

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

Printing date 06.01.2011


Version number 1

Revision: 06.01.2011


**1 Identification of the substance/mixture and of the company/undertaking**

- **Product identifier**
- **Trade name:** RATIONAL Grill cleaner for RATIONAL CleanJet® and for manual cleaning
- **Article number(s):** 9006.0153
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation:** Alkaline cleaner / detergent
- **Details of the supplier of the safety data sheet**
- **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:** *Quality management*
- **Emergency telephone number:**  
Internationale Giftzentrale Tel.: +49-(0)89-19240  
"Rechts der Isar"

**2 Hazards identification**

- **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:**  
Acid burns have to be treated immediately, as it may otherwise cause badly curing wounds.
- **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.

---

- **Label elements**
- **Labelling according to EU 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.

(Contd. on page 2)

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

Printing date 06.01.2011

Version number 1

Revision: 06.01.2011

**Trade name: RATIONAL Grill cleaner for RATIONAL CleanJet® and for manual cleaning**

(Contd. of page 1)

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### 3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **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 R35;  Xn R22 Skin Corr. 1A, H314 Acute Tox. 4, H302	2.5-10%
CAS: 70592-80-2 EINECS: 274-687-2	Amines, C10-16-alkyldimethyl, N-oxides Xi R38-41;  N R50 Eye Dam. 1, H318 Aquatic Acute 1, H400 Skin Irrit. 2, H315	< 2.5%

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

### 4 First aid measures

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

### 5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**  
Carbon dioxide (CO<sub>2</sub>), 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 arising from the substance or mixture**  
Can be released in case of fire:  
Nitrogen oxides (NO<sub>x</sub>)  
Sulphur oxides (SO<sub>x</sub>)  
Carbon monoxide (CO) and Carbon dioxide (CO<sub>2</sub>)
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

(Contd. on page 3)

GB

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

Printing date 06.01.2011

Version number 1

Revision: 06.01.2011

**Trade name: RATIONAL Grill cleaner for RATIONAL CleanJet® and for manual cleaning**

(Contd. of page 2)

- **Additional information**  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation.  
Avoid contact with skin and eyes.  
Use breathing protection against the effects of fumes/dust/aerosol.
- **Environmental precautions:**  
Dilute with much water.  
Do not allow to enter drainage system, surface or ground water.
- **Methods and material for containment and cleaning up:**  
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.
- **Reference to other sections**  
See Section 8 for information on personal protection equipment.

## 7 Handling and storage

- **Handling**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Keep containers tightly sealed.  
Prevent formation of aerosols.  
Do not inhale aerosols.  
Avoid contact with skin and eyes.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **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:** Store in a locked cabinet and out of the reach of children.

## 8 Exposure controls/personal protection

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

- **Control parameters**

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

**1310-58-3 Potassium hydroxide**

WEL (Great Britain) Short-term value: 2 mg/m<sup>3</sup>

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

- **Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
Keep away from foodstuffs, beverages and food.  
Instantly remove any contaminated garments.

(Contd. on page 4)

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

Printing date 06.01.2011

Version number 1

Revision: 06.01.2011

**Trade name: RATIONAL Grill cleaner for RATIONAL CleanJet® and for manual cleaning**

(Contd. of page 3)

*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

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

**Form:** liquid

**Colour:** red

· **Smell:** characteristic

· **pH-value (10 g/l) at 20°C:** 11.9

· **Change in condition**

**Melting point/Melting range:** not determined

**Boiling point/Boiling range:** ~ 100°C

· **Flash point:** not applicable

· **Self-inflammability:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive.

· **Density at 20°C:** 1.11 g/cm<sup>3</sup>

· **Solubility in / Miscibility with**

**Water:** fully miscible

**Organic solvents:** 0 %

GB

(Contd. on page 5)

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

Printing date 06.01.2011

Version number 1

Revision: 06.01.2011

**Trade name: RATIONAL Grill cleaner for RATIONAL CleanJet® and for manual cleaning**

(Contd. of page 4)

### 10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** Strong exothermic reaction with acids.
- **Incompatible materials:**
  - Strong oxidizing agents
  - Strong acids
- **Hazardous decomposition products:**
  - Nitrogen oxides (NO<sub>x</sub>)
  - Sulphur oxides (SO<sub>x</sub>)
  - Carbon monoxide (CO) and Carbon dioxide (CO<sub>2</sub>)

### 11 Toxicological information

- **Information on toxicological effects**
- **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

- **Toxicity**

· **Aquatic toxicity:**

**1310-58-3 Potassium hydroxide**

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

- **Additional ecological information:**

· **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 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.

- **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

(Contd. on page 6)

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

Printing date 06.01.2011

Version number 1

Revision: 06.01.2011

**Trade name: RATIONAL Grill cleaner for RATIONAL CleanJet® and for manual cleaning**

(Contd. of page 5)

· **vPvB:** Not applicable.

### 13 Disposal considerations

- **Waste treatment methods**
- **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.
- **Waste disposal key number:** According to local/national 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
- **UN proper shipping name:** UN 1814 POTASSIUM HYDROXIDE SOLUTION
- **Excepted quantities (EQ):** E2
- **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

(Contd. on page 7)

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

Printing date 06.01.2011

Version number 1

Revision: 06.01.2011

**Trade name: RATIONAL Grill cleaner for RATIONAL CleanJet® and for manual cleaning**

(Contd. of page 6)

- **Packaging group:** II
- **Correct technical name:** POTASSIUM HYDROXIDE SOLUTION
- **Special precautions for user** Warning: Corrosive substances.
- **Transport/Additional information:** Transport by post may be prohibited or restricted.

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **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%
------------------------	------

- **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.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 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 phrases**  
The(se) R- resp. H-phrase(s) are those of the ingredient(s) and do(es) not necessarily represent the classification of the preparation.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.

(Contd. on page 8)

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

Printing date 06.01.2011

Version number 1

Revision: 06.01.2011

**Trade name: RATIONAL Grill cleaner for RATIONAL CleanJet® and for manual cleaning**

(Contd. of page 7)

H400 Very toxic to aquatic life.

R22 Harmful if swallowed.

R35 Causes severe burns.

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

R50 Very toxic to aquatic organisms.

**Department issuing MSDS:**

C.S.B. GmbH

Phone: +49 - 2151 - 652086-0

Parkstraße 29

Fax: +49 - 2151 - 652086-9

D-47829 Krefeld

Germany

GB