PEEK+GLASS 30% | HIGH QUALITY MATERIALS

Main features

It has similar characteristics and properties to PEEK, but the presence of glass fibres increases its mechanical strength and rigidity, making it particularly suitable for applications at high temperatures and static loads. The glass charge, however, does not recommend the use in applications subject to sliding with friction or wear, as glass fibers have an abrasive effect.

Applications

Gears
Rollers
Structural components
Mechanic details in general

Application sectors

Aerospace
Power Plant,
Offshore, Oil & Gas
Medical and Pharmaceutical
Chemical
Automotive

FDA Compatibility NO

Available colours

PHYSICAL PROPERTIES	REGULATIONS	UM	PEEK+GF30
PHYSICAL PROPERTIES			
Density	DIN53479	g/cm³	1.49
Water absorption (50% at 23° C)	**DIN53495	%	0.1
Maximum temp. for use in the air for short duration	-	°C	300
Maximum temperature of use in continuous air	-	°C	260
Minimum temperature of use in continuous air	-	°C	-40
MECHANICAL PROPERTIES			
Yield stress/tensile strength (σ_s)	ISO527	N/mm²	80
Elongation at break (ε_s)	DIN53455	%	5
Breaking load (σ_r)	DIN53455	N/mm²	157
Elongation at break (ε_r)	*DIN53455 (4)	%	5
Impact resistance	*DIN53453	kJ/m²	35
Impact resistance, notched test	ISO179	kJ/m²	3
Rockwell hardness	DIN53465	Scala M	M99
Compression test, load 1% deform. nominal	*DIN53454 (3)	N/mm²	180
Elasticity module	*DIN53457 (5)	N/mm²	6000
THERMIC PROPERTIES			
Melting temperature	-	°C	340
VICAT softening temperature	DIN53460	°C	-
Deformation temperature under bending load	DIN53461	°C	315
Coefficient of linear thermal expansion (α)	DIN53752	$K^{-1}X10^{-4}$	0.30
Thermal conductivity at 23°	DIN52612	W/(Kxm)	0.43
ELECTRICAL PROPERTIES			
Volume resistivity	**DIN53482	Ω/cm	10^{14}
Surface resistivity	**DIN53482	Ω	10^{13}
Dielectric constant at 10^3 HZ (on thickness of 1 mm.)	**DIN53483	-	3.6
Dielectric dissipation factor (tan δ) a 10^3 HZ	**DIN53483	-	0.004
Dielectric strength (on thickness of 1 mm.)	**DIN53481	kV/mm	24
Electrical leakage resistivity	112/030TI	-	CTI175
OTHER PROPERTIES			
Possibility of gluing	-	-	Yes
Absence of physiological risks	FDA	-	No
Dry friction coefficient on steel	DIN53375	-	0.42
Flammability	UL94	-	V-O
UV stability	-	-	Limited

* : 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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