

# SAFETY DATA SHEET



RATIONAL Grill cleaner for RATIONAL CleanJet® and for manual cleaning

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

### 1.1 Product identifier

**Product name** : RATIONAL Grill cleaner for RATIONAL CleanJet® and for manual cleaning  
**Product code** : 9006.0153  
**Other means of identification** : Not available.

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Product use** : Cleaner. (Alkaline.) Professional use.

### 1.3 Details of the supplier of the safety data sheet

RATIONAL AG  
 Siegfried-Meister-Straße 1  
 86899 Landsberg am Lech  
 Deutschland  
 Tel.: +49 8191 327 387  
 Fax.: +49 8191 327 231

**e-mail address of person responsible for this SDS** : reinigung@rational-online.com

### 1.4 Emergency telephone number

#### Supplier

**Telephone number** : +49 6132 844 63 (24h)

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Met. Corr. 1, H290  
 Acute Tox. 4, H302  
 Skin Corr. 1A, H314  
 Eye Dam. 1, H318  
 Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

#### **Hazard pictograms**

:



#### **Signal word**

: Danger

#### **Hazard statements**

: H290 - May be corrosive to metals.  
 H302 - Harmful if swallowed.  
 H314 - Causes severe skin burns and eye damage.  
 H412 - Harmful to aquatic life with long lasting effects.

#### Precautionary statements

**SECTION 2: Hazards identification**

<b>Prevention</b>	: P280 - Wear protective gloves, protective clothing and eye or face protection. P273 - Avoid release to the environment. P260 - Do not breathe vapour or spray.
<b>Response</b>	: P301 + P330 + P310 + P331 - IF SWALLOWED: Rinse mouth. Immediately call a POISON CENTER or physician. Do NOT induce vomiting. P303 + P361 + P353 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Immediately call a POISON CENTER or doctor. P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
<b>Storage</b>	: Not applicable.
<b>Disposal</b>	: Not applicable.
<b>Hazardous ingredients</b>	: potassium hydroxide Amines, C12-14-alkyldimethyl, N-oxides
<b>Supplemental label elements</b>	: Keep out of reach of children.
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	: Not applicable.

**2.3 Other hazards**

<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
<b>Other hazards which do not result in classification</b>	: Toxic to aquatic life.

**SECTION 3: Composition/information on ingredients****3.2 Mixtures** : Mixture

Product/ingredient name	Identifiers	%	Classification	Type
potassium hydroxide	REACH #: 01-2119487136-33 EC: 215-181-3 CAS: 1310-58-3 Index: 019-002-00-8	≥10 - ≤25	Met. Corr. 1, H290 Acute Tox. 3, H301 Skin Corr. 1A, H314 Eye Dam. 1, H318	[1] [2]
Amines, C12-14-alkyldimethyl, N-oxides	REACH #: 01-2119490061-47 CAS: 308062-28-4	≤5	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	[1]
propane-1,2-diol	REACH #: 01-2119456809-23 EC: 200-338-0 CAS: 57-55-6	≤3	Not classified.	[2]
Silicic acid, potassium salt	REACH #: 01-2119456888-17 EC: 215-199-1 CAS: 1312-76-1	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319	[1]

**SECTION 3: Composition/information on ingredients**

			<b>See Section 16 for the full text of the H statements declared above.</b>	
Product/ingredient name		Specific Conc. Limits, M-factors and ATEs		
potassium hydroxide		ATE [Oral] = 100 mg/kg Skin Corr. 1A, H314: $C \geq 5\%$ Skin Corr. 1B, H314: $2\% \leq C < 5\%$ Skin Irrit. 2, H315: $0.5\% \leq C < 2\%$ Eye Dam. 1, H318: $C \geq 2\%$ Eye Irrit. 2, H319: $0.5\% \leq C < 2\%$		
Amines, C12-14-alkyldimethyl, N-oxides		ATE [Oral] = 1064 mg/kg M [Acute] = 1		
propane-1,2-diol		-		
Silicic acid, potassium salt		-		

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

**SECTION 4: First aid measures****4.1 Description of first aid measures**

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

## SECTION 4: First aid measures

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

#### Potential acute health effects

**Eye contact** : Causes serious eye damage.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Causes severe burns.  
**Ingestion** : Harmful if swallowed.

