



TECHNICAL DATASHEET

# HMPE 1000

High Molecular Polyethylene 1000 sheets

PROPERTY	UNIT	VALUE	STANDARD	VARIABLE
<b>General</b>				
Density	g/cm <sup>3</sup>	0,93	ISO 1183	
Molecular weight (average molecular weight)	g/mol	Ca. 4 - 6*10 <sup>6</sup>		
Conformances according to (regulation food contact)		EU-plastics directive 10/2011/EG FDA-directive 21CFR177.1520 FDA-directive 21CFR178.3297		
Water absorption	%	< 0,01	ISO 62	
<b>Mechanical</b>				
Yield stress	MPa	≥ 19	ISO 527	
Elongation at yield	%	≥ 8	ISO 527	
Modulus of elasticity	MPa	≥ 700	ISO 527	
Charpy impact strength	kJ/m <sup>2</sup>	Without breakage	ISO 179	
Charpy impact strength notched	kJ/m <sup>2</sup>	≥ 170	ISO 11542-2	
Ball indentation hardness	MPa	40	ISO 2039-1	
Shore D hardness of 15-s value		60 - 65	ISO 868	
Dynamic coefficient of friction		0,2		
Wear (Sand-Slurry)	%	100	ISO 2039-1	
<b>Electrical</b>				
Surface resistivity	Ohm	> 10 <sup>12</sup>	IEC 60093	
<b>Thermal</b>				
Melting range DSC, 10K/min.	°C	130 - 135		
Coefficient of thermal expansion between 23 °C and 60 °C	K <sup>-1</sup>	ca. 2*10 <sup>-4</sup>		
Thermal conductivity	W/mK	0,4		
Maximum usage temperature	°C	80		
Maximum usage temperature (Short term)	°C	120		
Minimum usage temperature	°C	- 200		
<b>Fire classification</b>				
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.