

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 |

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| | 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.



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