#### Over-exposure signs/symptoms

**Eye contact** : Adverse symptoms may include the following:  
 pain  
 watering  
 redness  
**Inhalation** : No specific data.  
**Skin contact** : Adverse symptoms may include the following:  
 pain or irritation  
 redness  
 blistering may occur  
**Ingestion** : Adverse symptoms may include the following:  
 stomach pains

### 4.3 Indication of any immediate medical attention and special treatment needed

**Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.  
**Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam. Use an extinguishing agent suitable for the surrounding fire.  
**Unsuitable extinguishing media** : Do not use water jet.

### 5.2 Special hazards arising from the substance or mixture

**Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.  
**Hazardous combustion products** : Decomposition products may include the following materials:  
 carbon dioxide  
 carbon monoxide  
 nitrogen oxides  
 metal oxide/oxides

### 5.3 Advice for firefighters

**Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

## SECTION 5: Firefighting measures

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- 6.2 Environmental precautions** : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### 6.3 Methods and material for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Absorb spillage to prevent material damage. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not breathe dust or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

### 7.2 Conditions for safe storage, including any incompatibilities

## SECTION 7: Handling and storage

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in corrosive resistant container with a resistant inner liner. Store locked up. Separate from acids. Keep away from metals. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

### 7.3 Specific end use(s)

Section 7. Handling and storage: The information in this section contains generic advice and guidance.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

Product/ingredient name	Exposure limit values
potassium hydroxide	<b>NAOSH (Ireland, 5/2021). Notes: Advisory Occupational Exposure Limit Values (OELVs)</b> OELV-15min: 2 mg/m <sup>3</sup> 15 minutes.
propane-1,2-diol	<b>NAOSH (Ireland, 5/2021). Notes: Advisory Occupational Exposure Limit Values (OELVs)</b> OELV-8hr: 10 mg/m <sup>3</sup> 8 hours. Form: particulate OELV-8hr: 470 mg/m <sup>3</sup> 8 hours. Form: vapour and particulates OELV-8hr: 150 ppm 8 hours. Form: vapour and particulates

#### Biological exposure indices

None known.

**Recommended monitoring procedures** : Reference should be made to monitoring standards, such as the following:  
European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

**DNEL/DMEL Summary** : Not applicable.

#### PNECs

**PNEC Summary** : Not applicable.

### 8.2 Exposure controls

**Appropriate engineering controls** : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

#### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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

- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: Wear tightly-sealed safety glasses (EN 166). Wear suitable face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. **Recommended:** Wear suitable gloves tested to EN374.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. **Recommended:** Combination filtering device (DIN EN 14387). Filter type: A-P2.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**9.1 Information on basic physical and chemical properties****Appearance**

- Physical state** : Liquid.
- Colour** : Red.
- Odour** : Not available.
- Odour threshold** : Not available.
- pH** : >13.5
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flash point** :

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
propane-1,2-diol	99	210.2				

- Evaporation rate** : Not available.
- Flammability** : Not available.
- Lower and upper explosion limit** : Not available.
- Vapour pressure** : Not available.

**SECTION 9: Physical and chemical properties**

Ingredient name	Vapour Pressure at 20 °C			Vapour pressure at 50 °C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
propane-1,2-diol	0.15	0.02	EU A.4			

**Vapour density** : Not available.**Relative density** : Not available.**Density** : 1.13 g/cm<sup>3</sup>**Solubility in water** : Not available.**Partition coefficient: n-octanol/ water** : Not applicable.**Auto-ignition temperature** : Not available.

Ingredient name	°C	°F	Method
propane-1,2-diol	371	699.8	

**Decomposition temperature** : Not available.**Viscosity** : 13 Fsec**Explosive properties** : Not available.**Oxidising properties** : Not available.**Particle characteristics****Median particle size** : Not applicable.**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity****10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.**10.2 Chemical stability** : The product is stable.**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.**10.4 Conditions to avoid** : Keep away from heat, sparks and flame.**10.5 Incompatible materials** : Reactive or incompatible with the following materials: metals, strong acids.**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.**SECTION 11: Toxicological information****11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute toxicity**

Product/ingredient name	Result	Species	Dose	Exposure	Remarks
Amines, C12-14-alkyldimethyl, N-oxides	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-	test substance: EC No. 931-341-1. (read-across) Literature
	LD50 Oral [OECD 401]	Rat - Male, Female	1064 mg/kg	-	Literature
Silicic acid, potassium	LC50 Inhalation Vapour	Rat	>2.06 mg/l	4 hours	Literature



