

Technical data sheet

KOTERM PE1000ABAC (UHMWPE)

Key benefits

Antimicrobial effect
High abrasion and wear resistance
Chemical and corrosion resistance

General application

Food processing industry
Medical application technology
Bottling industry

| | Test method | Unit | Value |
|--|---------------|-----------------------|--------------------------|
| General properties | | | |
| Density | DIN 53479 | g/cm ³ | 0,93 |
| Molecular weight (average molar mass) | | 10 ⁶ g/mol | ~ 4,0 |
| Mechanical Properties | | | |
| Tensile modulus | ISO 527 | MPa | 750 |
| Yield stress | ISO 527 | MPa | > 17 |
| Tensile strength at break | ISO 527 | MPa | > 30 |
| Elongation at break | ISO 527 | % | > 250 |
| Charpy notched impact strength at 23°C | ISO 179 | kJ/m ² | nb |
| Charpy unnotched impact strength at 23°C | ISO 179 | kJ/m ² | nb |
| Charpy impact strength with 15° V-notch | ISO 179 | kJ/m ² | |
| Hardness | ISO 868 | Shore D | 64 |
| Wear resistance | Sand-Slurry | | 100 |
| Thermal properties | | | |
| Melting temperature | DIN 53736 | °C | 130-135 |
| Thermal conductivity | DIN 52612 | W/(m·K) | 0,4 |
| Coefficient of linear thermal expansion (CLTE) | DIN 53752 | K ⁻¹ | 1,5-2,0×10 ⁻⁴ |
| Vicat softening temperature - A50 | ISO 306/A50 | °C | |
| Vicat softening temperature - B50 | ISO 306/B50 | °C | 80 |
| Service temperature (intermittent) | | °C | 120 |
| Service temperature (long term) | | °C | -200...80 |
| Electrical properties | | | |
| Volume resistivity | DIN IEC 60093 | Ω·cm | > 10 ¹² |
| Surface resistivity | DIN IEC 60093 | Ω | > 10 ¹² |
| Dielectric strength | DIN 53481 | kV/mm | 45 |
| Other properties | | | |
| Dynamic coefficient of friction | | | 0,09-0,17 |
| Flammability (thickness 3 mm) | UL94 | | HB |

The information data contained herein is believed to be reliable to the best of our knowledge but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom, and it is the end user responsibility to make its own determination of the product suitability for the intended applications.