

► Main features

Material with excellent impact resistance, practically unbreakable. It has a good heat resistance, has excellent transparency and permeability to light (about 90%), maintaining almost unchanged its mechanical properties up to 140,- C. It has an excellent transparency, being in itself a colourless material, but can be supplied with any color gradation. Thanks to this and the excellent mechanical properties, the PC is a valid alternative to glass.

► Applications

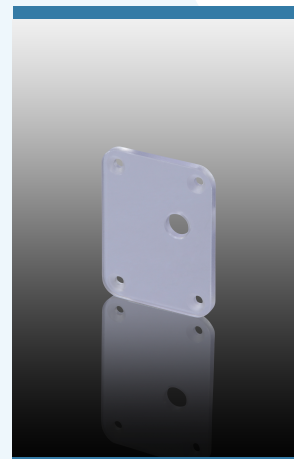
Carter
Protective doors
Shields
Mechanical details where it's necessary the transparency of the material

► Application sectors

Rail and transportation
Architectural and construction
Aerospace
Food
Medical and pharmaceutical

► Fda Compatibility YES

► Available Colours



PROPERTIES	REGULATIONS	UM	PC
PHYSICAL PROPERTIES			
Density	DIN53479	g/cm ³	1.20
Water absorption (50% at 23° C)	**DIN53495	%	0.15
Maximum temp. for use in the air for short duration	-	°C	140
Maximum temperature of use in continuous air	-	°C	120
Minimum temperature of use in continuous air	-	°C	-60
MECHANICAL PROPERTIES			
Yield stress/tensile strength (σ_s)	ISO178	N/mm ²	90
Elongation at break (ϵ_s)	ISO527	%	60
Breaking load (σ_r)	ISO527	N/mm ²	-
Elongation at break (ϵ_r)	ISO527	%	120
Impact resistance	*DIN53453	kJ/m ²	NR
Impact resistance, notched test	ISO179/1C	kJ/m ²	35
Rockwell hardness	DIN53465	Scala M	M70
Compression test, load 1% deform. nominal	*DIN53454 ⁽³⁾	N/mm ²	68
Elasticity module	*DIN53457 ⁽⁵⁾	N/mm ²	2300
THERMIC PROPERTIES			
Melting temperature	-	°C	150
VICAT softening temperature	DIN53460	°C	145
Deformation temperature under bending load	DIN53461	°C	-
Coefficient of linear thermal expansion (α)	DIN53752	K ⁻¹ X10 ⁻⁴	0.65 ⁽¹⁾
Thermal conductivity at 23°	DIN52612	W/(Kxm)	0.20
ELECTRICAL PROPERTIES			
Volume resistivity	**DIN53482	Ω /cm	10 ¹⁵
Surface resistivity	**DIN53482	Ω	-
Dielectric constant at 10 ³ HZ (on thickness of 1 mm.)	**DIN53483	-	3(10 ³ HZ)
Dielectric dissipation factor (tan δ) a 10 ³ HZ	**DIN53483	-	0.001(10 ³ HZ)
Dielectric strength (on thickness of 1 mm.)	**DIN53481	kV/mm	15 ⁽³⁾
Electrical leakage resistivity	112/030TI	-	CTI350
OTHER PROPERTIES			
Possibility of gluing	-	-	Limited
Absence of physiological risks	FDA	-	-
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