**SECTION 11: Toxicological information**

salt	[EPA OPPTS 870.1300]				
	LD50 Dermal [EPA OPPTS 870.1200]	Rat	>5000 mg/kg	-	Literature
	LD50 Oral [EPA OPPTS 870.1100]	Rat - Female	>5000 mg/kg	-	Literature

**Conclusion/Summary** : Harmful if swallowed. (Literature)

**Acute toxicity estimates**

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
RATIONAL Grill cleaner for RATIONAL CleanJet® and for manual cleaning	748.7	N/A	N/A	N/A	N/A
potassium hydroxide	100	N/A	N/A	N/A	N/A
Amines, C12-14-alkyldimethyl, N-oxides	1064	N/A	N/A	N/A	N/A

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation	Remarks
potassium hydroxide	Eyes - Visible necrosis [OECD 405]	Rabbit	-	24 hours	21 days	Literature
Amines, C12-14-alkyldimethyl, N-oxides	Eyes - Severe irritant [OECD 405]	Rabbit	-	-	35 days	Literature
	Skin - Irritant [OECD 404]	Rabbit	-	24 hours	72 hours	Literature
Silicic acid, potassium salt	Eyes - Non-irritating to the eyes. [OECD 405]	Rabbit	-	4 hours	7 days	Literature
	Skin - Mild irritant [OECD 404]	Rabbit	-	4 hours	5 days	Literature
	Skin - Non-irritating to the skin. [OECD 404]	Rabbit	-	4 hours	7 days	Literature

**Conclusion/Summary**

**Skin** : Causes severe burns. (Literature)

**Eyes** : Causes serious eye damage. (Literature)

**Respiratory** : Not available.

**Sensitisation**

Product/ingredient name	Route of exposure	Species	Result	Remarks
potassium hydroxide	skin	Guinea pig	Not sensitizing	Literature
Amines, C12-14-alkyldimethyl, N-oxides	skin	Guinea pig	Not sensitizing [OECD 406]	Literature
Silicic acid, potassium salt	skin	Guinea pig	Not sensitizing	Literature

**Conclusion/Summary**

**Skin** : Based on available data, the classification criteria are not met. (Literature)

**SECTION 11: Toxicological information****Respiratory** : Not available.**Mutagenicity**

Product/ingredient name	Test	Experiment	Result	Remarks
potassium hydroxide	-	Experiment: In vitro Subject: Bacteria	Negative	Literature
Amines, C12-14-alkyldimethyl, N-oxides	-	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic	Negative	Literature
	OECD 487	Experiment: In vitro Subject: Mammalian-Human Cell: Somatic	Negative	Literature
Silicic acid, potassium salt	OECD 473	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic	Negative	test substance: CAS no. 1344-09-8. (read-across) Literature
	OECD 476	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic	Negative	test substance: CAS no. 1344-09-8. (read-across) Literature

**Conclusion/Summary** : Based on available data, the classification criteria are not met. (Literature)**Carcinogenicity**

Product/ingredient name	Result	Species	Dose	Exposure	Remarks
Amines, C12-14-alkyldimethyl, N-oxides	Negative - Oral [OECD 451]	Rat - Male, Female	90 mg/kg NOEL	2 years; 24 hours per day	Literature

**Conclusion/Summary** : Based on available data, the classification criteria are not met. (Literature)**Reproductive toxicity**

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure	Remarks
Amines, C12-14-alkyldimethyl, N-oxides	Negative	Negative	Negative	Rat - Male, Female	Oral: ≥37 mg/kg	24 hours per day	OECD 416 test substance: CAS no. 1643-20-5. (read-across) Literature
Silicic acid, potassium salt	Negative	Positive	Positive	Rat - Male, Female	Oral: >159 mg/ kg NOAEL	2.5 years; 7 days per week	test substance: CAS no. 1344-09-8. (read-across) Literature

**Conclusion/Summary** : Based on available data, the classification criteria are not met. (Literature)**Teratogenicity**

**SECTION 11: Toxicological information**

Product/ingredient name	Result	Species	Dose	Exposure	Remarks
Amines, C12-14-alkyldimethyl, N-oxides	Negative - Oral [OECD 414]	Rat - Female	100 mg/kg NOAEL	10 days; 7 days per week	test substance: CAS no. 1643-20-5. (read-across) Literature
Silicic acid, potassium salt	Negative - Oral	Mouse - Female	>200 mg/kg NOAEL	18 days; 7 days per week	test substance: CAS no. 6834-92-0. (read-across) Literature

**Conclusion/Summary** : Based on available data, the classification criteria are not met. (Literature)

**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

Not available.

