

# SAFETY DATA SHEET



RATIONAL special rinse agent for RATIONAL CleanJet® cleaning system

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

### 1.1 Product identifier

**Product name** : RATIONAL special rinse agent for RATIONAL CleanJet® cleaning system  
**Product code** : 9006.0137  
**Other means of identification** : Not available.

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

**Product use** : Antistreaking agent.

### 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]

Eye Dam. 1, H318

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** : H318 - Causes serious eye damage.

#### Precautionary statements

**Prevention** : P280 - Wear eye or face protection.

**Response** : 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.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**SECTION 2: Hazards identification**

- Hazardous ingredients** : ☒ Alcohols, C11-15-secondary, ethoxylated
- Supplemental label elements** : ☒ Keep out of reach of children.  
If skin irritation occurs: Get medical advice or attention.
- Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

**2.3 Other hazards**

- Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
- Other hazards which do not result in classification** : ☒ Causes mild skin irritation.

Product does not contain substances above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

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

Product/ingredient name	Identifiers	%	Classification	Type
<input checked="" type="checkbox"/> Alcohols, C11-15-secondary, ethoxylated	CAS: 68131-40-8	<10	Acute Tox. 4, H302 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Dam. 1, H318	[1]
citric acid	REACH #: 01-2119457026-42 EC: 201-069-1 CAS: 77-92-9 Index: 607-750-00-3	≤3	Eye Irrit. 2, H319 STOT SE 3, H335	[1]
Oxirane, 2-methyl-, polymer with oxirane, mono(2-propylheptyl) ether	CAS: 166736-08-9	≤3	Eye Irrit. 2, H319  <b>See Section 16 for the full text of the H statements declared above.</b>	[1]

Product/ingredient name	Specific Conc. Limits, M-factors and ATEs
<input checked="" type="checkbox"/> Alcohols, C11-15-secondary, ethoxylated	ATE [Oral] = 412 mg/kg ATE [Inhalation (vapours)] = 11 mg/l
citric acid	-
Oxirane, 2-methyl-, polymer with oxirane, mono (2-propylheptyl) ether	-

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

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- |                                   |   |
|-----------------------------------|---|
| <b>Eye contact</b>                | : 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.  |
| <b>Inhalation</b>                 | : 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.   |
| <b>Skin contact</b>               | : 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.  |
| <b>Ingestion</b>                  | : 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. |
| <b>Protection of first-aiders</b> | : 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

- |                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : Causes serious eye damage.                        |
| <b>Inhalation</b>   | : No known significant effects or critical hazards. |
| <b>Skin contact</b> | : No known significant effects or critical hazards. |
| <b>Ingestion</b>    | : No known significant effects or critical hazards. |

#### Over-exposure signs/symptoms

- |                     |  |
|---------------------|--|
| <b>Eye contact</b>  | : Adverse symptoms may include the following:<br>pain<br>watering<br>redness                           |
| <b>Inhalation</b>   | : No specific data.  |
| <b>Skin contact</b> | : Adverse symptoms may include the following:<br>pain or irritation<br>redness<br>blistering may occur |
| <b>Ingestion</b>    | : Adverse symptoms may include the following:<br>stomach pains   |

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

- |                           |   |
|---------------------------|---|
| <b>Notes to physician</b> | : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
|---------------------------|---|

## SECTION 4: First aid measures

**Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, alcohol-resistant foam or water spray (fog). 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.

**Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

### 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.

**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).

### 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. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. 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.

## SECTION 6: Accidental release measures

- 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 ingest. 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. Empty containers retain product residue and can be hazardous. Do not reuse container.
- 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

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 locked up. 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

No exposure limit value known.

#### 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

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

**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.

**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 (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** : Blue.  
**Odour** : Not available.  
**Odour threshold** : Not available.  
**pH** : 2.5  
**Melting point/freezing point** : Not available.  
**Initial boiling point and boiling range** : Not available.  
**Flash point** :

**SECTION 9: Physical and chemical properties**

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
Alcohols, C11-15-secondary, ethoxylated	176	348.8	EU A.9			

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

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Alcohols, C11-15-secondary, ethoxylated	0	0	EU A.4			
citric acid	0	0				
Poly(oxy-1,2-ethanediyl),α-hydro-ω-hydroxy- Ethane-1,2-diol, ethoxylated	0	0				

**Vapour density** : Not available.**Relative density** : Not available.**Density** : 1.012 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
Alcohols, C11-15-secondary, ethoxylated	338	640.4	EU A.15

**Decomposition temperature** : Not available.**Viscosity** : Not available.**Particle characteristics****Median particle size** : Not applicable.**9.2 Other information****9.2.1 Information with regard to physical hazard classes****Explosive properties** : Not available.**Oxidising properties** : Not available.**9.2.2 Other safety characteristics**

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: strong alkalis.

**SECTION 10: Stability and reactivity**

**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
Alcohols, C11-15-secondary, ethoxylated	LC50 Inhalation Dusts and mists	Rat - Male, Female	1.06 mg/l	4 hours	Literature
citric acid	LD50 Dermal	Rat - Male, Female	>14000 mg/kg	-	Literature
	LD50 Oral	Rat	>412 mg/kg	-	Literature
	LD50 Dermal [OECD 402]	Rat - Male, Female	>2000 mg/kg	-	Literature
	LD50 Oral [OECD 401]	Mouse - Male, Female	5400 mg/kg	-	Literature

**Conclusion/Summary** : Based on available data, the classification criteria are not met. (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 special rinse agent for RATIONAL CleanJet® cleaning system	6338.5	N/A	N/A	169.2	N/A
Alcohols, C11-15-secondary, ethoxylated	412	14000	N/A	11	N/A
citric acid	5400	N/A	N/A	N/A	N/A

