



# THE GUND COMPANY

Manufacturers & fabricators of engineered material solutions

Item:	Fiberglass Reinforced Threaded Vinyl Ester Threaded Rods & FRP Nuts
Availability:	Threaded Rods & Nuts - Diameters: 0.375", 0.50", 0.625", 0.75", 1.0"
Fabricated Parts:	The Gund Company custom fabricates insulation materials to the exact specifications and drawings of our customers

Key Property	ASTM Test	Units	3/8" 16 UNC	1/2" 13 UNC	5/8" 11 UNC	3/4" 10 UNC	1" 8 UNC
Ultimate Thread Shear Capacity Using Standard Square Nut <sup>1,2,6</sup>	--	lbs	1,000	2,000	3,100	4,500	6,200
Max Ultimate Design Tensile Load Using Square Nut <sup>1,2,5,6</sup>	--	lbs	800	1,600	2,480	3,600	4,960
Flexural Strength <sup>1,2</sup>	ASTM D-790	psi	60,000	60,000	60,000	60,000	60,000
Flexural Modulus <sup>2,3</sup>	ASTM D-790	10 <sup>6</sup> psi	2.0	2.0	2.0	2.5	2.75
Compressive Strength (LW) <sup>2,3</sup>	ASTM D-695	psi	55,000	55,000	55,000	55,000	60,000
Ultimate Transverse Shear <sup>2,3</sup>	ASTM B-565	load lb	4,200	7,400	11,600	17,200	27,400
Transverse Shear Yield <sup>2,3</sup>	--	load lb	2,100	3,300	4,500	7,500	12,500
Dielectric Strength <sup>2,3</sup>	ASTM D-149	kV/in	40	40	40	40	40
Water Absorption <sup>3</sup>	ASTM D-570	%	1	1	1	1	1
Coefficient of Thermal Expansion (LW)	ASTM D-696	10 <sup>-6</sup> in/in/°F	3.0	3.0	3.0	3.0	3.0
Torque Strength - Using Square Nut w/ SAE 10x30 Motor Oil <sup>2,4,5,6</sup>	Ultimate	ft-lb	8	15	33	50	115
	Recommended	ft-lb	4	8	16	24	50
Stud Weight <sup>3</sup>	--	lb/ft	0.76	0.129	0.209	0.315	0.592
Flammability	ASTM D-635	--	--	--	--	--	--
Thickness - Square Nut	--	in	0.437	0.562	0.688	0.813	1.062
Width - Square Nut	--	in	0.688	0.875	1.062	1.250	1.625

LW = Length-Wise

<sup>1</sup> Applies to single unit only; multiple nuts do not yield corresponding results

<sup>2</sup> Ultimate strength values are averages obtained during testing

<sup>3</sup> Values are based on unthreaded rod

<sup>4</sup> Torque results are dependent on several variable factors including lubricant used, the length of stud between nuts, alignment, washer surfaces, etc. Therefore, if such results of torque tightening are important, it is vital that torque limits be determined experimentally for the exact installation conditions.

<sup>5</sup> Appropriate safety factors must be applied

<sup>6</sup> Properties apply to stud used with square nut