



# DragonPlate™

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Material Specifications



## Carbon Fiber Airex Foam Core

DragonPlate carbon fiber C70-40 Airex foam core is a unique closed cell, cross-linked polymer foam core. This is a lightweight structural foam that has good impact strength. While great for high strength applications which require a low panel weight, this is a carbon fiber foam core laminate that can resist crushing forces and supply an adequate mounting surface. The lay-up design is quasi-isotropic, consisting of three layers of carbon fiber on each side of a Airex foam core center. Available in gloss, matte or texture on one side and texture on other side for bonding to other surfaces.

### STANDARD CORES

CORE THICKNESS	LAMINATE THICKNESS	CUT SIZE TOLERANCE	ESTIMATED WEIGHT (lbs/ft²)*
1/4" ± 0.020	~ 0.32"	+ 0.5" / -0	0.48
1/2" ± 0.020	~ 0.57"	+ 0.5" / -0	0.52
1" ± 0.020	~ 1.07"	+ 0.5" / -0	0.63

\* Weight varies with core density

Available in Various Sizes

Finish: Textured, gloss, or matte / Textured

### Additional Options

- Custom Sizes
- Custom Laminates
- Custom Thickness
- CNC Machining
- Design and Engineering Services

### TECHNICAL SPECIFICATIONS

#### Properties of Carbon Fiber

Tensile Strength: 512 ksi  
Tensile Modulus: 33.4 Msi

#### Properties of Airex C70-40 Foam Core

Compressive Strength : 65 psi  
Compressive Modulus: 5370 psi  
Tensile Strength: 100 psi  
Tensile Modulus: 4060 psi  
Density: 2.5 lb/ft³  
Shear Strength: 65 psi  
Shear Modulus: 1900 psi

#### Resin

Epoxy resin that accounts for approximately 50% of the composition

$W_f \approx 50\%$

#### Lay Up Schedule

3 Layers Plain Weave Carbon Fiber  
C70-40 Airex Foam  
3 Layers Plain Weave Carbon Fiber