

Technical datasheet

PE 1000 (Polyethylene/UHMW-PE)

Example of application
› mechanical engineering; slide rail; conveyor technology

Advantages	Disadvantages
› excellent anti-friction properties › high chemical resistance › very high impact resistance	› high thermalexpansion › bad mechanical properties

Basic information	Specification
Format	round material: 20 mm up to 200 mm available in 2 m length sheets: 1 mm up to 100 mm available in 2 m x 1 m

Physical properties	Standard term/Specification*	Unit	Testing method
Density	0.93	g/cm ³	ISO 1183
Moisture ingress	0.01	%	DIN EN ISO 62

Mechanical properties	Standard term/Specification*	Unit	Testing method
Tensile strength	40	MPa	DIN EN ISO 527
Elongation at break	50	%	DIN EN ISO 527
E-Module	760	MPa	DIN EN ISO 527
Notch toughness	fracture free	kJ/m ²	ISO 179
Rochwellhardness	38	MPa	DIN EN ISO 2039

Thermal properties	Standard term/Specification*	Unit	Testing method
Thermal conductivity	0.41	W/(m·K)	DIN 52612
Linear thermal expansion coefficient based on a fixed initial length	2.0	K ⁻¹ · 10 ⁻⁴	DIN 53752
	4.0	mm	At initial length of 1.000 mm and a temperature difference of 20 °C.
Max. operating temperature, long-term	90	°C	
Max. operating temperature, short-term	n.sp.	°C	
Min. operating temperature, long-term	-150	°C	

Electrical properties	Standard term/Specification*	Unit	Testing method
Resistance	10 ¹³	Ω·cm	DIN IEC 60093
Outer surface coefficient	10 ¹³	Ω	DIN IEC 60093
Puncture resistance	45	kV/mm	DIN EN 60243

Legend
n.sp. = not specified

Should you require binding and exact values, please ask for the appropriate factory certificate. This may incur additional costs. Please note that all specifications are standard values only, which are subject to production-related fluctuations.

*Higher specification on request.

All information based on current knowledge and experience. Information provided shall not exempt the contractor or user from conducting own tests. A legally binding warranty as to product features or its suitability for specific purposes may not be derived therefrom. Compliance with any proprietary rights as well as existing laws or regulations is the responsibility of the recipient of our products. No liability assumed for printing and any other errors. Technical data subject to change without notice. Reproduction or duplication of this document or its contents - whole or in part - is only permitted with express approval by company noltewerk. The German version of this data shall prevail. As of 1119.



technical
plastics