

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## PURABYK-R 5500

Version:  
2.1

Revision Date:  
14.02.2025

Date of last issue: 24.04.2023  
Print Date: 18.02.2025

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

#### 1.1 Product identifier

Trade name : PURABYK-R 5500  
Product code : 000000000000135716

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

Use of the Substance/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

Europe +44 1235 239670  
Middle East/Africa +44 1235 239671  
Americas +1 215 207 0061  
East/South East Asia +65 3158 1074  
(Local India: 000 800 100 7479)

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### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**  
Not a hazardous substance or mixture.

#### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008)**  
No hazard pictogram, no signal word, no hazard statement(s), no precautionary statement(s) required.

#### **Additional Labelling**

EUH210 Safety data sheet available on request.

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### 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 : Synthetic (modified) phyllosilicate

#### Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
tetrasodium pyrophosphate	7722-88-5 231-767-1 01-2119489794-17	Acute Tox. 4; H302 Eye Dam. 1; H318  Acute toxicity estimate  Acute oral toxicity: 300,03 mg/kg	>= 7 - < 10

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : 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 : Wash off with soap and water.  
Get medical attention immediately if irritation develops and persists.

In case of eye contact : Remove contact lenses.

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---

Protect unharmed eye.  
If eye irritation persists, consult a specialist.

If swallowed : 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 symptoms known or expected.

Risks : Irritating to eyes, respiratory system and skin.

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

Treatment : Treat symptomatically.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Water spray

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

Specific hazards during firefighting : Material can be slippery when wet.

### 5.3 Advice for firefighters

Special protective equipment for firefighters : 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.  
Avoid breathing dust.  
Keep people away from and upwind of spill/leak.  
Material can create slippery conditions.

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Only qualified personnel equipped with suitable protective equipment may intervene.  
Avoid dust formation.

### 6.2 Environmental precautions

Environmental precautions : Prevent further leakage or spillage if safe to do so.  
Try to prevent the material from entering drains or water courses.  
Local authorities should be advised if significant spillages cannot be contained.

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

Methods for cleaning up : Use approved industrial vacuum cleaner for removal.  
High efficiency particulate air filter (HEPA filter)  
Clean-up methods - large spillage  
Knock down dust with water spray jet.  
Shovel into suitable container for disposal.  
After cleaning, flush away traces with water.

Pick up and arrange disposal without creating dust.  
Sweep up and shovel.  
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 : For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.

Hygiene measures : General industrial hygiene practice.

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

Requirements for storage areas and containers : Electrical installations / working materials must comply with the technological safety standards.

Advice on common storage : No materials to be especially mentioned.

Further information on storage stability : Keep in a dry place.  
No decomposition if stored and applied as directed.

### 7.3 Specific end use(s)

Specific use(s) : No data available

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## PURABYK-R 5500

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### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

##### Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Magnesium sodium lithium fluoride silicate	Workers	Dermal	Acute systemic effects	40 mg/kg
	Workers	Inhalation	Acute systemic effects	10 mg/m <sup>3</sup>
	Remarks:inhalable fraction			
tetrasodium pyrophosphate	Consumers	Inhalation	Long-term systemic effects	0,68 mg/m <sup>3</sup>
	Workers	Inhalation	Long-term systemic effects	2,79 mg/m <sup>3</sup>
	Workers	Inhalation	Long-term systemic effects	2,79 mg/m <sup>3</sup>
	Consumers	Inhalation	Long-term systemic effects	0,68 mg/l

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

Substance name	Environmental Compartment	Value
Magnesium sodium lithium fluoride silicate	Water	0,1 mg/l
tetrasodium pyrophosphate	Sewage treatment plant	50 mg/l
	Fresh water	0,05 mg/l
	Marine water	0,005 mg/l
	Intermittent releases	0,5 mg/l
	Fresh water	0,05 mg/l
	Marine water	0,005 mg/l
	Sewage treatment plant	50 mg/l

#### 8.2 Exposure controls

##### Engineering measures

Ensure adequate ventilation.

Maintain air concentrations below occupational exposure standards.

Dust must be extracted directly at the point of origin.

##### Personal protective equipment

Eye/face protection : Safety glasses  
Wear safety glasses with side shields or goggles.  
If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.

