



TECHNICAL DATASHEET

HMPE 500

High Molecular Polyethylene 500 sheets

PROPERTY	UNIT	VALUE	STANDARD	VARIABLE
General				
Density	g/cm ³	0,93	ISO 1183	
Molecular weight (average molecular weight)	g/mol	> 0,5*10 ⁶		
Conformances according to (regulation food contact)		EU-plastics derective 10/2011/EG		
Water absorption	%	<0,01	ISO 62	
Mechanical				
Yield stress	MPa	≈ 26	ISO 527	
Elongation at yield	%	≈ 9	ISO 527	
Modulus of elasticity	MPa	≈ 1000	ISO 527	
Charpy impact strength unnotched	kJ/m ²	Without breakage	ISO 179	
Charpy impact strength notched	kJ/m ²	≥ 25	ISO 11542-2	
Ball indentation hardness	MPa	≈ 52	ISO 2039-1	
Shore D hardness of 15-s value		≈ 63 - 65	ISO 868	
Dynamic coefficient of friction		≈ 0,2		
Wear (Sand-Slurry)	%	≈ 400	ISO 2039-1	
Electrical				
Surface resistivity	Ohm	> 10 ¹²	IEC 60093	
Thermal				
Melting range DSC, 10K/min.	°C	≈ 130 - 135		
Coefficient of thermal expansion between 23 °C and 60 °C	K ⁻¹	ca. 2*10 ⁻⁴		
Thermal conductivity	W/mK	≈ 0,41		
Maximum usage temperature	°C	80		
Maximum usage temperature (Short term)	°C	90		
Minimum usage temperature	°C	-100		
Fire classification				
Fire rating USA		HB	UL94	

The technical data given in this sheet correspond to our current state of knowledge and should not be construed as an agreement or guarantee regarding certain properties of our products. The decision on the suitability of a particular material for a specific application is up to the user. We reserve the right to modify the given data. Errors of the given data are reserved.