

PTFE STEEL 50% | POLYTETRAFLUOROETHYLENE

Main features

Excellent compressive strength, good resistance to chemicals; it does not have electrostatic charges.

Applications

Sliding surfaces
Bearings and skids with
low speeds and medium loads.

Application sectors

Chemical
Medical and Pharmaceutical
Power Plant, Offshore,
Oil & Gas Automotive
Mechanic Food
Industrial automation
Electrical and Semiconductor

Compatibilità FDA YES

Available colours



PHYSICAL PROPERTIES	REGULATIONS	UM	PTFE STEEL
PHYSICAL PROPERTIES			
Density	DIN53479	g/cm ³	3.35
Water absorption (50% at 23° C)	**DIN53495	%	-
Maximum temp. for use in the air for short duration	-	°C	-
Maximum temperature of use in continuous air	-	°C	260
Minimum temperature of use in continuous air	-	°C	-200
MECHANICAL PROPERTIES			
Yield stress/tensile strength (σ_s)	*DIN53455 (4)	N/mm ²	-
Elongation at break (ϵ_s)	DIN53455	%	-
Breaking load (σ_r)	DIN53455	N/mm ²	17-23
Elongation at break (ϵ_r)	ISO527	%	180
Impact resistance	*DIN53453	kJ/m ²	-
Impact resistance, notched test	*DIN53453	kJ/m ²	-
Rockwell hardness	DIN53465	Scala M	-
Compression test, load 1% deform. nominal	*DIN53454 (3)	N/mm ²	10-10.5
Elasticity module	*DIN53457 (5)	N/mm ²	-
THERMIC PROPERTIES			
Melting temperature	-	°C	-
VICAT softening temperature	DIN53460	°C	-
Deformation temperature under bending load	DIN53461	°C	-
Coefficient of linear thermal expansion (α)	ASTMD 696	KX10 ⁻⁵	10-12
Thermal conductivity at 23°	DIN52612	W/(Kxm)	0.65
ELECTRICAL PROPERTIES			
Volume resistivity	**DIN53482	Ω /cm	-
Surface resistivity	**DIN53482	Ω	-
Dielectric constant at 10 ³ HZ (on thickness of 1 mm.)	**DIN53483	-	-
Dielectric dissipation factor (tan δ) a 10 ³ HZ	**DIN53483	-	-
Dielectric strength (on thickness of 1 mm.)	**DIN53481	kV/mm	-
Electrical leakage resistivity	112/030TI	-	-
OTHER PROPERTIES			
Possibility of gluing	-	-	No
Absence of physiological risks	FDA	-	No
Dry friction coefficient on steel	DIN53375	-	-
Flammability	UL94	-	-
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