

THERMOSET ADVANCED COMPOSITE TECHNOLOGIES





Gordon Composites™ thermoset composite barstock, laminates, and hybrid composites made with proprietary resin/fiber reinforcement technologies offer:

- Corrosion resistance
- High fatigue strength
- Deep deflection
- Excellent interlaminar shear strength

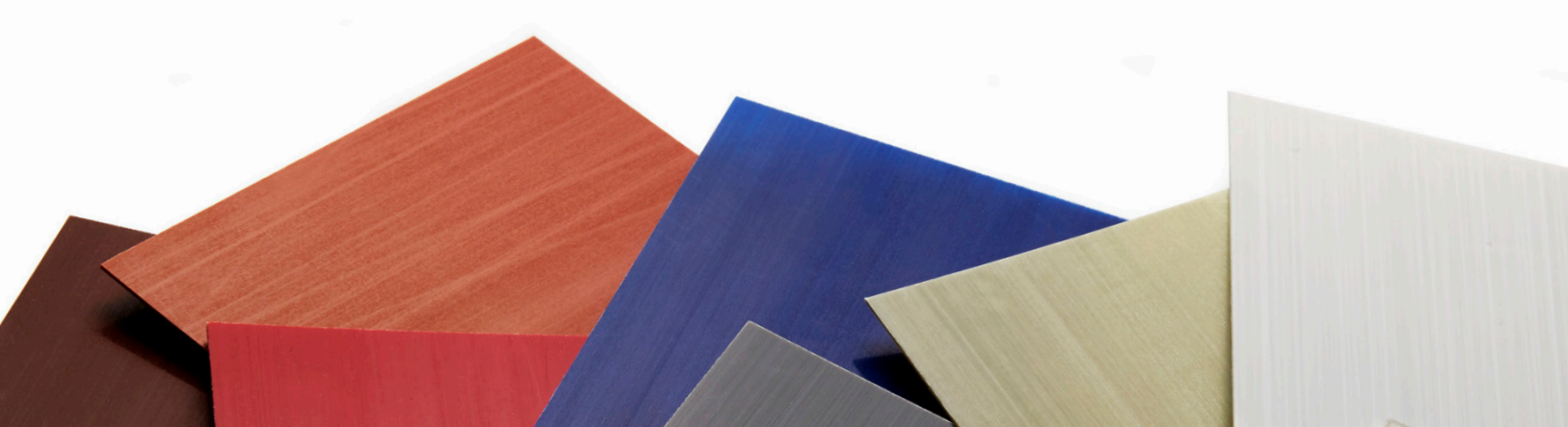
Our customized finishing capabilities include machining, water-jet cutting, profiling/shaping, sanding, slitting, laminating, molding and coatings.

