PROTOLABS
Manufacturing. Accelerated.

Polycarbonate (PC) 20% GF

Polycarbonate 20% GF is a 20% glass reinforced polycarbonate with higher temperature and tensile properties than unfilled polycarbonate. Its good electrical properties combined with superior impact strength and moderate chemical resistance make it widely fitting for numerous applications.

Applications

PC 20% GF is applicable to the automotive industry as it can be used for pumps, valves, light bezels, and instrument panels. It can also be used in business equipment for parts such as gears, rollers, internal mechanical parts, connectors, and relays. Moreover, it is often used in the aircraft and aerospace industries.

Key Product Benefits

- Good Electrical Properties
- High Strength and Stiffness
- Excellent Impact Strength
- Dimensional Stability
- Machinability

Properties

Property	Test Method	Value
Flammability	UL 94	V-0
Density	ASTM D792	1.33-1.35 g/cm3
Water Absorption @ 24 hours	ASTM D570	0.16%
Water Absorption @ Saturation	ASTM D570	0.29%
Dissipation Factor @ 1 MHz	ASTM D150	0.0009
Tensile Strength @ Yield	ASTM D638	12,000-16,000 psi
Tensile Modulus	ASTM D638	700,000-860,000 psi
Elongation @ Break	ASTM D638	4-6%
Flexural Strength	ASTM D790	18,000-19,000 psi
Flexural Modulus	ASTM D790	620,000-800,000 psi
Compressive Strength	ASTM D695	11,000-16,000 psi
Rockwell Hardness (M Scale)	ASTM D785	87-91

Property (Continued)	Test Method (Continued)	Value (Continued)
Dynamic Coefficient of Friction	ASTM D3702	0.22
Coefficient of Linear Thermal Expansion	ASTM D696	1.5 in/in/°F x 10-5
Continuous Service Temperature, Air		260-266°F
Heat Deflection Temperature @ 264 psi	ASTM D648	295°F
Heat Deflection Temperature @ 66 psi	ASTM D648	298°F
Dielectric Constant @ 1 MHz	ASTM D150	3.13
Dielectric Strength	ASTM D149	490 V/mil