**Irritation/Corrosion**

Product/ingredient name	Result	Species	Score	Exposure	Observation	Remarks
citric acid	Eyes - Moderate irritant [OECD 405]	Rabbit	-	-	14 days	Literature
	Skin - Non-irritating to the skin. [OECD 404]	Rabbit	-	4 hours	72 hours	Literature

**Conclusion/Summary**

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

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

**Respiratory** : Not available.

**Sensitisation****Conclusion/Summary**

**Skin** : Not available.

**Respiratory** : Not available.

**Mutagenicity**



**SECTION 11: Toxicological information**

Product/ingredient name	Test	Experiment	Result	Remarks
Alcohols, C11-15-secondary, ethoxylated    citric acid	OECD 471	Experiment: In vitro Subject: Bacteria	Negative	Literature
	OECD 476	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic	Negative	Literature
	OECD 473	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic	Negative	Literature
	OECD 471	Experiment: In vitro Subject: Bacteria	Negative	Literature
	OECD 475	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic	Negative	Literature
	-	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic	Negative	Literature

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

**Carcinogenicity**

**Conclusion/Summary** : Not available.

**Reproductive toxicity**

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure	Remarks
Alcohols, C11-15-secondary, ethoxylated	Negative	Negative	Negative	Rat - Female	Oral: ≤300 mg/kg NOAEL	14 days; 7 days per week	OECD 414 Literature

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

**Teratogenicity**

**Conclusion/Summary** : Not available.

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

Product/ingredient name	Category	Route of exposure	Target organs
citric acid	Category 3	-	Respiratory tract irritation

**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.

**SECTION 11: Toxicological information**

<b>Inhalation</b>	: No known significant effects or critical hazards.
<b>Skin contact</b>	: No known significant effects or critical hazards.
<b>Ingestion</b>	: No known significant effects or critical hazards.

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

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

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

**Long term exposure**

<b>Potential immediate effects</b>	: Not available.
<b>Potential delayed effects</b>	: Not available.

**Potential chronic health effects**

Product/ingredient name	Result	Species	Dose	Exposure	Remarks
Alcohols, C11-15-secondary, ethoxylated	Sub-chronic NOAEL Oral [OECD 408]	Rat - Male, Female	≤100 mg/kg	90 days; 7 days per week	Literature

<b>Conclusion/Summary</b>	: Based on available data, the classification criteria are not met. (Literature)
<b>General</b>	: No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Reproductive toxicity</b>	: No known significant effects or critical hazards.

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

Human Health:

Product does not contain substances above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

**11.2.2 Other information**

Not available.

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

Product/ingredient name	Result	Species	Exposure	Remarks
Alcohols, C11-15-secondary, ethoxylated	Acute EC50 824 mg/l Fresh water [OECD 209]	Micro-organism	3 hours	Literature
citric acid	Acute NOEC 425 mg/l Fresh water	Algae - <i>Scenedesmus quadricauda</i>	8 days	Literature
Oxirane, 2-methyl-, polymer with oxirane, mono(2-propylheptyl) ether	Acute EC50 10 to 100 mg/l [OECD 201]	Algae	48 hours	Literature
	Acute EC50 10 to 100 mg/l [OECD 202]	Daphnia	48 hours	Literature
	Acute LC50 10 to 100 mg/l [OECD 203]	Fish	96 hours	Literature
	Chronic EC10 >1 mg/l [OECD 201]	Algae	72 hours	Literature
	Chronic NOEC >1 mg/l [OECD 211]	Daphnia - <i>Daphnia magna</i>	21 days	Literature
	Chronic NOEC >1 mg/l [OECD 215]	Fish	28 days	Literature

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

**12.2 Persistence and degradability**

Product/ingredient name	Test	Result	Dose	Inoculum
Oxirane, 2-methyl-, polymer with oxirane, mono (2-propylheptyl) ether	OECD 301B	>60 % - Readily - 28 days	-	-

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

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Oxirane, 2-methyl-, polymer with oxirane, mono (2-propylheptyl) ether	-	-	Readily

**12.3 Bioaccumulative potential**

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Alcohols, C11-15-secondary, ethoxylated	5.9	-	High

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : 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.

## SECTION 12: Ecological information

### 12.6 Endocrine disrupting properties

Environment:

Product does not contain substances above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

### 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

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
Label				
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	Marine Pollutant: No	No.

**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.

## SECTION 14: Transport information

**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

Product/ingredient name	%	Designation [Usage]
<input checked="" type="checkbox"/> RATIONAL special rinse agent for RATIONAL CleanJet® cleaning system	≥90	3

**Labelling** : Not applicable.

#### Other EU regulations

**Explosive precursors** : ☒ Not applicable.

#### Ozone depleting substances (1005/2009/EU)

Not listed.

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

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	2 g/l 0.2 % (w/w)	Not applicable
With volume exclusion [water excluded]	22.2 g/l	Not applicable
With volume exclusion [water not excluded]	2 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

**SECTION 15: Regulatory information**

Not listed.

**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
- 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
Eye Dam. 1, H318	Calculation method

**Full text of abbreviated H statements**

H302 H315 H318 H319 H332 H335	Harmful if swallowed. Causes skin irritation. Causes serious eye damage. Causes serious eye irritation. Harmful if inhaled. May cause respiratory irritation.
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**Full text of classifications [CLP/GHS]**

Acute Tox. 4 Eye Dam. 1 Eye Irrit. 2 Skin Irrit. 2 STOT SE 3	ACUTE TOXICITY - Category 4 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 SKIN CORROSION/IRRITATION - Category 2 SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3
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## SECTION 16: Other information

Version : 2

### 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.