

Product information

Wefapress PS 1000[®]

PS 1000[®] is an ultrahigh molecular weight low pressure polyethylene with a molecular weight of approx. 9.2 million g/mol. It is possible to enhance and customise the properties of St 1000[®] by using specially selected carbon black and graphite materials.

The characteristics of PS 1000[®] are as follows:

- high mechanical load bearing capacity
- extremely low wear and good sliding properties
- high bending- and impact strength



Standard colours: black

Special colours: --

Form of delivery: sheets, rods (pressed)
(catalogue semi finished products)

Finished parts: on request

Fields of application:

- paper industry
- mechanical engineering
- transport and conveyor systems
- agriculture
- filter industry

Technical Data Sheet

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|-----------------------------------------|----------------------------|---------------------|----------------------|
| Material designation | PS 1000[®] | | |
| Raw material | UHMW-PE | | |
| Material colour(s) | black | | |
| Properties | Unit | Test method | Value |
| Molecular weight (average molar mass) | g/mol | | ~ 9.2 mill. |
| Mechanical properties | | | |
| Density | g/cm ³ | DIN 53479 | 0.95 |
| Tensile strength | N/mm ² | DIN 53455 | 22 |
| Shore D hardness, 15s - Value | D scale | DIN 53505 | 64 - 68 |
| Ball indentation hardness, 30s - Value | N/mm ² | DIN ISO 2039 part 1 | 46 |
| Ultimate tensile strength | N/mm ² | DIN 53455 | 41 |
| Elongation at break | % | DIN ISO / R 527 | 330 |
| Modulus of elasticity | N/mm ² | DIN 53457 | 700 |
| Notched impact strength (Charpy) | kJ/m ² | DIN 53453 | > 80 - 130 |
| Abrasion | % | Sand slurry method | ~ 85 |
| Coefficient of friction | μ | | 0.25 |
| Thermal properties | | | |
| Dimensional stability under heat | °C | DIN 53461 | 47 |
| Vicat softening temperature | °C | DIN 53460 | 79 |
| Crystallite melting range | °C | DTA | 130 - 135 |
| Thermal conductivity at 23°C | W/ (K * m) | DIN 52612 | 0.42 |
| Specific heat at 23°C | KJ/ (K * Kg) | | 1.8 |
| Coefficient of linear expansion at 23°C | 10 ⁻⁵ * (1/k) | DIN 53752 | 2 * 10 ⁻⁴ |
| Fire behaviour | | UL 94 | HB |
| Application temperature (min.) | °C | | - 200 |
| Application temperature (constant) | °C | | + 80 |
| Moisture absorption | % | | < 0.01 |
| Electrical properties | | | |
| Specific volume resistance | Ω * cm | DIN 53482 | |
| Surface resistance | Ω | DIN 53482 | |
| Dielectric strength | kV/mm | DIN 53481 | 45 |
| Dielectric constant at 50 Hz | | DIN 53485 | |

Notes for the user:

Data sheet specifications are made to our today's knowledge. This information does not mean that certain properties are agreed upon or assured. Whether or not a material is suitable for a given application is the user's decision. All specifications are subject to change.

Vreden, 04.06.07/dv