Hand protection

Material : Protective gloves

Remarks : Use protective skin cream before handling the product. The

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## PURABYK-R 5500

Version:  
2.1

Revision Date:  
14.02.2025

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Skin and body protection : suitability for a specific workplace should be discussed with the producers of the protective gloves.  
: Work uniform or laboratory coat.  
Protective suit

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.  
Suitable mask with particle filter P3 (European Norm 143)

### Environmental exposure controls

General advice : Prevent further leakage or spillage if safe to do so.  
Try to prevent the material from entering drains or water courses.  
Local authorities should be advised if significant spillages cannot be contained.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state : powder

Colour : white

Odour : odourless

Odour Threshold : Not applicable

Melting point/ range : Not applicable

Boiling point/boiling range : Not applicable

Flammability : Will not burn

Upper explosion limit / Upper flammability limit : Not applicable

Lower explosion limit / Lower flammability limit : Not applicable

Flash point : Not applicable

Auto-ignition temperature : Not applicable

Decomposition temperature : No data available

pH : 9,7  
Concentration: 20 g/l  
(as a dispersion)

Viscosity  
Viscosity, dynamic : Not applicable

# SAFETY DATA SHEET

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## PURABYK-R 5500

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---

Viscosity, kinematic	:	Not applicable
Solubility(ies)		
Water solubility	:	partly soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	Not applicable
Relative density	:	No data available
Density	:	No data available
Bulk density	:	1.000 kg/m <sup>3</sup>
Relative vapour density	:	Not applicable

### 9.2 Other information

Evaporation rate	:	Not applicable
Surface tension	:	not determined

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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 : Stable under recommended storage conditions.  
No hazards to be specially mentioned.

### 10.4 Conditions to avoid

Conditions to avoid : Exposure to air or moisture over prolonged periods.  
No data available

### 10.5 Incompatible materials

Materials to avoid : Strong acids and oxidizing agents

### 10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
Commission Regulation (EU) 2020/878



## PURABYK-R 5500

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---

### SECTION 11: Toxicological information

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

##### Acute toxicity

Not classified due to lack of data.

##### Product:

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg  
Method: Calculation method

##### Components:

##### **tetrasodium pyrophosphate:**

Acute oral toxicity : LD50 (Rat): > 300 - < 2.000 mg/kg  
Method: OECD Test Guideline 420  
GLP: yes

Acute toxicity estimate: 300,03 mg/kg  
Method: Calculation method

##### Skin corrosion/irritation

Not classified due to lack of data.

##### Product:

Remarks : No data available

##### Components:

##### **tetrasodium pyrophosphate:**

Result : No skin irritation

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : No skin irritation  
GLP : yes

##### Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

##### Product:

Species : Bovine corneal opacity and permeability assay (BCOP)  
Method : OECD Test Guideline 437  
Result : No eye irritation  
GLP : yes

##### Components:

##### **tetrasodium pyrophosphate:**

Assessment : Risk of serious damage to eyes.



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Version:  
2.1

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14.02.2025

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

### Respiratory or skin sensitisation

#### Skin sensitisation

Not classified due to lack of data.

#### Respiratory sensitisation

Not classified due to lack of data.

#### Product:

Remarks : No data available

#### Components:

##### tetrasodium pyrophosphate:

Test Type : Mouse Local Lymph Node assay (LLNA)  
Exposure routes : Skin contact  
Species : Mouse  
Method : OECD Test Guideline 429  
Result : Not a skin sensitizer.  
GLP : yes

### Germ cell mutagenicity

Not classified due to lack of data.

#### Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

### Carcinogenicity

Not classified due to lack of data.

#### Product:

Remarks : No data available

### Reproductive toxicity

Not classified due to lack of data.

#### Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

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Commission Regulation (EU) 2020/878



## PURABYK-R 5500

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14.02.2025

Date of last issue: 24.04.2023  
Print Date: 18.02.2025

---

### STOT - single exposure

Not classified due to lack of data.

#### Product:

Remarks : No data available

### STOT - repeated exposure

Not classified due to lack of data.

#### Product:

Remarks : No data available

### Repeated dose toxicity

#### Product:

Remarks : No data available

### Aspiration toxicity

Not classified due to lack of data.

#### 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

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### Components:

#### **tetrasodium pyrophosphate:**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 203  
GLP: yes
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h  
Test Type: static test  
GLP: yes
- Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes
- NOEC (Desmodesmus subspicatus (green algae)): > 100 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201  
GLP: yes
- Toxicity to microorganisms : EC50 (activated sludge): > 1.000 mg/l  
Method: OECD Test Guideline 209

### 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.

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### 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

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## SECTION 14: Transport information

### 14.1 UN number or ID number

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

### 14.2 UN proper shipping name

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

### 14.3 Transport hazard class(es)

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

### 14.4 Packing group

ADR : Not regulated as a dangerous good

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## PURABYK-R 5500

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**RID** : Not regulated as a dangerous good  
**IMDG** : Not regulated as a dangerous good  
**IATA (Cargo)** : Not regulated as a dangerous good  
**IATA (Passenger)** : 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.

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## SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Not applicable  
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

### 15.2 Chemical safety assessment

Not applicable

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## 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.

### Full text of H-Statements

H302 : Harmful if swallowed.  
H318 : Causes serious eye damage.

### Full text of other abbreviations

Acute Tox. : Acute toxicity  
Eye Dam. : Serious eye damage

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---

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - 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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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