

# SAFETY DATA SHEET

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



## BYK-012

Version: 5.3  
SDB\_IE

Revision Date: 16.06.2026

Date of last issue: 17.03.2023  
Print Date: 23.06.2026

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

#### 1.1 Product identifier

Trade name : BYK-012  
Product code : 000000000000107695

This substance/ mixture contains nanoforms (according to REACH Regulation)

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

Use of the Substance/Mixture : Defoamer

#### 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

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Long-term (chronic) aquatic hazard, Category 3 H412: Harmful to aquatic life with long lasting effects.

#### 2.2 Label elements

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

Hazard statements : H412 Harmful to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**  
P273 Avoid release to the environment.

**Disposal:**  
P501 Dispose of contents/ container to an approved waste disposal plant.

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Commission Regulation (EU) 2020/878



## BYK-012

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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.

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## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Compound of polyether with hydrophobic particles

#### Components

Remarks : No hazardous ingredients

The product itself has been tested.

This substance/ mixture contains nanoforms (according to REACH Regulation)

#### Components:

##### **Silicon dioxide:**

#### Particle characteristics

Assessment : This substance/ mixture contains nanoforms (according to REACH Regulation)

Shape : Shape: spheres

Crystallinity : Crystallinity: amorphous

Surface treatment /Coatings : Surface treatment /Coatings: yes  
Properties of Coated Particle: hydrophobic

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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : Do not leave the victim unattended.

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Commission Regulation (EU) 2020/878



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- If inhaled : If unconscious, place in recovery position and seek medical advice.  
If symptoms persist, call a physician.
- In case of eye contact : Remove contact lenses.  
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 information available.

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

Treatment : No information available.

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## 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

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)

### 5.3 Advice for firefighters

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

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by  
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## BYK-012

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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 : Try to prevent the material from entering drains or water courses.

Prevent product from entering drains.  
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 : Wipe up with absorbent material (e.g. cloth, fleece).  
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 : Normal measures for preventive fire protection.

Hygiene measures : General industrial hygiene practice.

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

Requirements for storage areas and containers : Containers which are opened must be carefully resealed and kept upright to prevent leakage. 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 : No decomposition if stored and applied as directed.

#### 7.3 Specific end use(s)

Specific use(s) : No data available

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## BYK-012

Version: 5.3  
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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.

#### 8.2 Exposure controls

##### Personal protective equipment

Eye/face protection	:	Safety glasses
Hand protection	:	
Material	:	PVC disposable gloves
Break through time	:	120,00 min
Skin and body protection	:	Protective suit
Respiratory protection	:	No personal respiratory protective equipment normally required.

##### Environmental exposure controls

General advice	:	Try to prevent the material from entering drains or water courses. Prevent product from entering drains. If the product contaminates rivers and lakes or drains inform respective authorities.
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### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	light yellow
Odour	:	characteristic
Odour Threshold	:	No data available
Melting point/ range	:	< 0 °C Method: derived
Initial boiling point	:	> 200 °C Method: derived
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available

# SAFETY DATA SHEET

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## BYK-012

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Revision Date: 16.06.2026

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---

Flash point	:	> 100,00 °C Method: 49 (Pensky-Martens)
Auto-ignition temperature	:	> 200,00 °C Method: DIN 51794
Decomposition temperature	:	No data available
pH	:	7 (20 °C) Concentration: 1 % Method: Universal pH-value indicator
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Solubility(ies)		
Water solubility	:	immiscible
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapour pressure	:	< 1 hPa Method: derived
Relative density	:	No data available
Density	:	1,0100 g/cm <sup>3</sup> (20,00 °C) Method: 4 (20°C oscillating U-tube)
Bulk density	:	Not applicable
Relative vapour density	:	No data available
Particle characteristics		
Assessment	:	This substance/ mixture contains nanoforms (according to REACH Regulation)
Particle size	:	Further particle properties for nanomaterials see section 3

### 9.2 Other information

Flammability (liquids)	:	Sustains combustion
Evaporation rate	:	No data available
Surface tension	:	No data available

# SAFETY DATA SHEET

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## BYK-012

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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 : No data available

#### 10.5 Incompatible materials

Materials to avoid : Strong oxidizing agents

#### 10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

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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 : Remarks: No data available

##### Skin corrosion/irritation

Not classified due to lack of data.

##### Product:

Remarks : No data available

##### Serious eye damage/eye irritation

Not classified due to lack of data.

##### Product:

Remarks : No data available

##### Respiratory or skin sensitisation

##### Skin sensitisation

Not classified due to lack of data.

# SAFETY DATA SHEET

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



## BYK-012

Version: 5.3  
SDB\_IE

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---

### Respiratory sensitisation

Not classified due to lack of data.

#### Product:

Remarks : No data available

### 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

### 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.

# SAFETY DATA SHEET

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



## BYK-012

Version: 5.3  
SDB\_IE

Revision Date: 16.06.2026

Date of last issue: 17.03.2023  
Print Date: 23.06.2026

### Product:

No data available

## 11.2 Information on other hazards

### Endocrine disrupting properties

Not classified due to lack of data.

### 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 : Solvents may degrease the skin.

Remarks : No data available

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## SECTION 12: Ecological information

### 12.1 Toxicity

### Product:

Toxicity to fish : LC50 (Cyprinodon variegatus (sheepshead minnow)): > 17 mg/l  
Exposure time: 96 h  
Method: PARCOM Protocol Part B  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : LC50 (Acartia Tonsa): 20,5 mg/l  
Exposure time: 48 h  
Method: ISO 14669 and PARCOM method  
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Skeletonema costatum (marine diatom)): 17 mg/l  
Exposure time: 72 h  
Method: ISO 10253  
GLP: yes

Toxicity to soil dwelling organisms : 1.886,2 mg/kg  
Exposure time: 10 d  
Species: Corophium volutator (sandhopper)  
Method: OSPAR protocol (2006)  
GLP:yes

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### Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

#### Product:

Biodegradability : Result: Not rapidly biodegradable  
Exposure time: 28 d  
Method: OECD Test Guideline 306  
GLP: yes

### 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 : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Harmful to aquatic life with long lasting effects.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.

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Commission Regulation (EU) 2020/878



## BYK-012

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SDB\_IE

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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  
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 : Conditions of restriction for the

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the market and use of certain dangerous substances,  
mixtures and articles (Annex XVII)

REACH - Candidate List of Substances of Very High  
Concern for Authorisation (Article 59).

REACH - List of substances subject to authorisation  
(Annex XIV)

Seveso III: Directive 2012/18/EU of the  
European Parliament and of the Council on the  
control of major-accident hazards involving  
dangerous substances.

following entries should be  
considered:

Number on list 3

: This product does not contain  
substances of very high concern  
(Regulation (EC) No  
1907/2006 (REACH), Article 57).

: Not applicable

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 other abbreviations

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 Harmonised 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 Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO -  
International Organisation for Standardisation; 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

# SAFETY DATA SHEET

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## BYK-012

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Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organisation 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:

Aquatic Chronic 3                      H412

#### Classification procedure:

Based on product data or assessment

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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