

HYOSUNG CARBON FIBERS

Hyosung carbon fiber products are high strength (H2550, 12k/24k) and intermediate modulus. (H3055, 12k)

■ Type

Polyacrylonitrile (PAN) based carbon fiber with our own precursor technology

■ Capacity

500 Tons/year in 2012, 2,500 Tons/year by early 2013. (New production line of 2,000 Tons is under construction)

■ Tow Properties (Number of Filaments : 12,000/24,000 for H2550, 12,000 for H3055)

Product Code	SI Unit		US Unit		Test method	
	H2550	H3055	H2550	H3055		
Filament Diameter	7.0 (μm)	5.0 (μm)	2.8 x 10 ⁻⁴ (in.)	2.0 x 10 ⁻⁴ (in.)	ISO 11567	
Tensile Strength	4,900 (MPa)	5,500 (MPa)	711 (ksi)	798 (ksi)	ISO 10618	
Specific Tensile Strength	28.1 x 10 ⁴ (m)	31.5 x 10 ⁴ (m)	92.2 x 10 ⁴ (ft)	103.5 x 10 ⁴ (ft)		
Tensile Modulus	250 (GPa)	290 (GPa)	36.3 (Msi)	42.1 (Msi)	ISO 10618	
Specific Tensile Modulus	14.3 x 10 ⁶ (m)	16.6 x 10 ⁶ (m)	46.9 x 10 ⁶ (ft)	54.4 x 10 ⁶ (ft)	ISO 10618	
Tensile Strain	2.0 (%)	1.9 (%)	2.0 (%)	1.9 (%)		
Yield	12k	800 (g/km)	445(g/km)	1,860 (ft/lbs)	3,344 (ft/lbs)	ISO 1889
	24k	1,650 (g/km)	N/A	902 (ft/lbs)	N/A	
Fiber Density	1.78 (g/cm ³)	1.78 (g/cm ³)	0.064 (lbs/in ³)	0.064 (lbs/in ³)	ISO 10119	
Size Content by Mass	1.0 (% , w/w)					

■ Composite Properties (Hyosung 250°F Epoxy Resin, corrected to 60% fiber volume)

Product Code	SI Unit		US Unit		Test Method
	H2550	H3055	H2550	H3055	
Tensile Strength	2,600 (MPa)	2,860 (MPa)	377 (ksi)	415 (ksi)	ASTM D-3039
Tensile Modulus	140 (GPa)	170 (GPa)	20.8 (Msi)	25.3 (Msi)	ASTM D-3039
Tensile Strain	1.75 (%)	1.5 (%)	1.75 (%)	1.5 (%)	ASTM D-3039
Compressive Strength	1,390 (MPa)	1,530 (MPa)	203 (ksi)	223 (ksi)	ASTM D-3410
Flexural Strength	2,000 (MPa)	2,000 (MPa)	293 (ksi)	293 (ksi)	ASTM D-790
Flexural Modulus	125 (GPa)	155 (GPa)	18.5 (Msi)	22.9 (Msi)	ASTM D-790
ILSS	90 (MPa)	90 (MPa)	13 (ksi)	13 (ksi)	ASTM D-2344