**Aspiration hazard**

Not available.

**Information on likely routes of exposure** : Not available.

**Potential acute health effects**

**Eye contact** : Causes serious eye damage.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Causes severe burns.  
**Ingestion** : Harmful if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness  
**Inhalation** : No specific data.  
**Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur  
**Ingestion** : Adverse symptoms may include the following:  
stomach pains

**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Short term exposure**

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

**Long term exposure**

**Potential immediate effects** : Not available.  
**Potential delayed effects** : Not available.

**Potential chronic health effects**

**SECTION 11: Toxicological information**

Product/ingredient name	Result	Species	Dose	Exposure	Remarks
Amines, C12-14-alkyldimethyl, N-oxides	Sub-chronic NOAEL Dermal [OECD 411]	Mouse - Male, Female	237.6 mg/kg	91 days; 5 days per week	Literature
	Sub-chronic NOAEL Oral [OECD 408]	Rat - Male, Female	88 mg/kg	14 weeks; 7 days per week	Literature
Silicic acid, potassium salt	Sub-chronic NOAEL Oral	Rat - Male, Female	>159 mg/kg	197 days; 7 days per week	Literature
	Sub-chronic NOAEL Oral [OECD 408]	Rat - Male, Female	227 to 237 mg/kg	3 months; 7 days per week	Literature

**Conclusion/Summary** : Based on available data, the classification criteria are not met. (Literature)

**General** : No known significant effects or critical hazards.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Reproductive toxicity** : No known significant effects or critical hazards.

**11.2 Information on other hazards****11.2.1 Endocrine disrupting properties**

No known significant effects or critical hazards (Human Health).

**11.2.2 Other information**

Not available.

**SECTION 12: Ecological information****12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure	Remarks
Amines, C12-14-alkyldimethyl, N-oxides	EC10 80 mg/l Fresh water	Micro-organism - Pseudomonas putida	18 hours	Literature
	Acute EC50 0.66 mg/l Fresh water [OECD 201]	Algae - Raphidocelis subcapitata	72 hours	Literature
	Acute LC50 10.4 mg/l Fresh water [OECD 202]	Daphnia - Daphnia magna	48 hours	Literature
	Acute LC50 3.41 mg/l pH 9.0 Fresh water	Fish - Pimephales promelas	96 hours	Literature
	Chronic NOEC 0.7 mg/l Fresh water [OECD 211]	Daphnia - Daphnia magna	21 days	Literature
	Chronic NOEC 0.42 mg/l Fresh water	Fish - Pimephales promelas	302 days	Literature
Silicic acid, potassium salt	Acute EC50 207 mg/l [DIN 38412]	Algae - Desmodesmus subspicatus	72 hours	Literature
	Acute LC50 >146 mg/l [OECD 202]	Daphnia - Daphnia magna	24 hours	Literature
	Acute LC50 >146 mg/l [DIN 38412 T.15]	Fish - Leuciscus idus	48 hours	Literature

## SECTION 12: Ecological information

**Conclusion/Summary** : Harmful to aquatic life with long lasting effects. (Literature)

### 12.2 Persistence and degradability

**Conclusion/Summary** : There are no data available on the mixture itself.

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

**Soil/water partition coefficient ( $K_{oc}$ )** : Not available.

**Mobility** : Not available.

### 12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

### 12.6 Endocrine disrupting properties

No known significant effects or critical hazards (Environment).

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance.

### 13.1 Waste treatment methods

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EWC, specific to the industry and process.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.





