

► Main features

PPS is a rigid thermoplastic material, with high dimensional stability and suitable for continuous operation at high temperatures. It also has a high chemical and mechanical resistance and has excellent electrical properties. It has a very low linear thermal expansion coefficient, a high purity and a high level of crystallinity, but, if not properly treated, it is particularly sensitive to UV rays.

► Applications

Thermal shields
Gears
Bearings
Sliding guides
Bushings
Valves

► Application sectors

Chemical
Electric and Semiconductors
Pumps and fluid management
Power Plant, Offshore,
Oil & Gas
Aerospace

Coming soon

► FDA Compatibility

► Available colours



PHYSICAL PROPERTIES	REGULATIONS	UM	PPS
PHYSICAL PROPERTIES			
Density	DIN53479	g/cm ³	1.35
Water absorption (50% at 23° C)	**DIN53495	%	0.2
Maximum temp. for use in the air for short duration	-	°C	260
Maximum temperature of use in continuous air	-	°C	230
Minimum temperature of use in continuous air	-	°C	-20
MECHANICAL PROPERTIES			
Yield stress/tensile strength (σ_s)	ISO527	N/mm ²	103
Elongation at break (ϵ_s)	ISO527	%	6,5
Breaking load (σ_r)	DIN53455	N/mm ²	-
Elongation at break (ϵ_r)	ISO527	%	6,5
Impact resistance	*DIN53453	kJ/m ²	-
Impact resistance, notched test	*DIN53453	kJ/m ²	15
Rockwell hardness	DIN53465	Scala M	-
Compression test, load 1% deform. nominal	*DIN53454 ⁽³⁾	N/mm ²	-
Elasticity module	*DIN53457 ⁽⁵⁾	N/mm ²	3500
THERMIC PROPERTIES			
Melting temperature	-	°C	281
VICAT softening temperature	DIN53460	°C	-
Deformation temperature under bending load	DIN53461	°C	-
Coefficient of linear thermal expansion (α)	DIN53752	K ⁻¹ X10 ⁻⁴	0.50
Thermal conductivity at 23°	ISO22007	W/(Kxm)	0.43
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	-	3.3
Dielectric dissipation factor ($\tan \delta$) a 10 ³ Hz	**DIN53483	-	0.003
Dielectric strength (on thickness of 1 mm.)	**DIN53481	kV/mm	24
Electrical leakage resistivity	112/030TI	-	-
OTHER PROPERTIES			
Possibility of gluing	-	-	-
Absence of physiological risks	FDA	-	-
Dry friction coefficient on steel	DIN53375	-	0.2
Flammability	UL94	-	V-0
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