

Polikim ULPOLEN® 500 UHMWPE Standard

Category : Polymer , Thermoplastic , Polyethylene (PE) , HDPE , High Density Polyethylene (HDPE), UHMW PE Ultra High Molecular Weight

Material Notes:

Standard Ulpolen® 1000 is the universal type primarily preferred on the condition that its technical properties meet operating environment requirements. It is more cost efficient compared to special types with additives. One major problem in the identification and selection of materials is the difficulty in distinguishing Ulpolen® 1000 from other lower quality polyethylene types in terms of physical appearance. The main differences in technical properties are evidenced in laboratory tests. Variations of Ulpolen® 1000 within its group according to molecular weights and its physical similarity to other polyethylene types are vital factors that should be carefully studied to select the right material for the application. In addition to "1000" quality, there are subgroups with different technical properties such as Ulpolen® 500 which is primarily used in food industry as cutting plates (with 0.5 million molecular weight) and Ulpolen® 300 which is used in chemical industry in the production of tanks resistant to chemicals (with 0.3 million molecular weight). Information provided by Polikim Polymer.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polikim-ULPOLEN-500-UHMWPE-Standard.php

Physical Properties	Metric	English	Comments
Density	0.940 g/cc	0.0340 lb/in ³	DIN 53479
Water Absorption at Saturation	0.00 %	0.00 %	ASTM D570
Molecular Weight	500000 g/mol	500000 g/mol	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	60 - 68	60 - 68	DIN 53505
Tensile Strength, Ultimate	24.5 MPa	3560 psi	DIN 53455
Elongation at Break	>= 300 %	>= 300 %	DIN 53455
Izod Impact, Notched (ISO)	NB	NB	DIN 53453
Charpy Impact Unnotched	>= 2.50 J/cm ²	>= 11.9 ft-lb/in ²	ISO 11542/2
Coefficient of Friction	0.15 - 0.20	0.15 - 0.20	

Thermal Properties	Metric	English	Comments
CTE, linear	200 µm/m-°C	111 µin/in-°F	DIN 53752
Melting Point	130 - 138 °C	266 - 280 °F	ISO 3146
Maximum Service Temperature, Air	80.0 °C	176 °F	
Minimum Service Temperature, Air	-100 °C	-148 °F	

Electrical Properties	Metric	English	Comments
Dielectric Strength	35.4 kV/mm	899 kV/in	DIN 53481

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