



Material: UHMWPE - PE1000

Having the highest molecular weight of all polyethylenes, UHMWPE (Ultra High Molecular Weight Polyethylene) is the most wear resistant. Typical impact properties of polyethylene apply so can operate at temperatures as low as -270°C.

Technical Specification

Property	Test Method	Units	Value
Colour	-	-	Natural/Black/Green
Molecular Weight	ISO 1183	g/cm ³	5 Mil.
Density	ISO 1183	g/cm ³	0.93
Service Temp Upper	-	°C	90
Service Temp Lower	-	°C	-200
Yield Stress	ISO 527 : 50mm/min	N/mm ²	>17
Elongation at yield Stress	ISO 527 : 50mm/min	%	=8
Breaking stress	ISO 527 : 50mm/min	N/mm ²	=40
Elongation at break	ISO 527 : 50mm/min	%	>50
Elastic modulus	ISO 527	N/mm ²	=700
Ball indentation hardness : 30 sec value	ISO 2039-1	N/mm ²	=38
Shore Hardness D : 3 sec value	ISO 868	-	63
Shore Hardness D : 15 sec value	ISO 868	-	61
Notched impact strength	ISO 179	mJ/mm ²	-
Wear by the sand and slurry method	Internal Test Method	-	100
Vicat Softening Point VST	ISO 306/B	°C	79
Crystalline melting range	ISO 3146	°C	130-135
Linear thermal expansion coefficient (23-80°C)	DIN 53752	k-1	2 x 10 ⁻⁴
Thermal Conductivity	DIN 52612	W/(K.m)	0.41
Volume resistivity	VDE 0303/3	Ohm/cm	10 ¹⁴
Surface resistivity dry	VDE 0303/3	Ohm	10 ¹¹
Dielectric strength	VDE 0303/2	kV/mm	45
Arc resistance	VDE 0303/5	Grade	L4

Availability:

Generally supplied in sheet and rod form. Also available in Anti Static form and a more cost effective form which incorporates a proportion of regenerated PE1000. Please call for further details.

Applications:

Chemical storage tanks, Ventilation Systems, Thermoformed Packaging, Fans, Pumps and valves, Machined components, Wall cladding, Display Products.

Tel: 01604 700 880

Web: www.abgrp.co.uk

Email: sales@abgrp.co.uk

The data shown are typical values and are not intended to represent specifications. Their aim is to guide the user toward a material choice.

Not all material sizes shown within the availability programme of this data sheet are available as standard.

Please contact ABG Rubber and Plastics Ltd for further details.