

Main features

Thermoplastic material with excellent physical and chemical properties. It has particularly advantageous features, such as excellent abrasion resistance and a low friction coefficient. It can be used in high temperatures and aggressive environments, and is characterized by low flammability. It has good mechanical properties and excellent dimensional stability.

Applications

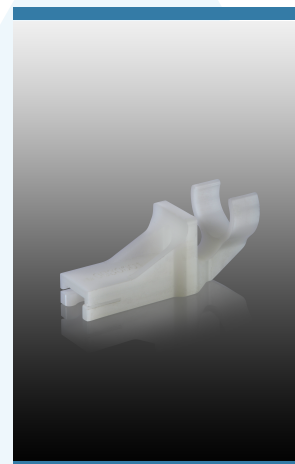
Cog-wheels
Valve rings
Cams
Pump parts
Supports
for measuring probes
Flanges

Application sectors

Chemical
Medical and Pharmaceutical
Power Plant, Offshore,
Oil & Gas
Electrical and
Semiconductor
Food

FDA Compatibility YES

Available colours ☐



PHYSICAL PROPERTIES

REGULATIONS

UM

PVDF

PHYSICAL PROPERTIES			
Density	DIN53479	g/cm ³	1.77
Water absorption (50% at 23° C)	**DIN53495	%	≤ 0.004
Maximum temp. for use in the air for short duration	-	°C	160
Maximum temperature of use in continuous air	-	°C	150
Minimum temperature of use in continuous air	-	°C	-30

MECHANICAL PROPERTIES			
Yield stress/tensile strength (σ_s)	ISO527	N/mm ²	62
Elongation at break (ϵ_s)	ISO527	%	17
Breaking load (σ_r)	DIN53455	N/mm ²	46
Elongation at break (ϵ_r)	ISO527	%	17
Impact resistance	*DIN53453	kJ/m ²	124
Impact resistance, notched test	*DIN53453	kJ/m ²	11
Rockwell hardness	DIN53465	Scala M	M80
Compression test, load 1% deform. nominal	*DIN53454 ⁽³⁾	N/mm ²	50
Elasticity module	*DIN53457 ⁽⁵⁾	N/mm ²	2100

THERMIC PROPERTIES			
Melting temperature	-	°C	175
VICAT softening temperature	DIN53460	°C	-
Deformation temperature under bending load	DIN53461	°C	90
Coefficient of linear thermal expansion (α)	DIN53752	K ⁻¹ X10 ⁻⁴	1.2
Thermal conductivity at 23°	DIN52612	W/(Kxm)	0.25

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	-	7.25
Dielectric dissipation factor (tan δ) a 10 ³ HZ	**DIN53483	-	0.18
Dielectric strength (on thickness of 1 mm.)	**DIN53481	kV/mm	22
Electrical leakage resistivity	112/030TI	-	CTI600

OTHER PROPERTIES			
Possibility of gluing	-	-	Limited
Absence of physiological risks	FDA	-	Yes
Dry friction coefficient on steel	DIN53375	-	0.34
Flammability	UL94	-	V-0
UV stability	-	-	Yes

* : 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