SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006 (REACH)
Revision date: 03-Jul-2019
Print date: 07-Jan-2020
Version: 7
Page 1/9

MEIKOLON FR 85

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

1.1. Product identifier
Trade name/designation: MEIKOLON FR 85
Additional information: Restricted to professional users.

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]-:

<table>
<thead>
<tr>
<th>Hazard classes and hazard categories</th>
<th>Hazard statements</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrosive to metals (Met. Corr. 1)</td>
<td>H290: May be corrosive to metals.</td>
<td></td>
</tr>
<tr>
<td>Skin corrosion/irritation (Skin Corr. 1A)</td>
<td>H314: Causes severe skin burns and eye damage.</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/eye irritation (Eye Dam. 1)</td>
<td>H318: Causes serious eye damage.</td>
<td></td>
</tr>
</tbody>
</table>

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

GHS05
Corrosion

Signal word: Danger

Hazard components for labelling:
sodium 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):

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:

<table>
<thead>
<tr>
<th>product identifiers</th>
<th>Substance name Classification according to Regulation (EC) No 1272/2008 (CLP)</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS No.: 1310-73-2</td>
<td>sodium hydroxide Skin Corr. 1A Danger H314</td>
<td>1 – 5 Wt %</td>
</tr>
<tr>
<td>EC No.: 215-185-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INDEX No.: 011-002-00-6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REACH No.: 01-2119457892-27-0035</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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. 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.

   After ingestion:
   Rinse mouth. Let water be drunken in little sips (dilution effect). 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
MEIKOLON FR 85

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
- 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.

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
Advises on safe handling:
- Wear personal protection equipment (refer to section 8).
MEIKOLON FR 85

Advises 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.

Packaging materials:
Keep/Store only in original container.

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

<table>
<thead>
<tr>
<th>Limit value</th>
<th>Substance name</th>
<th>① long-term occupational exposure limit value</th>
<th>② short-term occupational exposure limit value</th>
<th>③ Instantaneous value</th>
<th>④ Monitoring and observation processes</th>
<th>⑤ Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>WEL (GB)</td>
<td>sodium hydroxide CAS No.: 1310-73-2</td>
<td>2 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEL (GB)</td>
<td>potassium hydroxide CAS No.: 1310-58-3</td>
<td>2 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.1.2. Biological limit values
No data available

8.1.3. DNEL-/PNEC-values

<table>
<thead>
<tr>
<th>Substance name</th>
<th>DNEL value</th>
<th>① DNEL type</th>
<th>② Exposure route</th>
</tr>
</thead>
<tbody>
<tr>
<td>silicid acid, sodiumsalt CAS No.: 1344-09-8</td>
<td>5.61 mg/m³</td>
<td>① DNEL worker</td>
<td>② inhalative, long-term, systemic</td>
</tr>
<tr>
<td>sodium hydroxide CAS No.: 1310-73-2</td>
<td>1 mg/m³</td>
<td>① DNEL worker</td>
<td>② inhalative, long-term, local</td>
</tr>
<tr>
<td>potassium hydroxide CAS No.: 1310-58-3</td>
<td>1 mg/m³</td>
<td>① DNEL worker</td>
<td>② inhalative, long-term, local</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Substance name</th>
<th>PNEC Value</th>
<th>① PNEC type</th>
</tr>
</thead>
<tbody>
<tr>
<td>silicid acid, sodiumsalt CAS No.: 1344-09-8</td>
<td>7.5 mg/l</td>
<td>① PNEC aquatic, freshwater</td>
</tr>
</tbody>
</table>

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
MEIKOLON FR 85

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance</th>
<th>Physical state: Liquid</th>
<th>Colour: colourless</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour</td>
<td>odourless</td>
<td></td>
</tr>
</tbody>
</table>

Safety relevant basis data

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

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 zinc 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.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Substance name</th>
<th>Toxicological information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1310-73-2</td>
<td>sodium hydroxide</td>
<td>LC$_{50}$: &gt;133 - &lt;189 mg/l 2 d (fish-, Leuciscus idus (golden orfe))</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EC$_{50}$: &gt;100 mg/l 2 d (crustaceans, Daphnia magna (Big water flea))</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
No data available

12.3. Bioaccumulative potential

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Substance name</th>
<th>Log $K_{OW}$</th>
<th>Bioconcentration factor (BCF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1310-73-2</td>
<td>sodium hydroxide</td>
<td>-3.88</td>
<td></td>
</tr>
</tbody>
</table>

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.
MEIKOLON FR 85

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:

<table>
<thead>
<tr>
<th>Waste code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 01 29 *</td>
<td>Detergents containing hazardous substances</td>
</tr>
</tbody>
</table>

*: Evidence for disposal must be provided.

Waste code packaging:

<table>
<thead>
<tr>
<th>Waste code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 01 10 *</td>
<td>Packaging containing residues of or contaminated by dangerous substances</td>
</tr>
</tbody>
</table>

*: 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

<table>
<thead>
<tr>
<th>Land transport (ADR/RID)</th>
<th>Inland waterway craft (ADN)</th>
<th>Sea transport (IMDG)</th>
<th>Air transport (ICAO-TI / IATA-DGR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>UN 1824</td>
<td>UN 1824</td>
<td>UN 1824</td>
</tr>
</tbody>
</table>

14.1. UN-No.

14.2. UN proper shipping name

SODIUM HYDROXIDE SOLUTION

14.3. Transport hazard class(es)

<table>
<thead>
<tr>
<th>Class</th>
<th>Land transport (ADR/RID)</th>
<th>Inland waterway craft (ADN)</th>
<th>Sea transport (IMDG)</th>
<th>Air transport (ICAO-TI / IATA-DGR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14.4. Packing group

<table>
<thead>
<tr>
<th>Packing group</th>
<th>Land transport (ADR/RID)</th>
<th>Inland waterway craft (ADN)</th>
<th>Sea transport (IMDG)</th>
<th>Air transport (ICAO-TI / IATA-DGR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

14.5. Environmental hazards

<table>
<thead>
<tr>
<th>Environmental hazards</th>
<th>Land transport (ADR/RID)</th>
<th>Inland waterway craft (ADN)</th>
<th>Sea transport (IMDG)</th>
<th>Air transport (ICAO-TI / IATA-DGR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006 (REACH)
Revision date: 03-Jul-2019
Print date: 07-Jan-2020
Version: 7
Page 8/9

MEIKOLON FR 85

<table>
<thead>
<tr>
<th>Land transport (ADR/RID)</th>
<th>Inland waterway craft (ADN)</th>
<th>Sea transport (IMDG)</th>
<th>Air transport (ICAO-TI / IATA-DGR)</th>
</tr>
</thead>
</table>

14.6. Special precautions for user
Special provisions: Excepted Quantities (EQ): Hazard identification number (Kemler No.): Classification code#: tunnel restriction code#: (E) 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)
15-30% phosphates

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

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]:

<table>
<thead>
<tr>
<th>Hazard classes and hazard categories</th>
<th>Hazard statements</th>
<th>Classification procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrosive to metals (\text{Met. Corr. 1})</td>
<td>H290: May be corrosive to metals.</td>
<td></td>
</tr>
<tr>
<td>Skin corrosion/irritation (\text{Skin Corr. 1A})</td>
<td>H314: Causes severe skin burns and eye damage.</td>
<td></td>
</tr>
<tr>
<td>Serious eye damage/eye irritation (\text{Eye Dam. 1})</td>
<td>H318: Causes serious eye damage.</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Hazard statements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
</tbody>
</table>

16.6. Training advice
No data available

16.7. Additional information
No data available

* Data changed compared with the previous version