

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

Printing date 20.11.2018

Version number 2

Revision: 20.11.2018

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

- Date of compilation: 26.10.2009
- 1.1 Product identifier
- Trade name: **RATIONAL Grill cleaner for RATIONAL CleanJet® and for manual cleaning**
- Article number(s): 9006.0153
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.
- Application of the substance / the preparation: Alkaline cleaner / detergent
- 1.3 Details of the supplier of the safety data sheet
- Manufacturer / Supplier:
RATIONAL AG
Siegfried-Meister-Straße 1
86899 Landsberg am Lech
Germany
- Tel.: +49 8191 327-2365
Fax: +49 8191 327-72 2365
- E-mail address of the competent person responsible for the Safety Data Sheet:
reinigung@rational-online.com
- Informing department: Product management
- 1.4 Emergency telephone number:
Giftnotruf München "Klinikum rechts der Isar"
Tel. +49 89 19 24 0

SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
- Classification according to Regulation (EC) No 1272/2008



GHS05 corrosion

Met. Corr.1 H290 May be corrosive to metals.
Skin Corr. 1A H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.

- 2.2 Label elements

- Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

- Hazard pictograms



GHS05

- Signal word Danger

- Hazard-determining components of labelling:

Potassium hydroxide
Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides

- Hazard statements

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

- Precautionary statements

P101 If medical advice is needed, have product container or label at hand.

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P102	Keep out of reach of children.
P103	Read label before use.
P260	Do not breathe mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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.
P405	Store locked up.

• 2.3 Other hazards

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

SECTION 3: Composition/information on ingredients**• 3.2 Chemical characterisation: Mixtures**

• **Description:** Aqueous solution

• Dangerous components:

CAS: 1310-58-3 EINECS: 215-181-3 Index number: 019-002-00-8	Potassium hydroxide Met. Corr.1, H290; Skin Corr. 1A, H314; Acute Tox. 4, H302	5-<10%
EC number: 931-292-6	Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides Eye Dam. 1, H318; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; Acute Tox. 4, H302; Skin Irrit. 2, H315	≤ 2.5%
CAS: 70592-80-2 EINECS: 274-687-2	Amines, C10-16-alkyldimethyl, N-oxides Eye Dam. 1, H318; Aquatic Acute 1, H400; Skin Irrit. 2, H315	≤ 2.5%

• **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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

non-ionic surfactants, amphoteric surfactants	<5%
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SECTION 4: First aid measures**• 4.1 Description of first aid measures****• General information:**

Personal protection for the person providing first aid.

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.

Remove contact lenses, if present and easy to do.

Use eye protection.

Call a doctor immediately.

• After swallowing:

Drink copious amounts of water and provide fresh air. Instantly call for doctor.

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Do not induce vomiting - Danger of perforation!

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· 4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

· 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

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

· 5.2 Special hazards arising from the substance or mixture

Can be released in case of fire:

Nitrogen oxides (NOx)

Sulphur oxides (SOx)

Carbon monoxide (CO) and Carbon dioxide (CO₂)

· 5.3 Advice for firefighters

· Protective equipment: Wear self-contained breathing apparatus.

· Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

· 6.1 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.

· 6.2 Environmental precautions:

Do not allow to enter drainage system, surface or ground water.

Dilute with much water.

· 6.3 Methods and material for containment and cleaning up:

Ensure adequate ventilation.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Send for recovery or disposal in suitable containers.

Dispose of the material collected according to regulations.

· 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 information on disposal.

SECTION 7: Handling and storage

· 7.1 Precautions 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 under any circumstances.

· Information about protection against explosions and fires: No special measures required.

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· 7.2 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:

Keep container tightly sealed.

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

Store and transport upright.

· 7.3 Specific end use(s) No further relevant information available.

*** SECTION 8: Exposure controls/personal protection**

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

· 8.1 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 ³
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· Additional information: The lists that were valid during the compilation were used as basis.

· 8.2 Exposure controls

· 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.

· Recommended filter device for short term use: Filter type: A2

· 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.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

· Material of gloves

Nitrile rubber - NBR

Recommended thickness of the material: ≥ 0.11 mm

e.g. KCL Dermatril® 740

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

Penetration time: ≥ 8 hours

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

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- **Body protection:**
Protective work clothing
Body protection must be chosen depending on activity and possible exposure.
- **Limitation and supervision of exposure into the environment**
Do not allow to enter drainage system, surface or ground water.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	liquid
Colour:	red
· Smell:	characteristic
· Odour threshold:	not determined
· pH-value (10 g/l) at 20 °C:	11.9
· Change in condition	
Melting point/freezing point:	not determined
Initial boiling point and boiling range:	~ 100 °C
· Flash point:	not applicable
· Inflammability (solid, gaseous)	Not applicable.
· Ignition temperature:	not applicable
· Decomposition temperature:	Not determined.
· Self-inflammability:	Product is not selfigniting.
· Explosive properties:	Product is not explosive.
· Critical values for explosion:	
Lower:	Not determined.
Upper:	Not determined.
· Oxidising properties	not classified as oxidising
· Vapor pressure:	Not determined.
· Density at 20 °C:	1.11 g/cm³
· Relative density	Not determined.
· Vapour density (AIR = 1):	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	fully miscible
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
dynamic:	not determined
kinematic:	not determined
Organic solvents:	0 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- 10.1 Reactivity
No further relevant information available.
No further relevant information available.

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- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**
Corrosive action on metals
Strong exothermic reaction with acids.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
Strong oxidizing agents
Strong acids
- **10.6 Hazardous decomposition products:**
Nitrogen oxides (NOx)
Sulphur oxides (SOx)
Carbon monoxide (CO) and Carbon dioxide (CO₂)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values that are relevant for classification:**

1310-58-3 Potassium hydroxide		
Oral	LD50	284 mg/kg (rat)
Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides		
Oral	LD50	1064 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rat)
- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Subacute to chronic toxicity:** no data available
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of Regulation (EC) No. 1272/2008 (CLP/GHS):
Skin corr. 1A
Eye Dam. 1
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
According to present knowledge no CMR-effects known.
- **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.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**

1310-58-3 Potassium hydroxide	
LC50/96 h	80 mg/l (gambusia affinis)

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Amines, C12-14 (even numbered)-alkyldimethyl, N-oxides

LC50/96 h	3.46 mg/l (fish)
EC50	3.1 mg/l (daphnia)
IC50	0.143 mg/l (seagrass)
EC50/72 h	0.266 mg/l (algae)
NOEC	0.067 mg/l (seagrass)

70592-80-2 Amines, C10-16-alkyldimethyl, N-oxides

LC50/96 h	1.01 mg/l (daphnia)
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- **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:**

- **General notes:**

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

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.

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

- **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 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.

SECTION 14: Transport information

- **14.1 UN-Number**

- **ADR, IMDG, IATA**

UN1814

- **14.2 UN proper shipping name**

- **ADR**

UN 1814 POTASSIUM HYDROXIDE SOLUTION

- **IMDG, IATA**

POTASSIUM HYDROXIDE SOLUTION

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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

· Kemler Number:

Warning: Corrosive substances.

80

· EMS Number:

F-A,S-B

· Segregation groups

Alkalies

· Stowage Category

A

· Segregation Code

SG35 Stow "separated from" acids.

**· 14.7 Transport in bulk according to Annex II
of Marpol and the IBC Code**

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ):

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· Transport category:

2

· Tunnel restriction code:

E

· IMDG

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN1814, POTASSIUM HYDROXIDE SOLUTION,
8, II

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3

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