

Data sheet Murdotec 1000 natural

- very good wear resistance
- very good sliding properties
- very good shock and impact absorption
- very good antiadhesion properties

Applications: wear-resistant bearings, profiles and segments, chain guides

Technical properties	(PE-UHMW 1000 natural)	Values	Units	DIN	ISO/EC
Colour		natural			
Molecular weight		5x10 ⁶	g/mol		
Code		1.2			15527:2013
Density		≤0,94	kg/dm ³	53479	1183
Water absorption – saturation at 23°C		<0,01	%	53715	
Mechanical properties					
Yield/ break stress		~20	MPa	53455	527-2
Breaking elongation		>300	%	53455	527-2
Coefficient of elasticity (pulling test)		>700	MPa	53457	527-2
Notch impact strength - Charpy		≥170	kJ/m ²	53453	179
Shore hardness D		61-65	°	868	7619-1
Ball hardness		>30	N/mm ²	53456	2039
Sand-Slurry-Test		100	%		15527
Coefficient of sliding friction Steel (0,25m/s, 0,25N/mm ²)		-0,2	μ		
Coefficient of sliding friction POM (0,25m/s, 0,25N/mm ²)					
Thermal properties					
Heat conductivity 23°C		0,4	W/(K x m)	52612	
Linear thermal coefficient of expansion α (average value between 23 und 60 °C)		20x10 ⁻⁵	m/(K x m)	53752	11359-2
Upper service temperature in air	short term	90	°C		
	constant (5000h)	80	°C	53446	
Lower service temperature		-200	°C		
Burning behavior per UL 94 – sample thickniss 3/6 mm		HB			
Melting Point		130-135	°C		3146 method C
Electrical properties					
Electrical strength		≤45	kV/mm	53481	60243
Specific constant resistance		>10 ¹²	Ω x cm	53482	60093
Surface resistance		>10 ¹²	Ω	53482	60093
Physiological properties					
Approved for use in food industry (FDA)		Yes			
Approved for use in food industry (EU)		Yes			

The values, shown in this table, enable to compare materials faster. These values are short-term values, which can be influenced by processing, environmental as well as application conditions. Therefore, these values do not represent assured properties. It is due to the customer's responsibility whether the chosen material is suitable for its specific application.

Status 01/2017

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