

Technical Data Sheet



Polystone[®] M BIO (mb) natural

PE-UHMW / PE 1000

Typical characteristics

- Low coefficient of friction
- Good wear properties
- Good impact strength

Typical industries

- Conveyor Technology & Automation
- Mechanical Engineering Industry
- Food Industry

Sustainability

- Mass-balanced
- Bio-based raw materials reduce the use of fossil raw materials

	Test method	Unit	Guideline value
General properties			
Density	DIN EN ISO 1183-1	g / cm ³	>0,93
Water absorption	DIN EN ISO 62	%	0,01
Flammability (Thickness 3 mm / 6 mm)	UL 94		HB
Molecular weight	-	10 ⁶ g/mol	~ 9
Mechanical properties			
Elongation at break	DIN EN ISO 527	%	>50
Tensile modulus of elasticity	DIN EN ISO 527	MPa	>650
Notched impact strength	DIN EN ISO 11542	kJ / m ²	>100
Shore hardness	DIN EN ISO 868	scale D	>63
Thermal properties			
Melting temperature	ISO 11357-3	°C	130 ... 135
Thermal conductivity	DIN 52612-1	W / (m * K)	0,40
Thermal capacity	DIN 52612	kJ / (kg * K)	1,90
Coefficient of linear thermal expansion	DIN 53752	10 ⁻⁶ / K	150 ... 230
Service temperature, long term	Average	°C	-250 ... 80
Service temperature, short term (max.)	Average	°C	130
Vicat softening temperature	DIN EN ISO 306, Vicat B	°C	80
Electrical properties			
Dielectric constant	IEC 60250		2,3
Dielectric dissipation factor (10 ⁶ Hz)	IEC 60250		0,0001

ri-inquiry@roechling.com • www.roechling.com/industrial/materials



	Test method	Unit	Guideline value
Volume resistivity	DIN EN 62631-3-1	$\Omega \cdot \text{cm}$	$>10^{14}$
Surface resistivity	DIN EN 62631-3-2	Ω	$>10^{14}$
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV / mm	>40

The data stated above are average values ascertained by statistical tests on a regular basis. They are in accordance with DIN EN 15860. The data above are provided purely for information and shall not be regarded as binding unless expressly agreed in a contract of sale.



ri-inquiry@roechling.com • www.roechling.com/industrial/materials

Print: 25/05/2026 • Release: 12/05/2025 • Version: 2.0
 PIM-ID: 775124 • PIM-Code: 353-29-12.126.162-11.5.5-5.9-5
 Company-IDs: 20000-1

Page 2 / 2 (Dates in DD/MM/YYYY)

