

TECANAT® black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PC (Polycarbonate)

Colour

black

Density

1.19 g/cm³

Main features

- excellent impact strength
- excellent strength and stiffness
- excellent dimensional stability
- good machinability

Target Industries

- aircraft and aerospace technology
- food processing
- packaging and paper machinery

Mechanical properties	condition	value	unit	test method	comment
Modulus of elasticity (tensile test)	@ 73 °F	320,000	psi	ASTM D 638	
Tensile strength at yield	@ 73 °F	9,000	psi	ASTM D 638	
Elongation at break (tensile test)	@ 73 °F	50	%	ASTM D 638	
Flexural strength	@ 73 °F	13,000	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	305,000	psi	ASTM D 790	
Compression strength	@1% strain, 73 °F	2,900	psi	ASTM D 695	
Compression strength	@10% strain, 73 °F	12,000	psi	ASTM D 695	
Compression modulus	@ 73 °F	295,000	psi	ASTM D 695	
Impact strength (Izod)	@ 73 °F	1.25	ft-lbs/in	ASTM D 256	
Rockwell hardness	@ 73 °F M Scale (R Scale)	70 (120)		ASTM D 785	
Thermal properties	condition	value	unit	test method	comment
Vicat softening point		309	°F	ASTM D 1525	1) (1) Injection molded data
Deflection temperature	@264 psi	270	°F	ASTM D 648	2) (2) Injection molded data
Service temperature	Intermittent	275	°F	-	3) (3) per UL746B
Service temperature	Long Term	250	°F	-	
Electrical properties	condition	value	unit	test method	comment
volume resistance		1.0*10 ¹⁶	Ω*cm	ASTM D 257	1) (1) Injection molded data
Dielectric strength		378	V/mil	ASTM D 149	2) (2) Injection molded data
Other properties	condition	value	unit	test method	comment
Moisture absorption	@ 24 hrs, 73 °F	0.08	%	ASTM D 570	1) (1) Injection molded data
Flammability (UL94)		HB		-	2) (2) @ 1.50 mm thickness Injection molded data

→ Resin specification:
ASTM D3935-09 PC0150B34840
Shapes specification:
ASTM D6098-10 S-PC0111

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