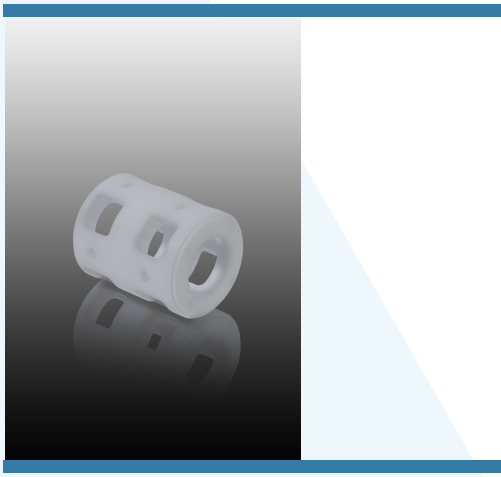
POM | FURTHER TECHNOPOLYMERS

Main features

POM is a highly versatile technopolymer, especially thanks to its excellent workability, low costs, good dimensional stability and fatigue resistance. POM is suitable for construction of details that work in contact with food and water, thanks to its low moisture absorption rate. It has good temperature and chemical resistance, as well as excellent wear resistance and good sliding characteristics, mechanical strength and rigidity.



Applications

Cams
Bushing
Bearings
Gears
Pads
Sliding guides
Mechanical details in general

Application sectors

Building and lifting industry
Racycling and waste management
Medical and Pharmaceutical
Food Automotive
Mechanic Naval
Electrical and Semiconductor

FDA Compatibility YES

Available colours

PHYSICAL PROPERTIES	REGULATIONS	UM	POM
PHYSICAL PROPERTIES			
Density	DIN53479	g/cm³	1.41
Water absorption (50% at 23° C)	**DIN53495	%	0.3
Maximum temp. for use in the air for short duration	-	°C	140
Maximum temperature of use in continuous air	-	°C	100
Minimum temperature of use in continuous air	-	°C	-50
MECHANICAL PROPERTIES			
Yield stress/tensile strength (σ_s)	*DIN53455 (4)	N/mm²	65
Elongation at break (ε_s)	ISO 527	%	32
Breaking load (σ_r)	DIN53455	N/mm²	-
Elongation at break (ε_r)	ISO 527	%	32
Impact resistance	*DIN53453	kJ/m²	NR
Impact resistance, notched test	*DIN53453	kJ/m²	8
Rockwell hardness	DIN53465	Scala M	M86
Compression test, load 1% deform. nominal	ISO 604	N/mm²	20
Elasticity module	*DIN53457 (5)	N/mm²	2800
THERMIC PROPERTIES			
Melting temperature	-	°C	165
VICAT softening temperature	DIN53460	°C	-
Deformation temperature under bending load	DIN53461	°C	110
Coefficient of linear thermal expansion (α)	DIN53752	$K^{-1}X10^{-4}$	10
Thermal conductivity at 23°	DIN52612	W/(Kxm)	0.31
ELECTRICAL PROPERTIES			
Volume resistivity	**DIN53482	Ω/cm	10^{13}
Surface resistivity	**DIN53482	Ω	10^{14}
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	>50
Electrical leakage resistivity	112/030TI	-	CTI600
OTHER PROPERTIES			
Possibility of gluing	-	-	No
Absence of physiological risks	FDA	-	Yes
Dry friction coefficient on steel	DIN53375	-	0.32
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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