

### Technical Data Sheet



# Polystone<sup>®</sup> M BIO (mb) natural

PE-UHMW / PE 1000

#### Typical characteristics

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

#### Typical industries

- 컨베이어 기술 및 자동화
- 기계 공학 산업
- Food Industry

#### Sustainability

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

|  | Test method             | Unit                  | Guideline value   |
|--|-------------------------|-----------------------|-------------------|
| <b>General properties</b>                          |                         |                       |                   |
| Density  | DIN EN ISO 1183-1       | g / cm <sup>3</sup>   | >0,93             |
| Water absorption                                   | DIN EN ISO 62           | %                     | <0,01             |
| Flammability (Thickness 3 mm / 6 mm)               | UL 94                   |                       | HB                |
| Molecular weight                                   | -                       | 10 <sup>6</sup> g/mol | ~ 9               |
| <b>Mechanical properties</b>                       |                         |                       |                   |
| 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 <sup>2</sup>   | >100              |
| Shore hardness                                     | DIN EN ISO 868          | scale D               | >63               |
| <b>Thermal properties</b>                          |                         |                       |                   |
| 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 <sup>-6</sup> / 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                |
| <b>Electrical properties</b>                       |                         |                       |                   |
| Dielectric constant                                | IEC 60250               |                       | 2,3               |
| Dielectric dissipation factor (10 <sup>6</sup> Hz) | IEC 60250               |                       | 0,0001            |
| Volume resistivity                                 | DIN EN 62631-3-1        | Ω * cm                | >10 <sup>14</sup> |

[ri-inquiry@roechling.com](mailto:ri-inquiry@roechling.com) • [www.roechling.com/industrial/materials](http://www.roechling.com/industrial/materials)



|                            | Test method      | Unit     | Guideline value |
|----------------------------|------------------|----------|-----------------|
| Surface resistivity        | DIN EN 62631-3-2 | $\Omega$ | $>10^{14}$      |
| 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](mailto:ri-inquiry@roechling.com) • [www.roechling.com/industrial/materials](http://www.roechling.com/industrial/materials)

Print: 15/06/2026 • 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)

