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# SHIMTEQ™ NCF Q880G

## Quadraxial Glass Fiber Non Crimp Fabric

### SUMMARY

NCF Q880G is a single fabric containing 4 layers (orientated 0°, +45°, 90°, -45°) of continuous glass fiber (GF) stitched by polyester. The material offers off-axis reinforcement with excellent strength and intermediate modulus for composites impregnated by matrix resins. NCF Q880G has a unique feature for a very stable composite material, i.e. its non-crimp configuration, which retains the alignment of the reinforcing fibers during molding. The material also offers a path for resin impregnation via the stitching holes and the well-aligned fiber orientation.

### SPECIFICATIONS

Total fiber areal weight [g/m <sup>2</sup> ]	883	Material configuration	Sheet roll
Reinforcing fiber areal weight [g/m <sup>2</sup> ]	869	Package configuration	Cardboard
Stitching yarn areal weight [g/m <sup>2</sup> ]	14	Fabric width [mm]	1270
Reinforcing fiber tensile modulus [GPa]	70	Fabric length [m]	50
Number of layers [ply]	4	Roll weight [kg]	56

### MATERIAL CONFIGURATION

	Material	Configuration
Reinforcement	GF	[0/+45/90/-45]
Stitching	Polyester	Chain-Tricot

### APPLICATION EXAMPLES

Wide range of light weight and/or high mechanical-/physical-strength-demanding fields (e.g. automotive and aerospace) molded by infusion, RTM, and press-molding.

### APPLICABLE MATRIX RESINS

Epoxy, Unsaturated polyester, Vinyl ester, Urethane, etc.

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**MATERIAL PROPERTIES**

Test condition : 23±3°C、 50±10%RH

Test items	Test Results	Test Method
0° tensile strength [MPa]	350	JIS K 7164
0° tensile modulus [GPa]	21.0	JIS K 7164
45° tensile strength [MPa]	310	JIS K 7164
45° tensile modulus [GPa]	19.8	JIS K 7164
90° tensile strength [MPa]	330	JIS K 7164
90° tensile modulus [GPa]	19.4	JIS K 7164
0° Compression strength [MPa]	460	ASTM D 6641
0° Compression modulus [GPa]	24.6	ASTM D 6641
45° Compression strength [MPa]	400	ASTM D 6641
45° Compression modulus [GPa]	22.3	ASTM D 6641
90° Compression strength [MPa]	410	ASTM D 6641
90° Compression modulus [GPa]	22.1	ASTM D 6641

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