

ST-130



ST-130™ is a model material for sacrificial tooling that simplifies the production of hollow composite parts. Complex tools can be 3D printed and easily dissolved after curing, eliminating secondary processes like mold making and accelerating the development and production of composite structures. Engineered and tested specifically for sacrificial tooling, ST-130 withstands the heat and pressure of autoclave curing. And it 3D prints with a permeable triangle fill pattern designed to optimize build speed, conserve material and dissolve quickly.

ST-130 is available on the Fortus 450mc™ and Fortus 900mc™ 3D Printers. This solution provides increased ease of use, improved part yield and quality – and is ideal for automotive, aerospace and sporting goods industries.

Mechanical Properties	Test Method	Value
Compressive Strength, Peak Load, On Edge	ASTM D695	7.3 kN (1,633 lbf)
Compressive Strength, Peak Load, Upright	ASTM D695	13.8 kN (3,103 lbf)
Compressive Strength, Peak Stress, On Edge	ASTM D695	14.5 MPa (2,106 lbf/in ²)
Compressive Strength, Peak Stress, Upright	ASTM D695	27.8 MPa (4,031 lbf/in ²)

Thermal Properties	Test Method	Metric
Heat Deflection (HDT) @ 66 psi, 0.125" unannealed	ASTM D648	121°C (250°F)
Heat Deflection (HDT) @ 264 psi, 0.125" unannealed	ASTM D648	108°C (226°F)
Glass Transition Temperature (Tg)	SSYS DSC	132°C (270°F)
Coefficient of Thermal Expansion (Up to 100°C, xyflow)	ASTM E831	107 μm/(m·°C) (59 μin/(in·°F))
Coefficient of Thermal Expansion (Up to 100°C, xzflow)	ASTM E831	88 μm/(m·°C) (49 μin/(in·°F))
Coefficient of Thermal Expansion (100-130°C, xyflow)	ASTM E831	177 μm/(m·°C) (98 μin/(in·°F))
Coefficient of Thermal Expansion (100-130°C, xzflow)	ASTM E831	76 μm/(m·°C) (42 μin/(in·°F))

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Suggested Cure Cycle Parameters	Temperature A	Temperature B	Pressure A	Pressure B
Temperature	250°F (121°C)	210°F (98°C)	29 in-Hg (101.3 kPa)	183 in-Hg (620 kPa)

*All values validated using three linked contours and permeable triangular fill with an air gap of 0.25 in (6 mm).

3D Printer Availability	Support Technology	Slice Height	Tips
Fortus 450mc	ST-130_S	0.013" (0.333 mm)	Model: T20B
Fortus 900mc			Support: T20

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