

Doriflon Specification Sheet

Material Name	UHMWPE			
Description	Ultra High Molecular Weight Polyethylene			
Remarks and Applications	Good wear and abrasion resistance High impact strength Excellent chemical resistance			
Typical Properties				
Property	Conditions	ISO	Units	Value
General Properties				
Specific Gravity			g/cm ³	0.93
Water Absorption @ 23°C				
- in water 24 hours			%	0
- saturation in water			%	0
Colour				Trans White
Thermal Properties				
Melting Point			°C	130
Minimum Working Temperature			°C	-260
Continuous Working Temperature			°C	60
Thermal Conductivity			W/K.m	.42
Linear Thermal Expansion Coefficient			K ⁻¹ x10 ⁻⁵	20
Flammability			UL (thickness)	Slow Burning
Mechanical Properties				
Tensile Strength @ 23°C, dry			N/mm ²	40
Tensile Modulus @ 23°C, dry			N/mm ²	552-690
Flexural Modulus			N/mm ²	517
Shear Strength			N/mm ²	24
Elongation @ 23°C, dry			%	>350
Flexural Strength @ 23°C, dry			N/mm ²	
Hardness Shore D @ 23°C, dry				62
Hardness Rockwell @ 23°C, dry				
Deformation under load				
- 14 N/mm ² for 24 hours at 50°C			%	6-8
- 8 N/mm ² for 24 hours at 150°C			%	
- 14 N/mm ² for 24 hours at 150°C			%	
Impact Strength			Izod J/m	No Break
Electrical Properties				
Volume Resistivity			Ohm.cm	>10 ¹⁷
Dielectric Strength			kV/mm	90
Relative Permittivity 50Hz-10kHz				2.3
Resistance Properties				
Outside Applications - UV Resistance				D
Acids, Weak pH > 3				A
Acids, Strong pH < 3				A
Alkalis, Strong pH > 11				A
Chlorinated Hydrocarbons				A
Hot Water				N/A