

Safety Data Sheet

AB 111176

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Commission Regulation (EU) 2020/878 - Europe Date of revision 11.12.2024 Version 0.11

1. Identification of the Substance and the Company

1.1 Product identifier

Product name	Hexamethyldisiloxane; 98%
CAS number	107-46-0
Product code	AB111176

1.2 Identified uses

Chemicals used in research and development, analysis and production

1.3 Details of the supplier of the safety data sheet

Company details	abcr GmbH Im Schlehert 10 76187 Karlsruhe Germany
Telephone	+49 (0)721 950 610
Email	sdb@abcr.com

1.4 Emergency telephone number

Emergency CONTACT (24-Hour-Number): GBK GmbH +49 (0)6132-84463 (multilingual)

2. Hazards identification

2.1 Classification of the substance or mixture

Product definition Substance

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

H400 AQUATIC HAZARD (ACUTE) Catego		
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2.2 Label elements

Hazard pictograms



Signal word Hazard statements Danger H225 - Highly flammable liquid and vapor. H410 - Very toxic to aquatic life with long lasting effects.



Precautionary statements	 P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P273 - Avoid release to the environment. P391 - Collect spillage.
Hazardous ingredients	Hexamethyldisiloxane; 98%
Supplemental label elements	Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain	Not applicable.

2.3 Other hazards

dangerous substances, mixtures and articles

Product meets the criteria for PBT or vPvB according to Regulation	PBT	Р	В	Т	vPvB	vP	vB
(EC) No. 1907/2006, Annex XIII	No	N/A	N/A	No	N/A	N/A	N/A
Other hazards which do not result in classification	None know	ו.					

See Section 11 for more detailed information on health effects and symptoms.

3. Composition/information on ingredients

Substance/mixture

Mono-constituent substance

Product/ingredient name	Identifiers	%	Classification Regulation (EC) No. 1272/2008 [CLP]	Specific Conc. Limits, M-factors and ATEs	Туре
Hexamethyldisiloxane; 98%	EC: 203-492-7 CAS: 107-46-0	100	Flam. Liq. 2, H225 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
			See Section 16 for the full text of the H statements declared above.		

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Туре

[1] Constituent

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



4. First aid measures

4.1 Description of first aid measures

Eye contact	Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Skin contact	Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
Ingestion	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects	No known significant effects or critical hazards.
Over-exposure signs/	No specific data.
symptoms	

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Specific treatments	No specific treatment.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	In case of fire, use water spray (fog), foam, dry chemical or $\ensuremath{CO_2}$.
Unsuitable extinguishing media	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	Highly flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous combustion products	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides

5.3 Advice for firefighters

fighters

Special precautions for fire-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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.



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.

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 spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Put on appropriate personal protective equipment.
For emergency responders	If specialized 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 spilled 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and materials for containment and cleaning up

Small spill	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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. Use spark-proof tools and explosion-proof equipment. Approach 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 spilled product.

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.



7. Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. 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

Keep under inert atmosphere.

Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

Seveso Directive - Reporting thresholds

Danger criteria

	Notification and MAPP threshold	Safety report threshold
-	5000 tonne 100 tonne	50000 tonne 200 tonne

7.3 Specific end use(s)

Recommendations	Not available.
Industrial sector specific	Not available.
solutions	



8. Exposure controls/Personal protective equipment

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. 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 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.

