PRODUCT INFORMATION

OC® FABRICS
OC® BIAXIAL FABRICS (0˚/90˚)

PRODUCT DESCRIPTION

OC® Biaxial Fabrics (0°/90°) are a stitch-bonded, non-crimp, composite reinforcement comprised of unidirectional warp (0°) and weft (90°) plies. Stitch-bonded fabrics eliminate fiber crimp inherent in woven products; this increases fiber alignment, allowing for stronger, stiffer laminates at lighter weights while minimizing the formation of resin-rich pockets. Stitch-bonded fabrics also provide improved laminate surface quality. *OC Biaxial Fabrics* can be engineered for specific applications requiring different ratios of warp to weft reinforcement.

All *OC Biaxial Fabrics* are available with a stitch-bonded mat, including chopped strand mat, direct chop (binderless) mat, continuous filament mat, and veil. The versatile fabric, made from high-quality fibers, is available in a variety of widths and weights to meet any requirements.
The input fibers are designed to give controlled wet-out and excellent laminate properties. Each fabric can be combined with a glass mat or veil for enhanced performance or surface finish.

PRODUCT APPLICATION

OC Biaxial Fabrics offer improved stiffness without added weight or laminate thickness for high-performance structural laminates. Reduced fabric print-through results in enhanced aesthetics on finished products while offering material and labor savings. These versatile fabrics have been used in a wide array of composite applications, including boat hulls, truck and trailer panels, wind blades, recreational sporting equipment and bridge decks. Since the concentration of reinforcement in each direction can be engineered, *OC Biaxial Fabrics* can be considered the reinforcement of choice when the critical design criteria is mechanical performance.

FEATURES	PRODUCT BENEFITS
• CRIMP-FREE CONSTRUCTION	• IMPROVED FIBER ALIGNMENT AND MECHANICAL PROPERTIES
• OPTIMIZED DIRECTIONAL FIBER CONTENT	• REDUCED RESIN USAGE AND PART WEIGHT
• HIGH BI-DIRECTIONAL STRENGTH, STIFFNESS, AND FLEX	• IMPROVED PERFORMANCE FROM LIGHTER LAMINATES
• REDUCE PRINT-THROUGH	• ENHANCED AESTHETICS WITH MATERIAL AND LABOR SAVINGS
• AVAILABLE IN A VARIETY OF WIDTHS AND WEIGHTS	• OFFERS SOLUTIONS FOR WIDE RANGE OF APPLICATIONS

PRODUCT NOMENCLATURE

CD(M) 17 08 - 50.0

- Roll width (inches)
- Chopped strand weight (oz/ft²)
- Fabric Weight (oz/yd²)
- M = mat glass; V = veil (360°)
- CD = knitted biaxial (0°/90°)

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PHYSICAL PROPERTIES / AVAILABLE PRODUCTS

FABRIC STYLE	TOTAL WEIGHT (OZ/YD²)	0º	90º	+45º	-45º	MAT	DRY THICKNESS (INCHES)
CD120	12.7	5.8	6.0	0	0	0	0.023
CDM1208	20.3	5.8	6.0	0	0	7.6	0.036
CDM1608G	23.8	10.4	5.5	0	0	7.6	0.045
CD180	21.5	10.3	10.6	0	0	0	0.034
CDM1808	29.2	10.3	10.6	0	0	7.6	0.049
CDM1815	35.1	10.3	10.6	0	0	13.5	0.067
CD240	26.0	13.9	11.9	0	0	0	0.042
CDM2408	34.1	13.8	12.1	0	0	7.6	0.059
CDM2415G	39.6	13.9	11.9	0	0	13.5	0.065
CDM3205G	40.4	15.7	17.7	0	0	6.8	0.059
CDM3208G	41.2	15.7	17.7	0	0	7.6	0.056
CDM3610G	44.6	17.4	17.4	0	0	9.0	0.065

SAMPLE MECHANICAL PROPERTIES

Sample Mechanical Properties of Laminate based on **CDM1808** (50% glass content by weight).

	ENGLISH UNITS	SI UNITS
Tensile (ASTM D 638)		
Strength	37.2 ksi	256 MPa
Modulus	2.10 msi	14.5 GPa
Compression (ASTM D 695)		
Strength	30.2 ksi	208 MPa
Modulus	1.83 msi	12.6 GPa
Flexural (ASTM D 790)		
Strength	61.0 ksi	420 MPa
Modulus	2.30 msi	15.8 GPa

Sample Mechanical Properties of Laminate based on **CDM2415** (50% glass content by weight).

	ENGLISH UNITS	SI UNITS
Tensile (ASTM D 638)		
Strength	35.2 ksi	243 MPa
Modulus	2.06 msi	14.2 GPa
Compression (ASTM D 695)		
Strength	31.3 ksi	216 MPa
Modulus	1.97 msi	13.6 GPa
Flexural (ASTM D 790)		
Strength	58.6 ksi	404 MPa
Modulus	1.95 msi	13.4 GPa

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COMPOSITE SOLUTIONS

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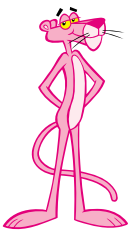

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