

Quantum QC[®] 8800

Sheet Molding Compound

PRODUCT DESCRIPTION

E-glass reinforced hybrid unsaturated polyester molding compound

GENERAL

Material Status	• Commercial: Active		
Availability	• North America	• Europe	• Asia Pacific
Filler/Reinforcement	• E-glass Fiber	• Nominal 63% w/w	• Nominal 1" (25 mm) Length
Features	• Fatigue resistance • High strength	• High stiffness • Shelf Life 2 months @ 75°F	• Black or Natural Color
Processing Method	• QC[®] 8800 can be molded at temperatures in the range of 260-310°F, with 280°F suggested as a starting point. Cure times will be dependent on molding temperature and part thickness and will typically be 3-5 minutes. Detailed molding suggestions are available on request. Cool molded parts at ambient temperature. A cooling fixture may be needed depending on part thickness and geometry. Matched metal die molds.		
Resin	• UP Hybrid Composite		

PHYSICAL	Typical	Unit	Test Method
Density	1.88	g/cm ³	ASTM D792
Shrinkage	<0.001	in/in	cold mold to cold part
CLTE, X-Y plane	18	ppm/°C	ASTM E831
CLTE, Z plane	50	ppm/°C	ASTM E831
Poisson's Ratio	0.38		ASTM D638

MECHANICAL (Machined)	Typical	Unit	Test Method
Tensile Modulus	2.8E+6 (19,300)	psi (MPa)	ASTM D3039
Tensile Stress (Break)	35,500 (245)	psi (MPa)	ASTM D3039
Flexural Modulus	2.9E+6 (20,000)	psi (MPa)	ASTM D790
Flexural Stress (Break)	70,500 (485)	psi (MPa)	ASTM D790
Short Beam Shear	8,000 (55.2)	psi (MPa)	ASTM D2344

Machined Properties are determined using specimen machined from molded 12"x12" panels with 80% mold coverage, 1000 psi pressure, 280-300°F mold temperature for 3-5 minutes

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MECHANICAL (As molded)	Typical	Unit	Test Method
Tensile Modulus	3.5E+6 (24,100)	psi (MPa)	ASTM D638
Tensile Strength	50,000 (345)	psi (MPa)	ASTM D638
Flexural Modulus (RT)	2.9E+6 (20,000)	psi (MPa)	ASTM D790
Flexural Strength	80,000 (552)	psi (MPa)	ASTM D790
IMPACT			
Izod Notched Impact Strength	36 (1992)	ft-lb/in (J/m)	ASTM D256
THERMAL			
Glass Transition T _g TanDelta	84	(°C)	ASTM D7028

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