#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

**SECTION 14: Transport information**

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number or ID number</b>	UN1814	UN1814	UN1814	UN1814
<b>14.2 UN proper shipping name</b>	POTASSIUM HYDROXIDE SOLUTION	POTASSIUM HYDROXIDE SOLUTION	POTASSIUM HYDROXIDE SOLUTION	Potassium hydroxide solution
<b>14.3 Transport hazard class(es)</b>	8	8	8	8
<b>Label</b>				
<b>14.4 Packing group</b>	II	II	II	II
<b>14.5 Environmental hazards</b>	No.	Yes.	Marine Pollutant: No	No.

**Additional information**

- ADR/RID** : **Hazard identification number** 80  
**Limited quantity** 1 L  
**Tunnel code** (E)
- ADN** : The product is only regulated as an environmentally hazardous substance when transported in tank vessels.
- IMDG** : **Emergency schedules** F-A, S-B
- IATA** : **Quantity limitation** Passenger and Cargo Aircraft: 1 L. Packaging instructions: 851. Cargo Aircraft Only: 30 L. Packaging instructions: 855. Limited Quantities - Passenger Aircraft: 0.5 L. Packaging instructions: Y840.  
**Special provisions** A3, A803

**14.6 Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**14.7 Maritime transport in bulk according to IMO instruments** : Not applicable.

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles****Label:** Not applicable.**Other EU regulations****Ozone depleting substances (1005/2009/EU)**

Not listed.

**Prior Informed Consent (PIC) (649/2012/EU)**

**SECTION 15: Regulatory information**

Not listed.

**Persistent Organic Pollutants**

Not listed.

**Seveso Directive**

This product is not controlled under the Seveso Directive.

**VOC**

Calculation method	Product as-supplied	Product ready-for-use
Without volume exclusion	22.6 g/l 2 % (w/w)	Not applicable
With volume exclusion [water excluded]	248.8 g/l	Not applicable
With volume exclusion [water not excluded]	22.6 g/l	Not applicable

**National regulations**

There are no known additional national regulations relevant to the SDS.

**International regulations****Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

**Montreal Protocol**

Not listed.

**Stockholm Convention on Persistent Organic Pollutants**

Not listed.

**Rotterdam Convention on Prior Informed Consent (PIC)**

Not listed.

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list****Eurasian Economic Union** : **Russian Federation inventory:** All components are listed or exempted.**New Zealand** : All components are listed or exempted.**Viet Nam** : All components are listed or exempted.**15.2 Chemical safety assessment** : This product contains substances for which Chemical Safety Assessments are still required.**SECTION 16: Other information****This Safety Data Sheet is prepared in accordance with Annex II to Regulation (EC) No 1907/2006, as amended by Commission Regulation (EU) 2020/878.** Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway  
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road  
 ATE = Acute Toxicity Estimate  
 BCF = Bioconcentration Factor  
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
 DMEL = Derived Minimal Effect Level  
 DNEL = Derived No Effect Level  
 EUH statement = CLP-specific Hazard statement  
 EWC = European Waste Catalogue  
 IATA = International Air Transport Association  
 IBC = Intermediate Bulk Container

## SECTION 16: Other information

IMDG = International Maritime Dangerous Goods  
 LogPow = logarithm of the octanol/water partition coefficient  
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
 N/A = Not available  
 PBT = Persistent, Bioaccumulative and Toxic  
 PNEC = Predicted No Effect Concentration  
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
 RRN = REACH Registration Number  
 SGG = Segregation Group  
 vPvB = Very Persistent and Very Bioaccumulative

### Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Met. Corr. 1, H290 Acute Tox. 4, H302 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Chronic 3, H412	Expert judgment Calculation method Calculation method On basis of test data Calculation method

### Full text of abbreviated H statements

H290 H301 H302 H314 H315 H318 H319 H400 H411 H412	May be corrosive to metals. Toxic if swallowed. Harmful if swallowed. Causes severe skin burns and eye damage. Causes skin irritation. Causes serious eye damage. Causes serious eye irritation. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects.
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### Full text of classifications [CLP/GHS]

Acute Tox. 3 Acute Tox. 4 Aquatic Acute 1 Aquatic Chronic 2 Aquatic Chronic 3 Eye Dam. 1 Eye Irrit. 2 Met. Corr. 1 Skin Corr. 1A Skin Irrit. 2	ACUTE TOXICITY - Category 3 ACUTE TOXICITY - Category 4 SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 CORROSIVE TO METALS - Category 1 SKIN CORROSION/IRRITATION - Category 1A SKIN CORROSION/IRRITATION - Category 2
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### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.