

# Physical properties PE-HD natural

## Product characteristics:

- Easy processing
- Excellent weldability
- High chemical resistance

## Product applications:

- Chemical engineering and tank building
- Drinking and waste water technology
- Bottling and food industry

General properties	Test method	Unit	Value
Color			natural
Density	DIN EN ISO 1183-1	g/cm <sup>3</sup>	0.95
Water absorption	DIN EN ISO 62	%	<0.01
Flammability (Thickness 3 mm / 6 mm)	UL 94		HB
<b>Mechanical properties</b>			
Yield stress	DIN EN ISO 527	N/mm <sup>2</sup>	22
Elongation at break	DIN EN ISO 527	%	>50
Tensile modulus of elasticity	DIN EN ISO 527	MPa	800
Notched impact strength (charpy)	DIN EN ISO 179	kJ/m <sup>2</sup>	12
Shore hardness	DIN EN ISO 868	scale D	63
<b>Thermal properties</b>			
Crystalline grain melting range	ISO 11357-3	°C	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 <sup>-1</sup>	150-230
Service temperature, long term	Average	°C	-50 ... 80
Service temperature, short term (max.)	Average	°C	100
Vicat softening temperature	DIN EN ISO 306, Vicat B	°C	67
<b>Electrical properties</b>			
Dielectric constant	IEC 60250		2.4
Dielectric dissipation factor (10 <sup>6</sup> Hz)	IEC 60250		0,0004
Volume resistivity	IEC 60093	Ω*cm	>10 <sup>14</sup>
Surface resistivity	IEC 60093	Ω	>10 <sup>14</sup>
Comparative tracking index	IEC 60112		600
Dielectric strength	IEC 60243	kV/mm	45

This table is a valuable help in the choice of a material. The data listed here fall within the normal range of products properties, but they should not be used to establish material specification limits nor used alone as the basis of design.