

## RHEOBYK-7411 CA

Version 3.0  
SDB\_CH

Revision Date: 19.01.2023

Date of last issue: 24.02.2021  
Print Date 16.05.2025

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

#### 1.1 Product identifier

Trade name : RHEOBYK-7411 CA  
Product code : 000000000000133603

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

Use of the Sub-  
stance/Mixture : Rheology Additive

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

Company : BYK-Chemie GmbH  
Abelstrasse 45  
46483 Wesel  
Telephone : +49 281 670-0  
Telefax : +49 281 65735  
  
Information : Regulatory Affairs  
Telephone : +49 281 670-23532  
Telefax : +49 281 670-23533  
E-mail address : GHS.BYK@altana.com

#### 1.4 Emergency telephone number

+44 1235 239670

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4 : H302: Harmful if swallowed.  
Skin irritation, Category 2 : H315: Causes skin irritation.  
Eye irritation, Category 2 : H319: Causes serious eye irritation.

#### 2.2 Label elements

##### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Warning

Hazard statements : H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.

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according to Regulation (EC) No. 1907/2006



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- Precautionary statements : **Prevention:**  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P280 Wear protective gloves/ eye protection/ face protection.
- Response:**  
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.  
P337 + P313 If eye irritation persists: Get medical advice/ attention.
- Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

### Hazardous components which must be listed on the label:

- 3470-98-2 1-butylpyrrolidin-2-one

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Solution of a modified urea

#### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
1-butylpyrrolidin-2-one	3470-98-2 222-437-8 01-2120062728-48	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319	>= 50 - <= 100
lithium chloride	7447-41-8 231-212-3 01-2119560574-35	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Irrit. 2; H319  Acute toxicity estimate  Acute oral toxicity:	>= 1 - < 3

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		526 mg/kg	
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For explanation of abbreviations see section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of skin contact : If skin irritation persists, call a physician.  
If on skin, rinse well with water.  
If on clothes, remove clothes.
- In case of eye contact : Immediately flush eye(s) with plenty of water.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.
- If swallowed : Induce vomiting immediately and call a physician.  
Keep respiratory tract clear.  
Do not give milk or alcoholic beverages.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.

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

- Symptoms : No information available.
- Risks : No information available.

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

- Treatment : No information available.

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

- Suitable extinguishing media : Foam  
Carbon dioxide (CO<sub>2</sub>)  
Dry chemical
- Unsuitable extinguishing media : High volume water jet

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

- Hazardous combustion prod- : Carbon oxides

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ucts  
Nitrogen oxides (NOx)  
Halogenated compounds  
metal oxides  
Hydrogen chloride

### 5.3 Advice for firefighters

Special protective equipment : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Standard procedure for chemical fires.  
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

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## SECTION 6: Accidental release measures

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

Personal precautions : Use personal protective equipment.

### 6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal considerations see section 13., For personal protection see section 8.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : Do not breathe vapours/dust.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : When using do not eat or drink. When using do not smoke.  
Wash hands before breaks and at the end of workday.

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

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Electrical installations / working materials must comply

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with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

### 7.3 Specific end use(s)

Specific use(s) : No data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
lithium chloride	7447-41-8	TWA (inhalable dust)	0,2 mg/m <sup>3</sup> (Lithium)	CH SUVA
Further information: Occupational Safety and Health Administration, Harm to the unborn child is not to be expected when the OEL-value is respected				
		STEL (inhalable dust)	0,2 mg/m <sup>3</sup> (Lithium)	CH SUVA
Further information: Occupational Safety and Health Administration, Harm to the unborn child is not to be expected when the OEL-value is respected				

#### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Modified urea	Workers	Inhalation	Long-term systemic effects	59 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	8,3 mg/kg
	Consumers	Inhalation	Long-term systemic effects	15 mg/m <sup>3</sup>
	Consumers	Dermal	Long-term systemic effects	4,2 mg/kg
	Consumers	Oral	Long-term systemic effects	4,2 mg/kg
lithium chloride	Workers	Skin contact	Acute systemic effects	100 mg/kg
	Workers	Inhalation	Acute systemic effects	30 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	73,2 mg/kg
	Workers	Inhalation	Long-term systemic effects	10 mg/m <sup>3</sup>
	Consumers	Inhalation	Long-term systemic effects	10 mg/m <sup>3</sup>
	Consumers	Skin contact	Long-term systemic effects	73,2 mg/kg
	Consumers	Ingestion	Long-term systemic effects	7,32 mg/kg
	Consumers	Inhalation	Acute systemic effects	30 mg/m <sup>3</sup>

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	Consumers	Skin contact	Acute systemic effects	50 mg/kg
	Consumers	Ingestion	Acute systemic effects	21,96 mg/kg

### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
lithium chloride	Fresh water	10,4 mg/l
	Fresh water sediment	270 mg/kg
	Marine water	1,04 mg/l
	Marine sediment	27 mg/kg
	Soil	49,95 mg/kg
	Sewage treatment plant	140,2 mg/l

## 8.2 Exposure controls

### Personal protective equipment

Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles  
Wear face-shield and protective suit for abnormal processing problems.

