

Safety Data Sheet


according to 1907/2006/EC, Article 31

Printing date 02.02.2010

Revision: 04.11.2009

1 Identification of substance:

- **Product details:**
- **Trade name:** RATIONAL Grillreiniger für RATIONAL-CleanJet® und Handreinigung
- **Application of the substance / the preparation:** Alkaline cleaner / detergent
- **Manufacturer / Supplier:**
 Rational AG
 Iglinger Straße 62
 D-86899 Landsberg



Tel.: ++49-(0)8191 - 32 70
 Fax: ++49-(0)8191 - 21735
- **E-mail address of the competent person responsible for the Safety Data Sheet:** *sdb@csb-online.de*
- **Informing department:** *Qualitätsmanagement*
- **Emergency information:**
 Internationale Giftzentrale Tel.: +49-(0)89-19240
 "Rechts der Isar"

2 Hazards identification

- **Hazard designation:**



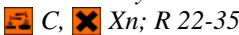

C Corrosive

- **Information pertaining to particular dangers for man and environment**
 Acid burns have to be treated immediately, as it may otherwise cause badly curing wounds.
 R 35 Causes severe burns.
- **Classification system**
 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.

3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 1310-58-3 EINECS: 215-181-3 Index number: 019-002-00-8	Potassium hydroxide  C, Xn; R 22-35	2.5-10%
CAS: 70592-80-2 EINECS: 274-687-2	Amines, C10-16-alkyldimethyl, N-oxides  Xi, N; R 38-41-50	< 2.5%

- **Additional information** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **General information:** Immediately remove any clothing contaminated by the product.
- **After inhalation:**
 Supply fresh air and call for doctor for safety reasons.
 In case of unconsciousness bring patient into stable side position for transport.
- **After skin contact:**
 Instantly wash with water and soap and rinse thoroughly.
 Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
- **After eye contact:**
 Rinse opened eye for several minutes under running water.
 Call a doctor immediately.
 Use eye protection.

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- **After swallowing:**
*Drink copious amounts of water and provide fresh air. Instantly call for doctor.
 Do not induce vomiting - Danger of perforation!*

5 Fire fighting measures

- **Suitable extinguishing agents**
Carbon dioxide (CO₂), extinguishing powder or water spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.
- **For safety reasons unsuitable extinguishing agents** *none*
- **Special hazards caused by the material, its products of combustion or flue gases:**
*Can be released in case of fire:
 Nitrogen oxides (NO_x)
 Sulphur oxides (SO_x)
 Carbon monoxide (CO) and Carbon dioxide (CO₂)*
- **Protective equipment:** *Wear self-contained breathing apparatus.*
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Person-related safety precautions:**
*Wear protective equipment. Keep unprotected persons away.
 Ensure adequate ventilation.
 Avoid skin and eye contact.
 Use breathing protection against the effects of fumes/dust/aerosol.*
- **Measures for environmental protection:**
*Dilute with much water.
 Do not allow to enter drainage system, surface or ground water.*
- **Measures for cleaning/collecting:**
*Ensure adequate ventilation.
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Use neutralizing agent.
 Send for recovery or disposal in suitable containers.
 Dispose of the material collected according to regulations.*

7 Handling and storage

- **Handling**
- **Information for safe handling:**
*Ensure good ventilation/exhaustion at the workplace.
 Keep containers tightly sealed.
 Prevent formation of aerosols.
 Do not inhale aerosols.
 Avoid skin and eye contact.*
- **Information about protection against explosions and fires:** *No special measures required.*
- **Storage**
- **Requirements to be met by storerooms and containers:**
*Store in the original container.
 Observe all local and national regulations for storage of water polluting products.*
- **Information about storage in one common storage facility:** *Store away from foodstuffs.*
- **Further information about storage conditions:**
Keep container tightly sealed.

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Store in a locked cabinet and out of the reach of children.

8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Components with critical values that require monitoring at the workplace:**

1310-58-3 Potassium hydroxide

WEL (Great Britain) | Short-term value: 2 mg/m³

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **Personal protective equipment**

· **General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Instantly remove any contaminated garments.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Use skin protection cream for preventive skin protection.

Wash hands during breaks and at the end of the work.

Do not eat, drink or smoke while working.

