



THE GUND COMPANY

Manufacturers & fabricators of engineered material solutions

Item:	N155 and N180, glass reinforcement laminate			
Description:	<p>N155 and N180 are high temperature glass reinforced laminates designed for downhole applications where components are under high compressive and shear stress.</p> <p>These grades can be easily machined into frac components such as pressure rings and cones.</p>			
Availability:	Laminate Sheets:		English Units (in)	SI Units (mm/cm)
		Thickness:	0.031 - 2.000 0.118 - 1.500	0.78 - 60 (mm) 3 - 38.1
		Sheet Size:	36 x 72 48 x 96	91.4 - 182.8 (cm) 121.9 - 243.8
	Fabricated Parts:	The Gund Company custom fabricates composite frac materials to the exact specification and drawings of our customers.		

Key Characteristics	Test Method	Units - English (SI)	N155 Typical Values	N180 Typical Values
Standard Color*	--	--	White	Black
Density	--	lb/in ³ (g/cc)	0.066 (1.83)	0.069 (1.91)
Water Absorption (0.125")	ASTM D-570	%	0.25	0.25
Tensile Strength	ASTM D-638	psi (MPa)	12,000 (83)	16,000 (110)
Compressive Strength, Flat-Wise	ASTM D-695	psi (MPa)	40,000 (276)	46,000 (317)
Flexural Strength Length-Wise Cross-Wise	ASTM D-790	psi (MPa)	26,000 (179) 22,000 (152)	29,000 (200) 32,000 (221)
IZOD Impact Strength, Edge-Wise	ASTM D-256	ft-lbs/in	9.5	12
Shear Strength	ASTM D-732	psi (MPa)	17,000 (117)	18,000 (124)
Thermal Class	--	°F (°C)	311°F (155°C)	356°F (180°C)

* Custom colors available upon request

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