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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

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

MEIKO Maschinenbau GmbH&Co.KG
Englerstrasse 3
77652 Offenburg
Germany
Telephone: +49(0)781/203-0
E-mail: meikolon@meiko.de
Website: www.meiko.de

1.4. Emergency telephone number

Vergiftungs-Informations-Zentrale Freiburg, 24h: +49(0)76119240

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.	
Skin corrosion/irritation *(Skin Corr. 1A)*	H314: Causes severe skin burns and eye damage.	
Serious eye damage/eye irritation *(Eye Dam. 1)*	H318: Causes serious eye damage.	

2.2. Label elements

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

Hazard pictograms:

GHS05
Corrosion

Signal word: Danger

Hazard components for labelling:
potassium hydroxide

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

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

Supplemental Hazard information (EU): -

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Precautionary statements Prevention	
P280	Wear protective gloves/protective clothing/eye protection/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 – 20 Wt %

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 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.

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.

After 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

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

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Co-ordinate fire-fighting measures to the fire surroundings.
Water
Carbon dioxide (CO2)
Extinguishing powder

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:

Carbon monoxide
Carbon dioxide (CO2)

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 (e.g. 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.

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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.

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
WEL (GB)	potassium hydroxide CAS No.: 1310-58-3	② 2 mg/m³

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	1 mg/m³	① DNEL worker ② inhalative, long-term, local
silicid acid, sodiumsalt CAS No.: 1344-09-8	5.61 mg/m³	① DNEL worker ② inhalative, long-term, systemic

Substance name	PNEC Value	① PNEC type
silicid acid, sodiumsalt CAS No.: 1344-09-8	7.5 mg/l	① PNEC aquatic, freshwater

* ### 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 (maximum wearing time) 480min In the case of wanting to use the gloves again, clean them before taking off and air them well.

8.2.3. Environmental exposure controls
No data available

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid
Colour: colourless
Odour: odourless

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 applicable*			
Vapour pressure	*not determined*			
Vapour density	*not determined*			
Density	≈ 1.2 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

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

* **10.4. Conditions to avoid**

Slowly corrodes aluminium and zink under hydrogen evolution.

* **10.5. Incompatible materials**

Exothermic reaction with: Acid

10.6. Hazardous decomposition products

Thermal decomposition can lead to the escape of irritating gases and vapours. In case of fire:

SECTION 11: Toxicological information

* **11.1. Information on toxicological effects**

CAS No.	Substance name	Toxicological information
1310-58-3	potassium hydroxide	**LD_{50} oral:** =273 mg/kg (Rat)

Acute oral toxicity:
The classification criteria for this hazard class are not met by definition.

Acute dermal toxicity:
The classification criteria for this hazard class are not met by definition.

Acute inhalation toxicity:
The classification criteria for this hazard class are not met by definition.

Skin corrosion/irritation:
Causes severe burns.

Serious eye damage/irritation:
Causes serious eye damage.

Respiratory or skin sensitisation:
The classification criteria for this hazard class are not met by definition.

Germ cell mutagenicity:
The classification criteria for this hazard class are not met by definition.

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

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

STOT-single exposure:
The classification criteria for this hazard class are not met by definition.

STOT-repeated exposure:
The classification criteria for this hazard class are not met by definition.

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

Additional information:
No data available

SECTION 12: Ecological information

12.1. Toxicity

CAS No.	Substance name	Toxicological information
1310-58-3	potassium hydroxide	**LC_{50}:** =80 mg/l 4 d (fish-, Gambusia affinis (Mosquito fish-)) **NOEC:** =56 mg/l 4 d (fish-, Gambusia affinis (Mosquito fish-))

12.2. Persistence and degradability

CAS No.	Substance name	Biodegradation	Remark
1310-58-3	potassium hydroxide	not applicable	

12.3. Bioaccumulative potential

CAS No.	Substance name	Log K_{OW}	Bioconcentration factor (BCF)
1310-58-3	potassium hydroxide	-3.88	

12.4. Mobility in soil
No data available

12.5. Results of PBT and vPvB assessment
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

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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:

Dispose of waste according to applicable legislation. 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 1814	UN 1814	UN 1814	UN 1814
14.2. UN proper shipping name			
POTASSIUM HYDROXIDE SOLUTION	POTASSIUM HYDROXIDE SOLUTION	POTASSIUM HYDROXIDE SOLUTION	POTASSIUM HYDROXIDE SOLUTION
14.3. Transport hazard class(es)			
 8	 8	 8	 8
14.4. Packing group			
II	II	II	II
14.5. Environmental hazards			
No	No	No	No
14.6. Special precautions for user			
Special provisions: **Excepted Quantities (EQ):** **Hazard identification number (Kemler No.):** **Classification code-:** - **tunnel restriction code-:** (E) **Remark:**	**Special provisions:** **Excepted Quantities (EQ):** **Classification code-:** - **Remark:**	**Special provisions:** **Excepted Quantities (EQ):** **EmS-No.:** **Remark:**	**Special provisions:** **Excepted Quantities (EQ):** **Remark:**

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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):

Volatile organic compounds (VOC) content in percent by weight: 0%

Regulation (EC) No. 648/2004 (Detergents regulation)
5-15% phosphates
<5% phosphonates

15.1.2. National regulations

No data available

15.2. Chemical Safety Assessment

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

SECTION 16: Other information

16.1. Indication of changes

2.1.	Classification of the substance or mixture
4.1.	Description of first aid measures
8.1.	Control parameters
8.2.	Exposure controls
10.4.	Conditions to avoid
10.5.	Incompatible materials
11.1.	Information on toxicological effects

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.	
Skin corrosion/irritation *(Skin Corr. 1A)*	H314: Causes severe skin burns and eye damage.	
Serious eye damage/eye irritation *(Eye Dam. 1)*	H318: Causes serious eye damage.	

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.

16.6. Training advice

No data available

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16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

* Data changed compared with the previous version