

SAFETY DATA SHEET

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



BYK-378

Version: 5.0
SDB_IS

Revision Date: 24.03.2026

Date of last issue: 15.07.2024
Print Date: 31.03.2026

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

1.1 Product identifier

Trade name : BYK-378

UFI : PEFD-F0D9-F00A-EC51

Product code : 000000000000113230

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

Use of the Substance/Mixture : Surface 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)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Long-term (chronic) aquatic hazard, Category 2 H411: Toxic to aquatic life with long lasting effects.

Persistent, bioaccumulative and toxic EUH440: Accumulates in the environment and living organisms including in humans.
Very persistent and very bioaccumulative EUH441: Strongly accumulates in the environment and living organisms including in humans.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

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Hazard pictograms	:		
Signal word	:	Danger	
Hazard statements	:	H411 EUH441	Toxic to aquatic life with long lasting effects. Strongly accumulates in the environment and living organisms including in humans.
Precautionary statements	:	Prevention: P201 P202 P273 Response: P391 Disposal: P501	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid release to the environment. Collect spillage. Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

- 556-67-2 octamethylcyclotetrasiloxane [D4]

2.3 Other hazards

This substance/mixture contains components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

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 : Polyether modified dimethylpolysiloxane

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
octamethylcyclotetrasiloxane [D4]	556-67-2 209-136-7	Repr. 2; H361f Aquatic Chronic 1;	>= 1 - < 2,5

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	01-2119529238-36	H410 PBT; EUH440 vPvB; EUH441 Flam. Liq. 3; H226	
		M-Factor (Chronic aquatic toxicity): 10	
decamethylcyclopentasiloxane	541-02-6 208-764-9	PBT; EUH440 vPvB; EUH441	$\geq 1 - < 3$
dodecamethylcyclohexasiloxane	540-97-6 208-762-8	PBT; EUH440 vPvB; EUH441	$\geq 0,25 - < 0,5$

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 eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
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.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Foam

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Carbon dioxide (CO₂)
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

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.

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 product from entering drains.
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 : Neutralize with chalk, alkali solution or ammonia.
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.

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.

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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 : 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. 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.

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

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
octamethylcyclotetrasiloxane [D4]	Consumers	Oral	Acute systemic effects, Long-term systemic effects	3,7 mg/kg
	Consumers	Inhalation	Acute systemic effects, Acute local effects, Long-term systemic effects, Long-term local effects	13 mg/m ³
	Workers	Inhalation	Acute systemic effects, Acute local effects, Long-term systemic effects, Long-term local effects	73 mg/m ³

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

Substance name	Environmental Compartment	Value
octamethylcyclotetrasiloxane [D4]	Fresh water	1,5 µg/l
	Marine water	0,15 µg/l
	Fresh water sediment	0,64 mg/kg

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	Soil	0,84 mg/kg
	Sewage treatment plant	10 mg/l
	Marine sediment	0,064 mg/kg
	Hazard for predators: secondary poisoning	41 mg/kg

8.2 Exposure controls

Personal protective equipment

Eye/face protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Hand protection

Material : Nitrile rubber
Break through time : > 480 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 product from entering drains.
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 : light yellow

Odour : not significant

Odour Threshold : No data available

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

Boiling point/boiling range : > 200 °C
Method: derived

Upper explosion limit / Upper
flammability limit : No data available

Lower explosion limit / Lower
flammability limit : No data available

Flash point : > 100,00 °C

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	Method: 49 (Pensky-Martens)
Auto-ignition temperature	: > 200 °C Method: DIN 51 794/ DIN prEN 14 522
Decomposition temperature	: No data available
pH	: 4 (20 °C) Concentration: 1 % Method: Universal pH-value indicator
Viscosity	
Viscosity, dynamic	: 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 (20 °C) Method: derived
Relative density	: No data available
Density	: 1,0200 g/cm ³ (20 °C, 1.013 hPa) Method: 4 (20°C oscillating U-tube)
Bulk density	: Not applicable
Relative vapour density	: No data available

9.2 Other information

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

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.

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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.

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.

Respiratory sensitisation

Not classified due to lack of data.

Product:

Remarks : No data available

Components:

octamethylcyclotetrasiloxane [D4]:

Species : Guinea pig
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.
GLP : yes

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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

Aspiration toxicity

Not classified due to lack of data.

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

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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

SECTION 12: Ecological information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

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 components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB).

Components:

octamethylcyclotetrasiloxane [D4]:

Assessment : Persistent, Bioaccumulative and Toxic (PBT).
: Very persistent and very bioaccumulative (vPvB).

decamethylcyclopentasiloxane:

Assessment : Persistent, Bioaccumulative and Toxic (PBT).
: Very persistent and very bioaccumulative (vPvB).

dodecamethylcyclohexasiloxane:

Assessment : Persistent, Bioaccumulative and Toxic (PBT).
: Very persistent and very bioaccumulative (vPvB).

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14: Transport information

14.1 UN number or ID number

ADR : UN 3082
IMDG : UN 3082
IATA : UN 3082

14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Siloxanes)

IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(Siloxanes)

IATA : Environmentally hazardous substance, liquid, n.o.s.
(Siloxanes)

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14.3 Transport hazard class(es)

ADR : 9
IMDG : 9
IATA : 9

14.4 Packing group

ADR
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : -

IMDG
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Remarks : IMDG Code segregation group - none

IATA (Cargo)
Packing instruction (cargo aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous Dangerous Goods

IATA (Passenger)
Packing instruction (passenger aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous Dangerous Goods

14.5 Environmental hazards

ADR
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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) : Conditions of restriction for the following entries should be considered:
Number on list 3

Number on list 70:
octamethylcyclotetrasiloxane [D4],
decamethylcyclopentasiloxane,
dodecamethylcyclohexasiloxane

Number on list 75: If you intend to use this product as tattoo ink, please contact your vendor.
: decamethylcyclopentasiloxane

octamethylcyclotetrasiloxane [D4]

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

octamethylcyclotetrasiloxane [D4]

dodecamethylcyclohexasiloxane
- REACH - List of substances subject to authorisation (Annex XIV) : Not applicable
Fire Hazard Class : -: -

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. E2 ENVIRONMENTAL HAZARDS

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.

Full text of H-Statements

EUH440 : Accumulates in the environment and living organisms including in humans.

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EUH441	:	Strongly accumulates in the environment and living organisms including in humans.
H226	:	Flammable liquid and vapour.
H361f	:	Suspected of damaging fertility.
H410	:	Very toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Flam. Liq.	:	Flammable liquids
PBT	:	Persistent, bioaccumulative and toxic
Repr.	:	Reproductive toxicity
vPvB	:	Very persistent and very bioaccumulative

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 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; TECl - 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 2 H411

PBT EUH440

vPvB EUH441

Classification procedure:

Calculation method

Calculation method

Calculation method

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