



Gordon Composites™ GC-70-ULZ

Advanced Composites

Key Characteristics

Product Description

Made with high strength glass fiber commonly called "S" glass, this unidirectional glass laminate provides strength and fatigue resistance superior to laminates made with standard "E" glass. GC-70-ULZ is manufactured with a proprietary pulforming process in which all glass fibers are pretensioned and aligned during the impregnation and curing process.

General

Material Status	• Commercial: Active
Regional Availability	• North America
Filler / Reinforcement	• Glass Fiber, 70% Filler by Weight
Uses	<ul style="list-style-type: none"> • Industrial Applications • Marine Applications • Metal Replacement <ul style="list-style-type: none"> • Prosthetics • Sporting Goods • Springs <ul style="list-style-type: none"> • Structural Parts
Appearance	• Black • Natural Color
Forms	• Sheet ¹
Processing Method	• Machining

Technical Properties ²

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	1.88 g/cm ³	1.88 g/cm ³	ASTM D1505
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus			ASTM D3039
-- ³	7.40E+6 psi	51000 MPa	
-- ⁴	1.60E+6 psi	11000 MPa	
Tensile Strength			ASTM D3039
-- ³	243000 psi	1680 MPa	
-- ⁴	6700 psi	46.2 MPa	
Tensile Strain ³ (Break)	3.3 %	3.3 %	ASTM D3039
Flexural Modulus	6.80E+6 psi	46900 MPa	ASTM D790
Flexural Strength ⁵	245000 psi	1690 MPa	ASTM D790
Compressive Modulus			ASTM D3410
-- ⁴	1.90E+6 psi	13100 MPa	
-- ³	7.30E+6 psi	50300 MPa	
Compressive Strength			ASTM D3410
-- ³	119000 psi	820 MPa	
-- ⁴	20900 psi	144 MPa	
Shear Modulus			ASTM D5379
-- ⁶	540000 psi	3720 MPa	
-- ⁷	910000 psi	6270 MPa	
Shear Strength			
-- ⁷	8000 psi	55.2 MPa	ASTM D5397
-- ⁶	5300 psi	36.5 MPa	ASTM D5379
Poisson's Ratio ⁸	0.28	0.28	ASTM D3410
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Glass Transition Temperature	245 °F	118 °C	ASTM D3418

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Notes

¹ Width: .1.50" to 8.75"
 Thickness: .020" to .040"
 Length: 6" to 120"

² Typical values are not to be construed as specifications.

³ 0 degree orientation

⁴ 90 degree orientation

⁵ Strength Values developed from ASTM D790 are dependent on thickness. As thickness increased flex strength decreased. The test data above is based on a test thickness of .060"

⁶ Inter-laminar, 2,3 direction

⁷ In-plane, 1,2 direction

⁸ nu12 (0/90), valid both tensile and compression

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