Hand protection  
Material : butyl-rubber  
Break through time : > 120 min

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

### Environmental exposure controls

General advice : Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state : liquid  
Colour : yellow  
Odour : characteristic  
Odour Threshold : No data available

Melting point/range : < 0 °C  
Method: derived

Initial boiling point : > 240 °C  
Method: derived

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower : No data available

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flammability limit

Flash point : ca. 110 °C  
Method: 49 (Pensky-Martens)

Auto-ignition temperature : > 200 °C  
Method: M0062 (Analytics Wesel)

Decomposition temperature : No data available

pH : 7 (20 °C)  
Concentration: 1 %  
Method: Universal pH-value indicator

Viscosity

Viscosity, dynamic : ca. 1.750 mPa.s (20 °C)  
Method: P/K 20°C

Viscosity, kinematic : No data available

Solubility(ies)

Water solubility : immiscible  
Solubility in other solvents : No data available

Vapour pressure : < 2 hPa (20 °C)  
Method: derived

Density : ca. 1,029 g/cm<sup>3</sup> (20 °C, 1,013 hPa)  
Method: 4 (20°C oscillating U-tube)

Relative vapour density : No data available

### 9.2 Other information

Evaporation rate : No data available

Surface tension : No data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No decomposition if stored and applied as directed.

### 10.2 Chemical stability

No decomposition if stored and applied as directed.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : No decomposition if stored and applied as directed.

### 10.4 Conditions to avoid

Conditions to avoid : No data available

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### 10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents  
Acids  
Bases

### 10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

##### Product:

Acute oral toxicity : Acute toxicity estimate: 872,16 mg/kg  
Method: Calculation method

##### Components:

##### **lithium chloride:**

Acute oral toxicity : LD50 (Rat): 526 mg/kg  
GLP: No information available.  
Acute toxicity estimate: 526 mg/kg  
Method: Calculation method

Acute inhalation toxicity : LC50 (Rat): > 5,57 mg/l  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
GLP: yes

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes

#### Skin corrosion/irritation

##### Product:

Remarks : May irritate skin.  
May cause skin irritation in susceptible persons.

#### Serious eye damage/eye irritation

##### Product:

Remarks : Causes serious eye irritation.

##### Components:

##### **lithium chloride:**

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Species : Rabbit  
Method : OECD Test Guideline 405  
Result : Severe eye irritation  
GLP : yes

### Respiratory or skin sensitisation

**Product:**

Remarks : No data available

**Components:**

**lithium chloride:**

Test Type : Buehler Test  
Exposure routes : Skin contact  
Species : Guinea pig  
Method : OECD Test Guideline 406  
Result : Did not cause sensitisation on laboratory animals.  
GLP : yes

### Germ cell mutagenicity

**Product:**

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

### Carcinogenicity

**Product:**

Remarks : No data available

### Reproductive toxicity

**Product:**

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

### STOT - single exposure

**Product:**

Remarks : No data available

### STOT - repeated exposure

**Product:**

Remarks : No data available

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### Repeated dose toxicity

**Product:**

Remarks : No data available

### Aspiration toxicity

**Product:**

No data available

## 11.2 Information on other hazards

### Endocrine disrupting properties

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### Further information

**Product:**

Remarks : No data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

**Product:**

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

**Components:**

**lithium chloride:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 158 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 249 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202  
GLP: yes

NOEC (Daphnia magna (Water flea)): 63,4 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

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GLP: yes

Toxicity to algae/aquatic plants : (Desmodesmus subspicatus (green algae)): > 400 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes

### 12.2 Persistence and degradability

**Product:**

Biodegradability : Remarks: No data available

### 12.3 Bioaccumulative potential

**Product:**

Bioaccumulation : Remarks: No data available

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Endocrine disrupting properties

**Product:**

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 12.7 Other adverse effects

**Product:**

Additional ecological information : No data available

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.

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Dispose of as unused product.  
Do not re-use empty containers.

### SECTION 14: Transport information

#### 14.1 UN number or ID number

Not regulated as a dangerous good

#### 14.2 UN proper shipping name

Not regulated as a dangerous good

#### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

#### 14.4 Packing group

Not regulated as a dangerous good

#### 14.5 Environmental hazards

Not regulated as a dangerous good

#### 14.6 Special precautions for user

Not applicable

#### 14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

### SECTION 15: Regulatory information

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

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. Not applicable

Volatile organic compounds : Law on the incentive tax for volatile organic compounds (VOCV)  
no VOC duties

#### 15.2 Chemical safety assessment

Not applicable

### SECTION 16: Other information

Items where relevant changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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### Full text of H-Statements

H302 : Harmful if swallowed.  
H315 : Causes skin irritation.  
H319 : Causes serious eye irritation.

### Full text of other abbreviations

Acute Tox. : Acute toxicity  
Eye Irrit. : Eye irritation  
Skin Irrit. : Skin irritation  
CH SUVA : Switzerland. Limit values at the work place  
CH SUVA / TWA : Time Weighted Average  
CH SUVA / STEL : Short Term Exposure Limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

#### Classification of the mixture:

Acute Tox. 4 : H302  
Skin Irrit. 2 : H315  
Eye Irrit. 2 : H319

#### Classification procedure:

Calculation method  
Calculation method  
Calculation method

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