvB assessment
potassium hydroxide CAS No.: 1310-58-3 EC No.: 215-181-3	The substance in the mixture does not meet the PBT/ vPvB criteria according to REACH, annex XIII.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

13.1.1. Product/Packaging disposal
Waste codes/waste designations according to EWC/AVV

Waste code product:

20 01 29 *	Detergents containing hazardous substances

*: Evidence for disposal must be provided.

Waste code packaging:

15 01 10 *	packaging containing residues of or contaminated by dangerous substances

*: Evidence for disposal must be provided.

Waste treatment options
Appropriate disposal / Product:
Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:
Completely emptied packages can be recycled.

SECTION 14: Transport information

Land transport (ADR/ RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN-No.			
UN 3266	UN 3266	UN 3266	UN 3266
14.2. UN proper shipping name			
CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (POTASSIUM HYDROXIDE SOLUTION-, HYPOCHLORITE SOLUTION-)	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (POTASSIUM HYDROXIDE SOLUTION-, HYPOCHLORITE SOLUTION-)	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (POTASSIUM HYDROXIDE SOLUTION-, HYPOCHLORITE SOLUTION-)	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (POTASSIUM HYDROXIDE SOLUTION-, HYPOCHLORITE SOLUTION-)
14.3. Transport hazard class(es)			
 8	 8	 8	 8

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Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.4. Packing group			
II	II	II	II
14.5. Environmental hazards			
No	No	No	No
* **14.6. Special precautions for user**			
Special provisions: 274 **Limited quantity (LQ):** 1L **Excepted Quantities (EQ):** E2 **Hazard identification number (Kemler No.):** 80 **Classification code-:** C5 **tunnel restriction code-:** (E) **Remark:**	**Special provisions:** 274 **Limited quantity (LQ):** 1L **Excepted Quantities (EQ):** E2 **Classification code-:** C5 **Remark:**	**Special provisions:** 274 **Limited quantity (LQ):** 1L **Excepted Quantities (EQ):** E2 **EmS-No.:** F-A, S-B **Remark:**	**Special provisions:** **Excepted Quantities (EQ):** **Remark:**

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Other regulations (EU):

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]: This product is not assigned to a hazard category.
Volatile organic compounds (VOC) content in percent by weight: 0%
Regulation (EC) No. 648/2004 (Detergents regulation)
15-30% phosphates
<5% chlorine-based bleaching agents

15.1.2. National regulations

[DE] National regulations

Störfallverordnung

for substances contained in the product:

This product is not assigned to a hazard category.

Named dangerous substances:
• Mixtures of sodium hypochlorite, aquatic acute 1 and < 5% active chlorine

Water hazard class

WGK:

2 - deutlich wassergefährdend

15.2. Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

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SECTION 16: Other information

16.1. Indication of changes

1.1.	Product identifier
1.2.	Relevant identified uses of the substance or mixture and uses advised against
2.2.	Label elements
8.1.	Control parameters
10.3.	Possibility of hazardous reactions
10.5.	Incompatible materials
14.6.	Special precautions for user
15.1.	Safety, health and environmental regulations/legislation specific for the substance or mixture

16.2. Abbreviations and acronyms

No data available

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

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

Hazard classes and hazard categories	Hazard statements	Classification procedure
Corrosive to metals *(Met. Corr. 1)*	H290: May be corrosive to metals.	On basis of test data.
Skin corrosion/irritation *(Skin Corr. 1)*	H314: Causes severe skin burns and eye damage.	Calculation method.
Serious eye damage/eye irritation *(Eye Dam. 1)*	H318: Causes serious eye damage.	Calculation method.
Hazardous to the aquatic environment *(Aquatic Chronic 3)*	H412: Harmful to aquatic life with long lasting effects.	Calculation method.

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements	
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H410	Very toxic to aquatic life with long lasting effects.

Supplemental hazard information	
EUH031	Contact with acids liberates toxic gas.

16.6. Training advice

No data available

16.7. Additional information

No data available

* Data changed compared with the previous version