

Technical data sheet

HPX

General properties			
Material designation	HPX		
Material colour(s)	signal blue (3003)		
Raw material	PE-UHMW Ultra-high-molecular polyethylene		
Molecular weight (Average molar mass)	~ 5 Mio.		
Mechanical properties			
	Unit	Test method	Value
Density	g/cm ³	DIN ISO 1183	0,96
Tensile strength	MPa	DIN EN ISO 527	> 16
Shore D hardness, 15s - Value	Skala D	DIN EN ISO 868	~ 64
Ball indentation hardness, 30s - Value	MPa	DIN ISO 2039 Teil 1	36
Ultimate tensile strength	MPa	DIN EN ISO 527	40
Elongation at break	%	DIN EN ISO 527	≥ 200
Modulus of elasticity	MPa	DIN EN ISO 527	700
Notched impact strength (Charpy)	kJ/m ²	DIN EN ISO 179	≥ 140
Wear resistance	%	Sand Slurry method	< 85
Coefficient of friction (to steel)	μ		≤ 0,15
Thermal properties			
	Unit	Test method	Value
Dimensional stability under heat	°C	DIN 53461	47
Vicat softening temperature	°C	DIN EN ISO 306	81
Crystalline melting range	°C	DIN EN ISO 11357	135
Thermal conductivity at 23°C	W/ (K * m)	DIN 52612	~ 0,3
Specific heat at 23°C	kJ / (K * Kg)		1,7
Coefficient of linear expansion at 23°C	10 ⁻⁵ * (1/K)	DIN ISO 11359	20
Fire behaviour		UL 94	HB
Application temperature (min.)	°C		- 200
Application temperature (constant)	°C		+ 80
Moisture absorption	%		< 0,01
Electrical properties			
	Unit	Test method	Value
Specific volume resistance	Ω * cm	IEC 60093	10 ¹⁵
Specific surface resistance	Ω	IEC 60093	10 ¹³
Dielectric strength	KV/mm	IEC 60243	50
Conformity with food secure regulations			
FDA	Conforms to FDA regulations		
EU	-		

Our employees are available to answer all of your questions.

You can find additional information on our material qualities on the internet at www.wefapress.com/en/materials.

All stated information reflects our current knowledge. No agreement or guarantee regarding specific characteristics can be derived from the information contained in the datasheets. Each user is responsible for deciding on the suitability of a material for a specific purpose. The data supplied are subject to change.

The materials labelled as a "Food Secure Product" (FSP) comply with the provisions of Regulations (EU) No. 10/2011 and No. 1935/2004.