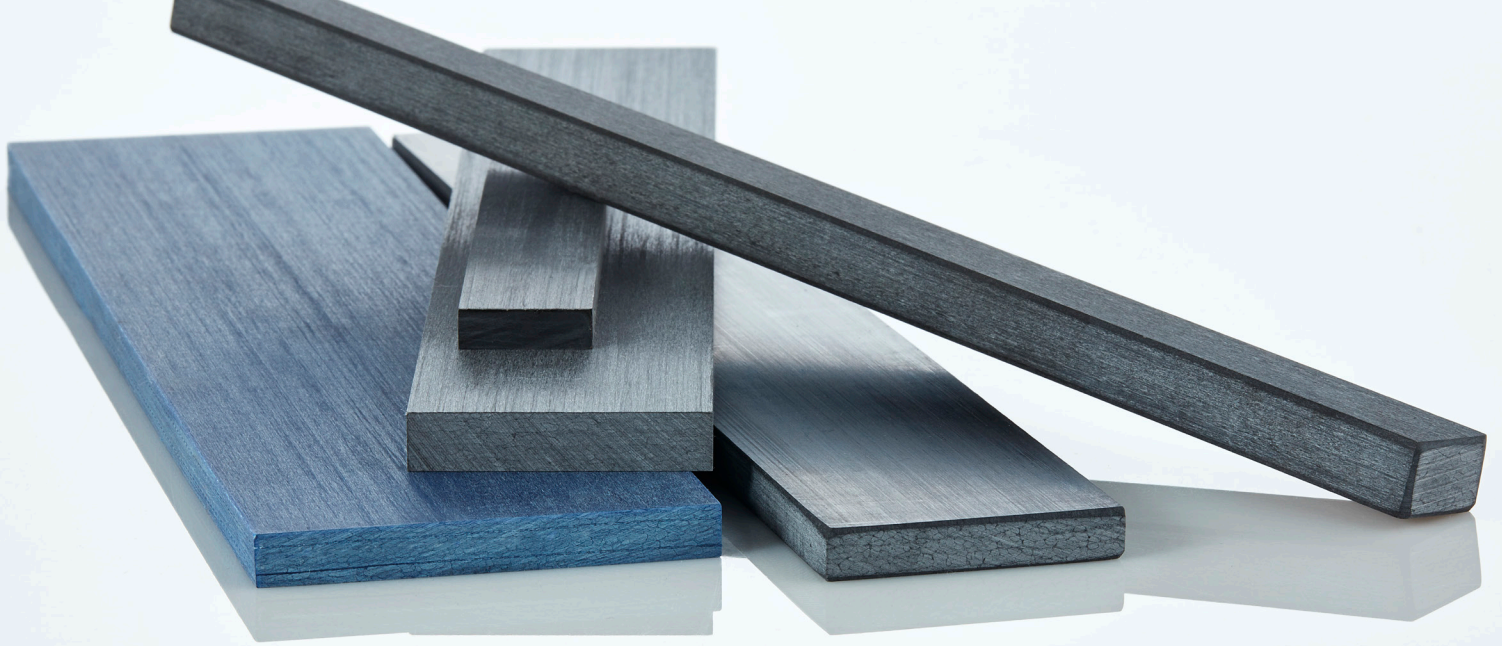
LAMINATES

This table represents examples of common laminate materials and sizes. Gordon Composites laminates are available in an assortment of colors, inlay options, and lengths from 6" to 120", or rolls up to 1500 feet. Contact [Avient](#) for more information or to discuss your specific application.

STANDARD LAMINATE PRODUCTS

PRODUCT	MATERIAL DESCRIPTION	COLOR	MAX THICKNESS IN (MM)	MAX WIDTH IN (CM)	FLEXURAL MODULUS Msi (GPa)	FLEXURAL STRENGTH ksi (MPa)	GLASS %
GC-70-UL	Glass/Epoxy	Any	0.1 (2.5)	17.75 (45)	5.8 (39.99)	210 (1448)	70
GC-66-ULW	Glass/Epoxy, 90° Weft	Any	0.1 (2.5)	17.75 (45)	4.5 (31.03)	130 (896)	66
GC-70-ULS	Glass/Epoxy, 1080 Woven Scrim	Any	0.1 (2.5)	17.75 (45)	5.8 (39.99)	210 (1448)	70
GC-70-ULZ	Glass/Epoxy	Natural	0.04 (1.0)	8.75 (22.2)	6.8 (46.89)	245 (1689)	70
GC-70-ULC	Carbon/Epoxy	Black	0.04 (1.0)	8.0 (20.3)	19.9 (137.21)	300 (2069)	70





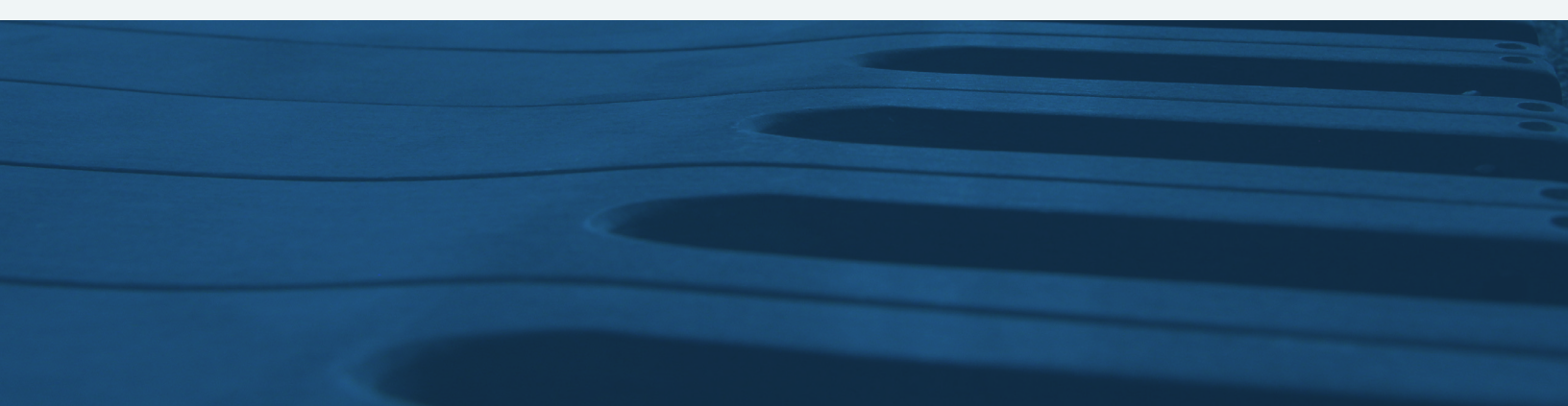
BARSTOCK

All barstock composites are machined to size with a surface finish prepared to fit customer requirements.

