

CHEMICAL NAME	PE UHMW
DENSITY	0.935 g/cm ³
COLOR	■
WATER ABSORPTION 24/96h	0,03 %

THERMAL PROPERTIES

Melting temperature	135 °C
Minimum service temperature	-150 °C
Thermal conductivity at 23 °C	0,40 W/(K.m)
Linear thermal expansion coefficient	200 X 10 ⁻⁶
Temperature of deflection under load method A 1, 81 N/mm ²	42 °C
Max. Allowable service temperature in air:	
For short periods	120 °C
Continuously for 5000/20 000 hours	80 °C
Flammability:	
« Oxygen index »	<20 %
According to UL 94 (6 mm thickness)	HB

MECHANICAL PROPERTIES AT 23 °C

Tension test:	
Tensile stress at yield ISO 527	19 Mpa
Tensile strain at yield ISO 527	15 %
Tensile strain at break ISO 527	> 50%
Tensile modulus of elasticity ISO 527	725 Mpa
Compression test	
Compressive test at 1 / 2 / 5 % nominal strain	6,5/ 10,5 / 17 Mpa
Charpy impact strength- unnotched IOS 179	No break
Charpy impact strength notched ISO 179	105P kJ / m ²
Ball indentation hardness ISO 2039-1	32 N / mm ²
Shore D hardness ISO 2039-2	59 N / mm ²

ELECTRICAL PROPERTIES AT 23 °C

Electric strength ISO 60243	45 kV/mm
Volume resistivity ISO 6009	> 10 ¹⁴ Ohm.cm
Surface resistivity ISO 60093	> 10 ¹² Ohm
Relative permittivity at:	
100 Hz ISO 60250	-
1 MHz ISO 60250	-
Dielectric dissipation factor tan at:	
100 Hz ISO 60250	-
1 MHz ISO 60250	-

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