

► Main features

PES is a highly technological material, with good dielectric rigidity, good tensile strength, but little elastic. Suitable for use at temperatures not exceeding 150 °C. This material guarantees a high mechanical strength, rigidity and resistance to hydrolysis.

► Applications

Connectors
Spools
Valves
Housing
for pumps

► Application sectors

Pumps and Fluid
Management
Chemical
Medical and
Pharmaceutical
Electric and
Semiconductors

Coming soon

► FDA Compatibility YES

► Available colours



PHYSICAL PROPERTIES

REGULATIONS

UM

PES

PHYSICAL PROPERTIES			
Density	DIN53479	g/cm ³	1.37
Water absorption (50% at 23° C)	**DIN53495	%	0.4
Maximum temp. for use in the air for short duration	-	°C	220
Maximum temperature of use in continuous air	-	°C	180
Minimum temperature of use in continuous air	-	°C	-50

MECHANICAL PROPERTIES			
Yield stress/tensile strength (σ_s)	ISO 527	N/mm ²	90
Elongation at break (ϵ_s)	ISO 527	%	15
Breaking load (σ_r)	DIN53455	N/mm ²	-
Elongation at break (ϵ_r)	*DIN53455 ⁽⁴⁾	%	40
Impact resistance	*DIN53453	kJ/m ²	320
Impact resistance, notched test	ISO 179	kJ/m ²	7
Rockwell hardness	DIN53465	Scala M	M85
Compression test, load 1% deform. nominal	*DIN53454 ⁽³⁾	N/mm ²	-
Elasticity module	*DIN53457 ⁽⁵⁾	N/mm ²	2750

THERMIC PROPERTIES			
Melting temperature	-	°C	-
VICAT softening temperature	DIN53460	°C	-
Deformation temperature under bending load	DIN53461	°C	204
Coefficient of linear thermal expansion (α)	DIN53752	K ⁻¹ X10 ⁻⁴	0.49
Thermal conductivity at 23°	DIN52612	W/(Kxm)	-

ELECTRICAL PROPERTIES			
Volume resistivity	**DIN53482	Ω /cm	>10 ¹⁸
Surface resistivity	**DIN53482	Ω	>10 ¹⁴
Dielectric constant at 10 ³ HZ (on thickness of 1 mm.)	**DIN53483	-	3.54
Dielectric dissipation factor (tan δ) a 10 ³ HZ	**DIN53483	-	0.0056
Dielectric strength (on thickness of 1 mm.)	**DIN53481	kV/mm	40
Electrical leakage resistivity	112/030TI	-	-

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

* : 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