

PE1000 PRESSED | POLYETHYLENE

Main features

The PE 1000 maintains the same mechanical characteristics as the PE 300, with the difference of having a lower rigidity and, therefore, an even higher resistance to bumps.

Applications

Pumps
Valve bodies
Cams
Slide guides
Gears
Skids
Hopper liners

Application sectors

Food
Industrial automation
Naval Bottling
Medical and pharmaceutical
Chemical
Construction and lifting machinery

FDA Compatibility YES

Available colours



PHYSICAL PROPERTIES

REGULATIONS

UM

PE1000

PHYSICAL PROPERTIES			
Density	DIN53479	g/cm ³	0.93
Water absorption (50% at 23° C)	**DIN53495	%	~0
Maximum temp. for use in the air for short duration	-	°C	110
Maximum temperature of use in continuous air	-	°C	80
Minimum temperature of use in continuous air	-	°C	-250

MECHANICAL PROPERTIES			
Yield stress/tensile strength (σ_s)	*DIN53455 (4)	N/mm ²	>17
Elongation at break (ϵ_s)	DIN53455	%	<20
Breaking load (σ_r)	DIN53455	N/mm ²	-
Elongation at break (ϵ_r)	*DIN53455 (4)	%	>50
Impact resistance	*DIN53453	kJ/m ²	NR
Impact resistance, notched test	*DIN53453	kJ/m ²	NR
Rockwell hardness	DIN53465	Scala M	-
Compression test, load 1% deform. nominal	*DIN53454 (3)	N/mm ²	4.5
Elasticity module	*DIN53457 (5)	N/mm ²	>700

THERMIC PROPERTIES			
Melting temperature	-	°C	140
VICAT softening temperature	DIN53460	°C	80
Deformation temperature under bending load	DIN53461	°C	42
Coefficient of linear thermal expansion (α)	DIN53752	K ⁻¹ X10 ⁻⁴	2
Thermal conductivity at 23°	DIN52612	W/(Kxm)	0.40

ELECTRICAL PROPERTIES			
Volume resistivity	**DIN53482	Ω /cm	>10 ¹²
Surface resistivity	**DIN53482	Ω	>10 ¹²
Dielectric constant at 10 ³ HZ (on thickness of 1 mm.)	**DIN53483	-	2.35<0.0
Dielectric dissipation factor (tan δ) a 10 ³ HZ	**DIN53483	-	<0.002
Dielectric strength (on thickness of 1 mm.)	**DIN53481	kV/mm	90
Electrical leakage resistivity	112/030TI	-	-

OTHER PROPERTIES			
Possibility of gluing	-	-	No
Absence of physiological risks	FDA	-	Yes
Dry friction coefficient on steel	DIN53375	-	0.30
Flammability	UL94	-	HB
UV stability	-	-	-

* : MEASUREMENTS ON TEST TUBES IN ANHYDROUS STATE

(3): ON CYLINDERS Ø 12X30 MM

(4): TRACTION SPEED 5 MM/MIN

** : MEASUREMENTS ON EQUILIBRIUM TUBES
WITH U.R. 50% AT A TEMPERATURE OF 23° C

(5): TRACTION SPEED 1 MM / MIN

(6): TRACTION SPEED 20 MM/MIN