



**Fiberglass Rebars Physical Properties (Vinyl Ester Resin)**

Rebar diameter, mm.	Nominal diameter, mm.	Cross section, mm <sup>2</sup>	Tensile strength, kg/cm <sup>2</sup>	Modulus of elasticity, kg/cm <sup>2</sup>
5	4.6	16.61	7,900	480,000
6	5.8	26.41	7,900	480,000
8	8.1	51.53	7,500	480,000
10	9.4	69.36	7,400	480,000
12	11.7	107.51	7,000	480,000
13	12.7	126.62	6,800	480,000
14	13.6	145.19	6,600	480,000
15	14.7	169.72	6,500	480,000
16	15.7	193.50	6,300	480,000
20	19.5	298.5	6,000	480,000
25	24.3	463.53	5,700	480,000

**Rebar 16 mm. - Technical Information**

Properties	Test Procedures	Minimum ultimate	
		Vinyl ester	Epoxy resin
Tensile strength	D638	6,300 kg/cm <sup>2</sup>	6,800 kg/cm <sup>2</sup>
Tensile E-modulus	D638	480,000 kg/cm <sup>2</sup>	540,000 kg/cm <sup>2</sup>
single shear strength	D2344	1,300 kg/cm <sup>2</sup>	1,500 kg/cm <sup>2</sup>
Barcol hardness	D2583	55	65
Di-electric strength	D149	14 kv/mm	14 kv/mm
Di-electric constant	D150	5.5	5.5
Arc resistance	D495	160 sec.	180 sec.
Glass content	D2584	79%	83%
Density	D792	2.1 gr/cm <sup>3</sup>	2.2 gr/cm <sup>3</sup>
Water absorption	D570	0.05%	0.03%
Coefficient of thermal expansion in the longitudinal direction			
	D696	5-8 x 10 <sup>-6</sup>	6-9 x 10 <sup>-6</sup>

- More sizes and relevant technical data available upon customers' request.

**Main Features and Advantages**

- Impenetrable to chloride ion and low pH chemical attack.
- Tensile strength greater than steel.
- Lighter than steel reinforcement by 75%.
- Transparent to magnetic fields and radio frequencies.
- Non-conductive (electrical and thermal).