This table represents examples of common barstock materials and sizes. Gordon Composites barstock are highly customizable through engineering, machining, and construction to meet specific customer requirements. Contact [Avient](#) for more information or to discuss your specific application.

STANDARD BARSTOCK PRODUCTS

PRODUCT	MATERIAL DESCRIPTION	COLOR	MAX THICKNESS IN (MM)	MAX WIDTH IN (CM)	FLEXURAL MODULUS Msi (GPa)	FLEXURAL STRENGTH ksi (MPa)	GLASS %
GC-67-UB	Glass/Epoxy	Black	0.575 (14.6)	11.75 (29.8)	5.8 (39.99)	153 (1055)	67
GC-67-UBZ	Glass/Epoxy	Black	0.5 (12.7)	8.75 (22.2)	5.8 (39.99)	153 (1055)	67
GC-60-UBC	Carbon/Epoxy	Black	0.25 (6.35)	4.0 (10.2)	12.5 (86.19)	150 (1034)	60
GC-67-UBW	Glass/Epoxy, 90° Weft	Blue	0.25 (6.35)	8.75 (22.2)	4.8 (33.10)	150 (1034)	67



The Glasforms™ pultrusion process creates continuous, constant cross-sectional profiles with consistent, uniform quality and exceptional mechanical performance. These continuous fiber-reinforced polymer composites are ideal in applications where high stiffness and light weight performance are critical.

Standard and custom shapes and sizes are available with a variety of resins including polyester, vinyl ester, and epoxy, and reinforcements including mat/roving (MR-GFRP) or unidirectional (U-GFRP) fiberglass, or high performance unidirectional carbon fiber.



PULTRUDED PROFILES

The tables below represent typical properties and common pultruded shapes and sizes. Glasforms materials are highly customizable to meet specific customer requirements. Contact [Avient](#) for more information or to discuss your specific application.

PULTRUDED PROFILES - TYPICAL PROPERTIES

	TENSILE STRENGTH ksi (MPa)	TENSILE MODULUS Msi (GPa)	FLEXURAL STRENGTH ksi (MPa)	FLEXURAL MODULUS Msi (GPa)	COMPRESSIVE STRENGTH ksi (MPa)	DENSITY lb/in ³ (g/cm ³)	GLASS %
ASTM Standard	ASTM D3916/D638	ASTM D3916/D638	ASTM D4476/D790	ASTM D4476/D790	ASTM D695	ASTM D792	ASTM D2584
Glass Fiber Reinforced	110-150 (750-1000)	5.5-7.0 (38-48)	100-130 (700-900)	5.5-6.5 (38-45)	60-110 (415-750)	.068-.073 (1.9-2.0)	65-75
Carbon Fiber Reinforced	405 (2800)	24 (165)	180 (1200)	21 (145)	150 (1000)	0.058 (1.6)	75
Multiaxial Glass Reinforced	45-60 (310-415)	2.6-3.5 (18-24)	65 (450)	2.1-2.7 (15-19)	40 (275)	0.066 (1.8)	45-55

STANDARD SIZES

PROFILE	THICKNESS IN (MM)	WIDTH IN (MM)
Rectangular	0.165-3.75 (4.19-95.25)	0.600-5.500 (15.24-139.70)

PROFILE	DIAMETER IN (MM)	CROSS SECTION IN ³ (MM ³)
Round	0.062-3.465 (1.57-88.01)	0.003-9.430 (1.93-6083.86)

The Glasforms™ continuous filament winding process combines the principles of filament winding with pultrusion to create lightweight, stiff tubes and poles with a constant cross-section and maximum durability. Unlike conventional filament wound or pultruded tubing, reinforcements are precisely oriented to optimize the stiffness-to-weight ratio. Benefits include:

- Alternating longitudinal (axial) fibers for flexural & tensile strength and circumferential (biaxial) fibers for crush & burst resistance
- Manufactured continuously, at a much higher rate than standard filament winding
- Resin matrix and fiber loading formulated to meet your property requirements
- Tubing in standard or customized diameters and lengths

CONTINUOUS FILAMENT WOUND PROFILES

This table represents examples of common continuous filament wound profile sizes. Glasforms materials are highly customizable to meet specific customer requirements. Contact [Avient](#) for more information or to discuss your specific application.

STANDARD SIZES

PROFILE	OUTER DIAMETER IN (MM)	INNER DIAMETER IN (MM)	WALL THICKNESS IN (MM)
Continuous Filament Wound	0.298–1.170 (7.57–29.72)	0.250–1.070 (6.35–27.18)	0.024–0.097 (0.61–2.46)





**To learn more about Avient advanced composite solutions, call +1.844.4AVIENT
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