Derived effect levels

Product/ingredient name	Туре	Exposure	Value	Population	Effects
Hexamethyldisiloxane; 98%	DNEL	Short term Oral	0,27 mg/	General	Systemic
			kg bw/day	population	
	DNEL	Long term Oral	0,27 mg/	General	Systemic
			kg bw/day	population	
	DNEL	Short term	13,3 mg/	General	Systemic
		Inhalation	m³	population	
	DNEL	Long term	13,3 mg/	General	Systemic
		Inhalation	m³	population	
	DNEL	Short term	53,4 mg/	Workers	Systemic
		Inhalation	m³		
	DNEL	Long term	53,4 mg/	Workers	Systemic
		Inhalation	m³		
	DNEL	Short term Dermal	167 mg/kg	General	Systemic
			bw/day	population	
	DNEL	Long term Dermal	167 mg/kg	General	Systemic
			bw/day	population	_
	DNEL	Short term Dermal	333 mg/kg	Workers	Systemic
			bw/day		
	DNEL	Long term Dermal	333 mg/kg	Workers	Systemic
			bw/day		

Predicted effect concentrations

No PECs available.

8.2 Exposure controls

Appropriate engineering controls

Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

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: safety glasses with side-shields.
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.
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. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
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.
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.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Appearance	
Physical state	Liquid.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	-67°C
Initial boiling point and boiling range	99 °C
Flammability (solid, gas)	Not available.



abcr

Upper/lower flan explosive limits	nmability or	Not available.	
Flash point		Closed cup: -	1°C
Auto-ignition ter	mperature	340°C	
Decomposition	temperature	Not available.	
Viscosity		Dynamic: 0,5	mPa·s
Solubility(ies) Not available.			
Solubility at room	m temperature	Insoluble	[H2O]
Partition coeffic water	ient: n-octanol/	5,3	
Vapor pressure		4,5 kPa	
Evaporation rate)	Not available.	
Relative density		Not available.	
Density		0,764 g/cm ³	
Vapor density		Not available.	
Explosive prope	erties	Not available.	
Oxidizing prope	rties	Not available.	
Particle characte	eristics		
Median particle	size	Not applicable	
9.2 Other informa	ation		
Burning time		Not applicable	Э.
Burning rate		Not applicable	Ð.
No additional info	rmation.		

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

Moisture-sensitive material. Handle under inert gas.

10.3 Possibility of hazardous reactions

Vapors may form explosive mixtures with air.

10.4 Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. moisture

10.5 Incompatible materials



Reactive or incompatible with the following materials: peroxides oxidizing materials strong acids strong alkalis

10.6 Hazardous decomposition products

Formaldehyde.

11. See toxicological information

11.1 Information on toxicological effects

Acute toxicity Conclusion/Summary Acute toxicity estimates N/A	Not available.
Irritation/Corrosion Conclusion/Summary	Not available.
Sensitizer Conclusion/Summary	Not available.
Mutagenicity Conclusion/Summary	Not available.
Carcinogenicity Conclusion/Summary Reproductive toxicity	Not available.
Conclusion/Summary	Not available.
Teratogenicity Conclusion/Summary	Not available.
Information on the likely routes of exposure	Not available.
Potential acute health e	ffects
Inhalation	No known significant
Skin contact	No known significant
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Inhalation	No known significant effects or critical hazards.
Skin contact	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
Eye contact	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics



Inhalation	No specific data.
Ingestion	No specific data.
Skin contact	No specific data.
Eye contact	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure		
Potential immediate effects	Not available.	
Potential delayed effects	Not available.	
Long term exposure		
Potential immediate effects	Not available.	
Potential delayed effects	Not available.	
Potential chronic health effects		

Not available.

Conclusion/Summary	Not available.
General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

12. Ecological Information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Hexamethyldisiloxane; 98%	EC50 0,22 mg/l	Algae - Pseudokirchneriella subcapitata	95 hours
	LC50 0,46 mg/l	Fish - Oncorhynchus mykiss	96 hours

Conclusion/Summary

Not available.

12.2 Persistence and degradability

Conclusion/Summary Not available.



12.3 Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Hexamethyldisiloxane; 98%	5,3	-	High

12.4 Mobility in soil

Soil/water partition coefficient
(Koc)Not available.MobilityNot available.

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	Р	В	Т	vPvB	vP	vB
Hexamethyldisiloxane; 98%	No	N/A	N/A	No	N/A	N/A	N/A

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

13. Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal	The generation of waste should be avoided or minimized 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.
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 minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.
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. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.



