THE Seal Specialists

AbbeySeals International Ltd

MADE IN IRELAND

UHMW-PE polyethylene of ultra high molecular weight

Mechanical, Physical and Thermal Properties

Properties	Condition	Standard	Unit		Unit	
Colour				**nature**		**nature**
Density/Specific gravity	**23°C**	DIN 53479	kg/m^3	**930**	g/cm^3	**0,93**
Hardness	**23°C**	ISO 868	Shore D	**61 ± 3**	Shore D	**61 ± 3**
Ball Indentation Hardness	**23°C**	DIN 53456/ H135/30	MPa	**≥36**	psi	**≥5200**
Tensile Strength	**23°C**	ASTM D 4745-79	MPa	**≥40**	psi	**≥5800**
Elongation at Break	**23°C**	ASTM D 4745-79	%	**≥50**	%	**≥50**
izod Impact Strength	**23°C**	ISO 180 / 1A	kJ/m^2	**≥130**		
Thermal Conduvtivity		DIN 52612	$\frac{J * 10^3}{m * h * K}$	**0,41**	$\frac{J * 10^3}{m * h * K}$	**0,41**
Coefficient of Thermal Expansion	**25°C - 200°C**		$K^{-1} * 10^{-5}$	**15**	$K^{-1} * 10^{-5}$	**15**
Coefficient of Friction*	**23°C**		µ	**0,25**	µ	**0,25**
Minimum Service Temp			°C	**-200**	°F	**-328**
Maximum Service Temp			°C	**80**	°F	**176**
Young's Modulus	**23°C**	DIN 53457	MPa	**680**	psi	**98000**

*coefficient of friction dry dynamic Steel 16MnCr5 v=0,6m/s; p=0,05 MPa; t=5h

Chemical Properties

Excellent chemical properties

Good corrosion resistance

Good sliding and anti-adhesive behaviours

High resistance to abrasive wear

Excellent izod impact strenth/high resilience at shock and impact stress

Foodstuff applications: generally recognized as safe for foodstuff applications

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