UHMWPE PE1000 (Ultra-High Molecular Weight Polyethylene)

Wear-Resistant Polyethylene Sheets & Rods — Technical Datasheet

DIODE TRADING EST
Dammam, Saudi Arabia

UHMWPE PE1000 has exceptional abrasion resistance, very high impact strength and a low, self-lubricating friction surface. It outperforms steel in many sliding-wear duties and is used for liners, wear strips, chain guides, fenders and outrigger pads.

Specification

Material	UHMWPE, molecular weight approx. 5 - 9 million g/mol (PE1000)
Standard Colours	Natural (white), black, green; other colours on request
Forms	Sheets, round rods, profiles; cut-to-size and machined parts
Sheet Thickness	Approx. 5 mm to 200 mm
Rod Diameter	Approx. 20 mm to 300 mm
Standard Sheet Size	1000 x 2000 mm, 1220 x 3050 mm, 2000 x 4000 mm, or cut to size

Material Properties (typical values)

Property	Typical Value
Density	0.93 - 0.94 g/cm³
Tensile strength at yield	17 - 22 MPa
Elongation at break	> 300%
Tensile modulus	650 - 800 MPa
Hardness	Shore D 60 - 64
Notched impact (Charpy)	No break / > 100 kJ/m²
Melting point	approx. 135°C
Service temperature	-200°C to +80°C
Water absorption	< 0.01%
Coefficient of friction	0.10 - 0.20 (dry on steel)
Food contact	FDA-compliant grades available

Typical Applications

Chute, hopper and truck-bed liners, wear strips and chain guides, dock and marine fenders, outrigger and crane pads, star wheels, scraper blades, bushings.

Selection Note

Anti-static, UV-stabilised, glass-filled and recycled (reprocessed) grades are available on request.

How to Order

Send the material, grade, colour, form, dimensions (thickness / diameter, width, length) and quantity, or a drawing for machined parts, to Diode Trading EST at www.diode.sa or +966 51 083 8213. Material test certificates are available on request.

Notice: Values are typical and indicative, based on common industry grades. Exact grade, size, tolerance and performance are confirmed on quotation and against the supplier or manufacturer data and material test certificate for each batch. This sheet is not a warranty. Contact Diode Trading EST to confirm availability and specification for your application.