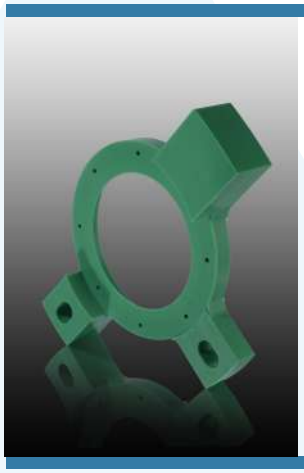
PE500 PRESSED | POLYETHILENE

Main features

The PE 500 has the same mechanical characteristics as the PE 300, but given its greater elasticity, offers greater resistance to wear and excellent properties of smoothness. In addition, it is more rigid than the PE 300, for this has a wider use in the mechanical sector.



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	PE500
PHYSICAL PROPERTIES			
Density	DIN53479	g/cm³	0.95
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	-60
MECHANICAL PROPERTIES			
Yield stress/tensile strength (σ_s)	*DIN53455 (4)	N/mm²	28
Elongation at break (ε_s)	DIN53455	%	10
Breaking load (σ_r)	DIN53455	N/mm²	-
Elongation at break (ε_r)	*DIN-ISO527(4)	%	>50
Impact resistance	*DIN53453	kJ/m²	NR
Impact resistance, notched test	*DIN53453	kJ/m²	NR
Rockwell hardness	DIN53465	Scala M	-
Compression test, load 1% deform. nominal	*DIN53454 (3)	N/mm²	9
Elasticity module	*DIN53457 (5)	N/mm²	1200
THERMIC PROPERTIES			
Melting temperature	-	°C	135
VICAT softening temperature	DIN53460	°C	79
Deformation temperature under bending load	DIN53461	°C	44
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^{14}
Surface resistivity	**DIN53482	Ω	$>10^{14}$
Dielectric constant at 10^3 HZ (on thickness of 1 mm.)	**DIN53483	-	2.35
Dielectric dissipation factor (tan δ) a 10^3 HZ	**DIN53483	-	<0.002
Dielectric strength (on thickness of 1 mm.)	**DIN53481	kV/mm	>40
Electrical leakage resistivity	112/030TI	-	-
OTHER PROPERTIES			
Possibility of gluing	-	-	No
Absence of physiological risks	FDA	-	Yes
Dry friction coefficient on steel	DIN53375	-	0.11
Flammability	UL94	-	HB
UV stability	-	-	-

* : MEASUREMENTS ON TEST TUBES IN ANHYDROUS STATE
**: MEASUREMENTS ON EQUILIBRIUM TUBES WITH U.R. 50% AT A TEMPERATURE OF 23° C
(3): ON CYLINDERS Ø 12X30 MM
(5): TRACTION SPEED 1 MM / MIN
(4): TRACTION SPEED 5 MM/MIN
(6): TRACTION SPEED 20 MM/MIN

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