

## TECAFINE PE1000 black - Stock Shapes (rods, plates, tubes)

### Chemical Designation

PE-UHMW (Polyethylene - ultra highmolecular weight)

### Colour

black opaque

### Density

0.93 g/cm<sup>3</sup>

### Main features

- ultra high molecular weight
- very good abrasion resistance
- excellent impact strength
- not electrically insulating
- good UV and weather resistance
- very good slide and wear properties
- average molecular weight 4.500.000 g/mol

### Target Industries

- construction industry
- food engineering
- mining industry

<i>Mechanical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Modulus of elasticity (tensile test)		700	MPa	DIN EN ISO 527-1	(1) n.b. = not broken
Tensile strength at yield		19	MPa	DIN EN ISO 527-1	
Elongation at yield (tensile test)		11	%	DIN EN ISO 527-1	
Impact strength (Charpy)		n.b.	kJ/m <sup>2</sup>	DIN EN ISO 179-1	1)
Ball indentation hardness		30	MPa	ISO 2039-1	
Shore hardness	Shore D	60		DIN EN ISO 868	
<i>Thermal properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Service temperature		-260 - +80	°C	-	1)
Thermal expansion (CLTE)		18	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	(1) Found in public sources. Individual testing regarding application conditions is mandatory.
<i>Electrical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
surface resistivity		> 10 <sup>14</sup>	Ω	-	
Dielectric strength		44	kV/mm	ISO 60243-1	
<i>Other properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Water absorption		< 0,01	%	DIN EN ISO 62	(1) Corresponding means no listing. The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.
Flammability	corresponding to	B2		DIN 4102	1)

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