

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 | psi (MPa) | 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

The information and recommendations contained in this document are based upon data collected by A. Schulman and are believed to be reliable; however, because A. Schulman cannot anticipate or control the many different conditions under which this information and/or product may be used, no representation is made and no warranty is given of any kind, express or implied, for completeness, accuracy, availability, suitability, usefulness, commercial value, or non-violation of intellectual property rights of information, recommendation, and products and services directly or indirectly provided. A. Schulman assumes no responsibility for the results of the use of products and processes described herein and expressly disclaims the implied warranties of merchantability and fitness for a particular use.

Quantum QC[®] 8800

Sheet Molding Compound

| MECHANICAL (As molded) | Typical | Unit | Test Method |
|-------------------------------|-----------------|-------------|--------------------|
| Tensile Modulus | 3.5E+6 (24,100) | psi (GPa) | ASTM D638 |
| Tensile Strength | 50,000 (345) | psi (MPa) | ASTM D638 |
| Flexural Modulus (RT) | 2.9E+6 (20,000) | psi (GPa) | ASTM D790 |
| Flexural Strength | 80,000 (552) | psi (MPa) | ASTM D790 |

| IMPACT | Typical | Unit | Test Method |
|------------------------------|----------------|----------------|--------------------|
| Izod Notched Impact Strength | 36 (1992) | ft-lb/in (J/m) | ASTM D256 |

| THERMAL | Typical | Unit | Test Method |
|--|----------------|-------------|--------------------|
| Glass Transition T _g TanDelta | 84 | (°C) | ASTM D7028 |

For additional information, please contact:

A. Schulman Inc., Engineered Composites
Quantum Composites, Inc.
1310 South Valley Center Drive
Bay City, MI 48604
p: 989-922-3863
f: 989-922-3915
www.aschulman.com

The information and recommendations contained in this document are based upon data collected by A. Schulman and are believed to be reliable; however, because A. Schulman cannot anticipate or control the many different conditions under which this information and/or product may be used, no representation is made and no warranty is given of any kind, express or implied, for completeness, accuracy, availability, suitability, usefulness, commercial value, or non-violation of intellectual property rights of information, recommendation, and products and services directly or indirectly provided. A. Schulman assumes no responsibility for the results of the use of products and processes described herein and expressly disclaims the implied warranties of merchantability and fitness for a particular use.