DURPLAST®

DURPLAST® are produced from re-processed, industrial ultra-high molecular weight polyethylene materials. These recycled shapes are then re-purposed for use in a variety of industries such as construction and heavy equipment, agriculture and grain handling, bulk material and parcel handling, and automotive and transportation.

DURPLAST® components exhibit excellent abrasion and corrosion resistance, outstanding impact strength, minimal moisture absorption, and a low coefficient of friction. For these reasons, DURPLAST® is often a favored solution for wear and outrigger pads, strips, rails, guides, rollers, conveyors, chutes, hoppers, impact plates, and asphalt equipment components.

DURPLAST® contains recycled UHMW-PE and therefore is associated with a significantly lower carbon footprint compared to similar materials derived from non-recycled feedstocks.

		Test methods	Indicative values
Thermal properties (1)	Melting temperature (DSC, 10°C (50°F) / min)	ISO 11357-1/-3	135 °C
	Glass transition temperature (DMA- Tan δ) (2)		
	Thermal conductivity at 23°C (73°F)		0.4 W/(K.m)
	Coefficient of linear thermal expansion (-40 to 150 °C) (-40 to 300°F)		
	Coefficient of linear thermal expansion (23 to 100°C) (73°F to 210°F)		200 µm/(m.K)
	Heat Deflection Temperature: method A: 1.8 MPa (264 PSI)	ISO 75-1/-2	
	Continuous allowable service temperature in air (20.000 hrs) (3)		80°C
	Min. service temperature (4)		-150°C
	Flammability: Oxygen Index	ISO 4589-1/-2	20%

Mechanical Properties (6)	Tensile strength	ISO 527-1/-2	20MPa
	Tensile strain (elongation) at yield	ISO 527-1/-2	18%
	Tensile strain (elongation) at break	ISO 527-1/-2	>50%
	Tensile modulus of elasticity	ISO 527-1/-2	500MPa
	Shear Strength		20
	Compressive stress at 1 / 2 / 5 % nominal strain	ISO 604 (10)	6/9/15 MPa
	Compressive strength		
	Charpy impact strength - unnotched	ISO 179-1/1eU	No break kJ/m²
	Charpy impact strength - notched	ISO 179-1/1eA	116P kJ/m²
	Charpy impact strength - double 14° notched	ISO 21304-2	180 kJ/m²
	Izod Impact notched		
	Flexural strength	ISO 178 (12)	18 MPa
	Flexural modulus of elasticity	ISO 178 (12)	520 MPa
	Relative volume loss "sand-slurry" (ISO vsTIVAR®1000; ASTM vs1018 Steel)	ISO 15527	116 (Index=100)
	Shore Hardness D (14)	ISO 868	60

153 Rue Aristide berges 73000 CHAMBERY
Numéro SIREN : 788137461
Numéro SIRET : 78813746100042
Numéro TVA Intracommunautaire : FR50788137461

Electrical Properties	Tensile strength	IEC 60243-1 (15)	
	Volume resistivity	IEC 62631-3-1	
	Surface resistivity	ANSI/ESD STM 11.11	10^12 Ohm
	Dielectric constant at 1 MHz	IEC 62631-2-1	
	Shear Strength	IEC 62631-2-1	

Miscellaneous	Colour		Green
	Density	ISO 1183-1	0.94
	Water absorption after 24h immersion in water of 23 °C (73°F)	ANSI/ESD STM 11.11	0.1%
	Water absorption at saturation in water of 23 °C (73°F)	ANSI/ESD STM 11.11	0.1%
	Limiting PV at 0.1 / 1 m/s cylindrical sleeve bearings	IEC 62631-2-1	0.08 / 0.05 MPa.m/s

This table, mainly to be used for comparison purposes, is a valuable help in the choice of a material. The data listed here fall within the normal range of product properties of dry material. However, they are not guaranteed and they should not be used to establish material specification limits nor used alone as the basis of design. See the remaining notes on the next page.