

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 26.07.2012

Version number 5

Revision: 26.07.2012

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

- **1.1 Product identifier**
- **Trade name:** **RM 31 ASF**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
 - SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
 - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
- **Process category**
 - PROC7 Industrial spraying
 - PROC11 Non industrial spraying
- **Environmental release category**
 - ERC8d Wide dispersive outdoor use of processing aids in open systems
 - ERC8a Wide dispersive indoor use of processing aids in open systems
- **Application of the substance / the preparation**
 - High pressure cleaner
 - Detergent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**

 - Alfred Kärcher GmbH & Co. KG
 - Alfred-Kärcher-Str. 28-40
 - D - 71364 Winnenden

 - Postfach 160
 - D - 71349 Winnenden

 - Tel.: +49-7195-14-0
 - Fax : +49-7195-14-2212

 - Internet: www.karcher.com
- **Further information obtainable from:**
 - Department PDE-D
 - Tel.: +49-7195-14-2398
 - Fax : +49-7195-14-3164
 - safetydata@karcher.com
- **1.4 Emergency telephone number:** Tel.: 0049 30 30686 790 Giftnotruf Berlin

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 - C; Corrosive
 - R35: Causes severe burns.
- **Information concerning particular hazards for human and environment:**
 - The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
 - The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

- **2.2 Label elements**
- **Labelling according to EU guidelines:**
 - The product has been marked in accordance with EU Directives / respective national laws.

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· **Code letter and hazard designation of product:**



C Corrosive

· **Hazard-determining components of labelling:**

sodium hydroxide

· **Risk phrases:**

35 Causes severe burns.

· **Safety phrases:**

1/2 Keep locked up and out of the reach of children.

23 Do not breathe vapour/spray.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

28 After contact with skin, wash immediately with plenty of water.

36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

51 Use only in well-ventilated areas.

60 This material and its container must be disposed of as hazardous waste.

· **2.3 Other hazards**

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients





· **3.2 Chemical characterization: Mixtures**

· **Description:**

Cleaning agent

Mixture of substances listed below with non-hazardous additions.

· **Dangerous components:**

CAS: 1310-73-2	sodium hydroxide	 C R35	9,0%
EINECS: 215-185-5		 Skin Corr. IA, H314	
CAS: 68891-38-3	sodium lauryl ether sulfate	 Xi R36/38	2,0%
		 Skin Irrit. 2, H315; Eye Irrit. 2, H319	

· **Regulation (EC) No 648/2004 on detergents / Labelling for contents**

anionic surfactants	< 5%
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· **Additional information** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information**

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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

· **After inhalation**

In case of unconsciousness place patient stably in side position for transportation.

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- Supply fresh air; consult doctor in case of complaints.
- **After skin contact**
Seek medical treatment.
Immediately wash with water and soap and rinse thoroughly.
Immediately rinse with water.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing**
Drink plenty of water and provide fresh air. Call for a doctor immediately.
If symptoms persist consult doctor.
Rinse out mouth and then drink plenty of water.
- **4.2 Most important symptoms and effects, both acute and delayed** Corneal damage
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with full jet.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear fully protective suit.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
Do not allow to penetrate the ground/soil.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Store only in the original receptacle.

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- Unsuitable material for receptacle: aluminium.
- Unsuitable material for receptacle: glass or ceramic.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store under lock and key and out of the reach of children.
Keep receptacle tightly sealed.
- **Storage class VCI-storage class:** 8B - not flammable corrosive substances
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the eyes and skin.
- **Respiratory protection:**
Use suitable respiratory protective device only when aerosol or mist is formed.
Short term filter device:
Filter A/P2.
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Not necessary if room is well-ventilated.
- **Protection of hands:**



Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact gloves made of the following materials are suitable:**
 - * butyl rubber 0,7 mm, 480 min
- **As protection from splashes gloves made of the following materials are suitable:**
 - * nitril rubber 0,4 mm, 30 min

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· **Eye protection:**

Tightly sealed goggles.

· **Body protection:**Alkaline resistant protective clothing
Boots

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· Form:	Fluid
· Colour:	Yellow
· Odour:	Characteristic
· Odour threshold:	Not determined.

· pH-value at 20°C:	13,5
· pH-value 1 %:	12,5

· **Change in condition**

· Melting point/Melting range:	-10 °C
· Boiling point/Boiling range:	undetermined

· **Flash point:** Not applicable· **Flammability (solid, gaseous)** Not applicable.· **Ignition temperature:**· **Decomposition temperature:** Not determined.· **Self-igniting:** Product is not selfigniting.· **Danger of explosion:** Product does not present an explosion hazard.· **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

· **Vapour pressure:** Not determined.

· Density at 20°C:	1,14 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· **Solubility in / Miscibility with**· **Water:** Fully miscible· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**

· dynamic at 20°C:	5 mPas
· kinematic:	Not determined.

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· Solvent content:	
Organic solvents:	0,0 %
Water:	82,6 %
VOC (EC)	0,00 %
Solids content: 17,4 %	
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** corresponds to 10.3
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Reacts with strong acids
Reacts with light alloys to form hydrogen
Corrodes aluminium
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Not compatible with alkali-sensitive substances like Sn, Zn, Al and paintings.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values relevant for classification:		
1310-73-2 sodium hydroxide		
Oral	LD50	2000 mg/kg (Rat)

- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
Corrosive
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** Not applicable
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **CSB-value:** 115.000 mg/l

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· General notes:

The product does not contain organically bounded halogens (AOX-free).

The contained organic complexing agents reach a DOC-elimination grade of 80% (corresponding to No. 406 of Annex "Analytic and measuring methods") and with this meet the tightened demands of Annex 49 of the revised Direction on liquid waste.

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralized.

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably reduced, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

· 12.5 Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· 13.1 Waste treatment methods**· Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Must be specially treated adhering to official regulations.

· European waste catalogue

06 02 04*	sodium and potassium hydroxide
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· Uncleaned packaging:**· Recommendation:**

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

Non contaminated packagings may be recycled.

· **Recommended cleansing agents:** Water, if necessary together with cleaning agents.

SECTION 14: Transport information

· 14.1 UN-Number

· **ADR, IMDG, IATA**

UN1824

· 14.2 UN proper shipping name

· **ADR**

1824 SODIUM HYDROXIDE SOLUTION, mixture

· **IMDG, IATA**

SODIUM HYDROXIDE SOLUTION, mixture

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· 14.3 Transport hazard class(es)

· ADR



- Class 8 (C5) Corrosive substances.
- Label 8

· IMDG, IATA



- Class 8 Corrosive substances.
- Label 8

· 14.4 Packing group

- ADR, IMDG, IATA II

· 14.5 Environmental hazards:

- Marine pollutant: No

· 14.6 Special precautions for user

- Warning: Corrosive substances.
- Danger code (Kemler): 80
- EMS Number: F-A,S-B
- Segregation groups Alkalis

· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

· Transport/Additional information:

- ADR
- Tunnel restriction code E

* **SECTION 15: Regulatory information**

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- National regulations
- Information about limitation of use: Employment restrictions concerning juveniles must be observed.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

* **SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
A product information sheet can be provided if requested.

· Relevant phrases

- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.

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R35 Causes severe burns.
R36/38 Irritating to eyes and skin.

· **Department issuing MSDS: PDE-D**

· **Contact:**

Brigitte Kuehner

Frank Ritscher

· *** Data compared to the previous version altered.**

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