

TECHNICAL DATA SHEET

QC 2550, 126-40-146 Engineered Structural Composite® (ESC®) Molding Compound

QC 2550 is a chopped E-glass fiber reinforced ESC® molding compound. It exhibits outstanding low flammability characteristics. It is recommended for applications such as aircraft interiors and public transportation components requiring composite materials having very low flammability, low smoke, and minimal generation of toxic gases.

TYPICAL PROPERTIES | UNCURED

Form and Color	Rolled Sheet, Natural or Black	Fiber Length	Nominal 1.0-inch
Glass Fiber Content	Nominal-50% w/w	Shelf Life: @ 10°F	6 months
Resin Content	Nominal-50% w/w	Shelf Life: @ 40°F	2 months

TYPICAL PROPERTIES | CURED | “Net Shape” Specimen

<u>Test</u>	<u>Procedure</u>	<u>Value</u>
Specific Gravity, g/cc	ASTM D-792	1.80
Molding Shrinkage, inch/inch (mm/mm)	ASTM D-955	<0.0015 (0.038)
Flexural Strength, psi (MPa) ¹	ASTM D-790	56,500 (389)
Flexural Modulus, psi (GPa) ¹	ASTM D-790	2.8 x10 ⁶ (19.3)
Tensile Strength, psi (MPa) ¹	ASTM D-638	34,000 (234)
Tensile Modulus, psi (GPa) ¹	ASTM D-638	3.0 x10 ⁶ (20.7)
Izod Impact (notched) ft.lb./in. (J/M)	ASTM D-256	18 (960)
Glass Transition Temp. °F (°C) Tan Delta ²	ASTM D-7028	392 (200)

¹ Tensile and Flexural Properties are determined using net shaped molded specimen

² Glass Transition Temp measured from machined specimen

Molding Suggestions – QC 2550 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 5-10 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. A breath cycle is recommended during mold process to allow for moisture generated during cure reaction to escape.

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Data Sheet Continued

Technical Data Sheet QC 2550, 126-40-146

Precautions – QC 2550 contains glass fibers and should be handled carefully in order to minimize skin contact. Molding areas should be well ventilated to minimize exposure to fumes. Presses must be provided with local exhaust to remove vapors from work areas. If adequate ventilation is not available, a respirator approved for removing organic vapor must be used.

Typical Uncured and Cured Properties tested each lot of – QC 2550:

- Fiber Content/Resin Content
- Specific Gravity
- Molding Shrinkage
- Mat Weight, (Areal Density)

NO WARRANTY – The above information is offered for your consideration, investigation, and verification. No warranty, expressed or implied, is given as to the materials described on this Technical Data Sheet. Quantum Composites, Inc. specifically disclaims any warranty of merchantability or fitness for any particular purpose. Final determination of the suitability of this material is the sole responsibility of the buyer. Contact our sales representative for assistance in developing procedures to fit individual requirements.

This ESC® product is generally intended to be compression molded in matched-metal die molds. Strength values may be affected by the molding process. **The values presented in this data sheet are typical values and are not to be interpreted as product specifications.**
