



A true industrial thermoplastic, PC (polycarbonate) is widely used in automotive, aerospace, medical and many other applications. PC offers accuracy, durability and stability, creating strong parts that withstand functional testing. It also has superior mechanical properties to ABS and a number of other thermoplastics. When combined with FDM (Fused Deposition Modeling) systems, PC gives you Real Parts™ for producing design verification prototypes and manufacturing end-use parts.

Mechanical Properties ¹	Test Method	Imperial	Metric
Tensile Strength, Type 1, 0.125	ASTM D638	7,600 psi	52 MPa
Tensile Modulus, Type 1, 0.125	ASTM D638	290,000 psi	2,000 MPa
Tensile Elongation, Type 1, 0.125	ASTM D638	3%	3%
Flexural Strength	ASTM D790	14,000 psi	97 MPa
Flexural Modulus	ASTM D790	310,000 psi	2,137 MPa
IZOD Impact, notched	ASTM D256	1 ft-lb/in	53.39 J/a
IZOD impact, un-notched	ASTM D256	5 ft-lb/in	266.95 J/a

Thermal Properties	Test Method	Imperial	Metric
Heat Deflection Temperature @ 66 psi	ASTM D648	280° F	138° C
Heat Deflection Temperature @ 264 psi	ASTM D648	261° F	127° C
Glass Transition Temperature (Tg)	DMA (SSYS)	322° F	161° C
Coefficient of Thermal Expansion	-----	3.8E-05 in/in/F	-----
Melt Point	-----	Not Applicable ²	Not Applicable ²

Other	Test Method	Value
Specific Gravity	ASTM D792	1.2
Rockwell Hardness	ASTM D785	R115
Flame Classification	UL 94	V2, 1.1 mm
Dielectric Strength kV/mm	IEC 60112	15
Dielectric Constant @ 60Mhz	IEC 60250	3.17
Dielectric Constant @ 1Mhz	IEC 60250	2.96

APPEARANCE: White

APPLICATIONS: cell phones, business equipment, computer products, manufacturing fixtures, and a wide variety of consumer products, such as appliances

MASTERS: RTV molds and vacuum forming, vacuum metallization and electroplating

BENEFITS of Direct Digital Manufacturing:

- Multiple design iterations -design engineers have the flexibility to modify geometry's while in production, which incurs cost and time penalties when tooling starts
- Bridge manufacturing - rapid manufacturing allows you to start production while waiting for your tool to build
- Jigs and Fixtures - Use additive fabrication as a light-weight, lower cost tool for assembly and manufacturing aids during the production of your parts
- Just-in-time or lean manufacturing - DDM can conserve cash flow for manufacturers
- Alpha and Beta product releases - produce accurate, durable products during the early design validation stages - even if you already committed to tooling

The information presented are typical values intended for reference and comparison purposes only. They should not be used for design specifications or quality control purposes. End-use material performance can be impacted (+/-) by, but not limited to, part design, end-use conditions, test conditions, etc. Actual values will vary with build conditions.

¹ Build orientation is on side edge. ² Do to amorphous nature, material does not display a melting point.

For more information about Redeye services and materials, contact your representative at +1 866-882-6934 or visit www.redeyeondemand.com

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