

**THE GUND COMPANY** 

Manufacturers & fabricators of engineered material solutions

ltem:	<i>G-FRAC</i> <sup>™</sup> G2019 High Temperature Epoxy Glass Filament Wound Tube					
Description:	<b>G-FRAC<sup>™</sup></b> G2019 epoxy glass tubes are wound from high temperature resistant epoxy coated glass filament strands. The <b>G-FRAC</b> <sup>™</sup> G2019 tube formulation has enhanced inter-laminar shear strength and excellent compressive strength retention at temperatures up to 300°F. Common applications demanding moderately high temperature and high mechanical strength performance in heavy wall construction for hydraulic fracturing as an economical alternative.					
Availability:	Sizes:	Inner Diameter: from .250" - 6.00"	Wall Thickness: from 0.062" to 2.00"			
	Fabricated Parts:	The Gund Company fabricates materials and components to the exact specifications and drawings of our customers. Customized tube properties according to filament wind angle are available upon request.				

Key Characteristics	Test Method	Units	Typical Values
Standard Wind Angle			45 +/- 5°*
Color			Black
Flammability Rating	UL 94		НВ
Compressive Strength	ASTM D-348	psi	30,000
Interlaminate Shear	Modified ASTM D-732	psi	4,300/5,000*
Barcol Hardness	ASTM D-2583		>55
Tensile Strength	ASTM D348 psi		32,000
Density	ASTM D-348 gm/cc		2.0 - 2.2
Water Absorption	ASTM D-348	24 Hours	< 0.2%
Glass Transition Temperature, Tg	ASTM D-3418 °C		155

\*G2019HS version for high shear strength

Typical Inter-Laminar Shear Strength (ILSS) at Elevated Temperatures, psi							
	200°F	250°F	300°F	350°F			
G2018HS	3,300	3,000	Not Recommended	Not Recommended			
G2019HS	3,600	3,500	3,000	Not Recommended			
G2039HS	3,800	3,500	3,200	3,000			

\*This formula is good for cones, load rings, mule shoes, slips and mandrels in moderate temperatures.

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