

# Technical datasheet

## PE 1000 (Polyethylene/UHMW-PE) blue MD

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

Advantages	Disadvantages
› metal detectable › good anti-friction properties › high chemical resistance › very high impact resistance › good wear resistance	› high thermal expansion › bad mechanical properties

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

Physical properties	Standard term/Specification*	Unit	Testing method
<b>Density</b>	1.2	g/cm <sup>3</sup>	DIN 53479
<b>Moisture ingress</b>	0.01	%	

Mechanical properties	Standard term/Specification*	Unit	Testing method
<b>Tensile strength</b>	> 17	MPa	DIN 53455
<b>Elongation at break</b>	> 200	%	DIN ISO R 527
<b>E-Module</b>	1.000	N/mm <sup>2</sup>	DIN 53457
<b>Notch toughness</b>	< 100	kJ/m <sup>2</sup>	DIN 53453
<b>Rochwellhardness</b>	42	N/mm <sup>2</sup>	DIN ISO 2039 part 1

Thermal properties	Standard term/Specification*	Unit	Testing method
<b>Thermal conductivity</b>	0.42	W/(m·K)	DIN 52612
<b>Linear thermal expansion coefficient based on a fixed initial length</b>	2.0	K <sup>-1</sup> · 10 <sup>-4</sup>	DIN 53752
	4.0	mm	At initial length of 1.000 mm and a temperature difference of 20 °C.
<b>Max. operating temperature, long-term</b>	80	°C	
<b>Max. operating temperature, short-term</b>	n.sp.	°C	
<b>Min. operating temperature, long-term</b>	-200	°C	

Electrical properties	Standard term/Specification*	Unit	Testing method
<b>Resistance</b>	10 <sup>13</sup>	Ω·cm	DIN IEC 60093
<b>Outer surface coefficient</b>	10 <sup>12</sup>	Ω	DIN IEC 60093
<b>Puncture resistance</b>	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.

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