14. Transport information

	ADR/RID	ADN	IMDG	ΙΑΤΑ
14.1 UN number or ID number	UN1993	UN1993	UN1993	UN1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (Hexamethyldisiloxane; 98%)	FLAMMABLE LIQUID, N.O.S. (Hexamethyldisiloxane; 98%)	FLAMMABLE LIQUID, N.O.S. (Hexamethyldisiloxane; 98%). Marine pollutant (Hexamethyldisiloxane; 98%)	Flammable liquid, n.o. s. (Hexamethyldisiloxane; 98%)
14.3 Transport hazard class(es)	3	3	3	3
14.4 Packing group	11	11	II	II
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.
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.	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.	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.	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.
Additional information	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Hazard</u> <u>identification</u> <u>number</u> 33 <u>Limited quantity</u> 1 L <u>Special provisions</u> 601, 274, 640C <u>Tunnel code</u> (D/E)	The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Special provisions</u> 274, 601, 640C	The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. <u>Emergency</u> <u>schedules</u> F-E, _S-E_ <u>Special provisions</u> 274	The environmentally hazardous substance mark may appear if required by other transportation regulations. Quantity limitation Passenger and Cargo Aircraft: 5 L. Packaging instructions: 353. Cargo Aircraft Only: 60 L. Packaging instructions: 364. Limited Quantities - Passenger Aircraft: 1 L. Packaging instructions: Y341. Special provisions A3



14.7 Transport in bulk according to IMO instruments

Not available.

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 authorization

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	Not applicable.		
Other EU regulations			
Industrial emissions (integrated pollution prevention and control) - Air	Not listed		
Industrial emissions (integrated pollution prevention and control) - Water	Not listed		
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 controlled under the Seveso Directive. **Danger criteria**

Category	
P5c E1	
E1	

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

Not listed.

Inventory list	
China	This material is listed or exempted.
Canada	This material is listed or exempted.
Australia	This material is listed or exempted.
Eurasian Economic Union	Russian Federation inventory: Not determined.
Japan	Japan inventory (CSCL): This material is listed or exempted. Japan inventory (ISHL): This material is listed or exempted.
New Zealand	This material is listed or exempted.
Philippines	This material is listed or exempted.
Republic of Korea	This material is listed or exempted.
Taiwan	This material is listed or exempted.
Thailand	Not determined.
Turkey	This material is listed or exempted.
United States	This material is listed or exempted.
Viet Nam	Not determined.
15.2 Chemical Safety Assessment	Not available.

16. Other information

✓ Indicates information that has changed from previously issued version.

 Abbreviations and acronyms
 ATE = Acute Toxicity Estimate

 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

 DNEL = Derived No Effect Level

 EUH statement = CLP-specific Hazard statement

 PNEC = Predicted No Effect Concentration

 RRN = REACH Registration Number



Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classific	ation	Justification
Flam. Liq. 2, H225 Aquatic Acute 1, H400 Aquatic Chronic 1, H410		Expert judgment Expert judgment Expert judgment
Full text of abbreviated H statements	H400 Very toxic to a	ble liquid and vapor. quatic life. quatic life with long lasting effects.
Full text of classifications [CLP/GHS]	Aquatic Acute 1 Aquatic Chronic 1 Flam. Liq. 2	AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1 FLAMMABLE LIQUIDS - Category 2
Full text of classifications [CLP/GHS]	Aquatic Acute 1 Aquatic Chronic 1 Flam. Liq. 2	AQUATIC HAZARD (ACUTE) - Category 1 AQUATIC HAZARD (LONG-TERM) - Category 1 FLAMMABLE LIQUIDS - Category 2
Date of issue/ Date of revision	11.12.2024	
Version	0.11	

Notice to reader

The above information is based on our present state of knowledge. It should not therefore be construed as guaranteeing specific properties of the products described or their suitability for a particular application.