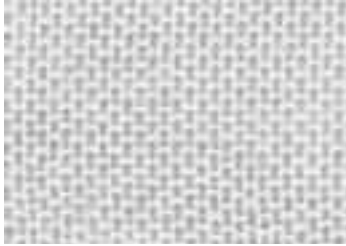


1093 Unidirectional E-Glass Fiberglass Fabric



Overview: Woven fabrics are strong reinforcements because the fibers are bundled into yarns oriented in just two directions. The warp and fill yarns run at 0 and 90 degrees respectively. Thus, fabrics are anisotropic, or strong in only two directions.

Fabrics need to be oriented so the fiber yarns run parallel to the expected loads. If extra strength is needed in a different direction, another ply must be added at an angle to the first. The most common angles are +/- 45 degrees.

Unidirectional fabrics are used to strengthen in one direction and save weight in the less critical orientation. This fabric permits a part's strength to be tailored to any orientation or stiffness with little weight penalty. 1093 is a plain weave style with 95% of the fiber density in the warp (roll length) direction.

Available in 1, 3, and 5 yard packages; custom cuts of 10 yards or more; and full rolls.

General Properties for Woven Fabrics:

High Tensile Strength	Glass is one of the strongest textile fibers, having greater specific tensile strength than steel wire of the same diameter, at a lower weight
Dimensional Stability	Low elongation under load, generally 3% or less. Glass fibers produce fabrics with excellent dimensional stability under various types of conditions.
High Heat Resistance	Glass fabrics have excellent dimensional stability under various types of conditions.
Fire Resistance	Composed of inorganic materials, glass fabrics are noncombustible, a natural choice where flammability is a concern.
Chemical Resistance	Like glass itself, fiberglass fabrics are highly resistant to attack by most chemicals.
Durability	Being inert, glass fabrics are unaffected by sunlight, fungus, or bacteria.
Economical	Glass fabrics are lower in cost than many other fabrics for smaller applications.

Specific Product Properties:

Style	7715
Finish	504
Weave Pattern	Plain
Yarn Description	Warp: ECG 75 1/0
	Fill: ECH 150 1/0
Count (Ends x Picks) inches	80 x 18
Weight	7.25 oz/yard ²
Thickness	0.0085 inches
Width	38 inches

Weave Pattern Rankings:

	Thickness	Weight	Strength	Porosity
Plain	3	1	3	1
Twill	2	1	4	2
4-Harness Satin	3	1	4	2
8-Harness Satin	1	1	7	4
Leno	7	7	1	7
Mock Leno	6	1	2	4

This was a scale from 1 to 7, with 1 being the lowest and 7 being the highest.

Resin Compatibility:

Part Number	Polyester Resin	Vinyl Ester Resin	System 2000 Epoxy
543	X	X	X
573	X	X	X
1093	X	X	X
1094	X	X	X

An "X" means the fabric is compatible with the resin.
The compatibility is based on Fibre Glast Development's resins only.