· **Breathing equipment:** Use breathing protection when aerosol or mist is formed.

· **Protection of hands:**

Protective gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

Check the permeability prior to each renewed use of the glove.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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.

· **Eye protection:** Tightly sealed safety glasses

· **Body protection:**

Protective work clothing

Protective clothing should be selected specifically for the working place.

9 Physical and chemical properties:

· **General Information**

Form:	liquid
Colour:	red
Smell:	characteristic

· **Change in condition**

Melting point/Melting range: not determined

Boiling point/Boiling range: ~ 100°C

· **Flash point:** not applicable

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· Self-inflammability:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive.
· Density at 20°C	1.11 g/cm ³
· Solubility in / Miscibility with Water:	fully miscible
· pH-value (10 g/l) at 20°C:	11.9
· Organic solvents:	0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Materials to be avoided:**
 - Strong oxidizing agents
 - Strong acids
- **Dangerous reactions** Strong exothermic reaction with acids.
- **Dangerous products of decomposition:**
 - Nitrogen oxides (NO_x)
 - Sulphur oxides (SO_x)
 - Carbon monoxide (CO) and Carbon dioxide (CO₂)

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

1310-58-3 Potassium hydroxide

Oral LD50 365 mg/kg (rat)

- **Primary irritant effect:**
 - **on the skin:** Strong caustic effect on skin and mucous membranes.
 - **on the eye:** Corrosive
- **Sensitization:** No sensitizing effect known.
- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EC 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.

12 Ecological information:

- **Ecotoxicological effects:**

- **Aquatic toxicity:**

1310-58-3 Potassium hydroxide

LC50/96 h 80 mg/l (gambusia affinis)

- **General notes:**

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

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.

The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) N° 648/2004 on detergents. Data to support this assertion are held at the disposal

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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.

13 Disposal considerations

- **Product:**
- **Recommendation**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Disposal must be made according to official regulations.
- **European waste catalogue:**
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agent:** Water, if necessary with cleaning agent.

14 Transport information

- **Land transport ADR/RID (cross-border):**



- **ADR/RID Class:** 8 (C5) Corrosive substances.
- **Kemler Number:** 80
- **UN-Number:** 1814
- **Packaging group:** II
- **Label:** 8
- **Designation of goods:** UN 1814 POTASSIUM HYDROXIDE SOLUTION
- **Limited quantities (LQ):** LQ22
- **Transport category:** 2
- **Tunnel restriction code:** E

- **Maritime transport IMDG-Code:**



- **IMDG Class:** 8
- **UN Number:** 1814
- **Label:** 8
- **Packaging group:** II
- **EMS Number:** F-A,S-B
- **Marine pollutant:** NO
- **Correct technical name:** POTASSIUM HYDROXIDE SOLUTION

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 8
- **UN/ID Number:** 1814
- **Label:** 8
- **Packaging group:** II

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· **Correct technical name: POTASSIUM HYDROXIDE SOLUTION**

· **Transport/Additional information:** Transport by post may be prohibited or restricted.

15 Regulatory information

· **Designation according to EC guidelines:**

The product has been classified/labelled in accordance with EC Directives / relevant national laws.

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



C Corrosive

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

Potassium hydroxide

· **Risk phrases:**

35 Causes severe burns.

· **Safety phrases:**

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

25 Avoid contact with eyes.

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

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).

56 Dispose of this material and its container to hazardous or special waste collection point.

· **Ingredients according to Regulation (EC) No 648/2004:**

amphoteric surfactants	< 5%
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· **National regulations**

· **Information about limitation of use:** Employment restrictions concerning young persons must be observed.

· **Decree to be applied in case of technical fault:** -

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water

· **Other regulations, limitations and prohibitive regulations**

Observe restrictions on the marketing and use according to Annex XVII of Regulation (EC) No 1907/2006.

16 Other information:

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant R-phrases:**

The(se) R-phrase(s) are those of the ingredient(s) and do(es) not necessarily represent the classification of the preparation.

22 Harmful if swallowed.

35 Causes severe burns.

38 Irritating to skin.

41 Risk of serious damage to eyes.

50 Very toxic to aquatic organisms.

· **Department issuing MSDS:**

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D-47829 Krefeld

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Germany

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GB