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E-Glass (Electrical Glass) Fiberglass

E-glass is the everyday aircraft fiberglass: low cost, white, non-conductive and corrosion-free.

E-glass at a glance

Item	What the sources say	Source
Name	Electrical glass: identified as such for electrical applications; high resistance to current flow	FAA-H-8083-31B, p. 7-5
Composition	Borosilicate glass	FAA-H-8083-31B, p. 7-5
Advantages	Lower cost than other composites; chemical and galvanic corrosion resistance; does not conduct electricity	FAA-H-8083-31B, p. 7-5
Colour and forms	White; dry fabric or prepreg	FAA-H-8083-31B, p. 7-5
Typical uses	Secondary structure such as fairings, radomes and wing tips; helicopter rotor blades	FAA-H-8083-31B, p. 7-5
Fabric weights	1.4 oz/yd² (48 g/m², styles 108 and 1080) to 19.7 oz/yd² (668 g/m², style 7587); dry thickness 2.2 to 27.2 mil	Hexcel HexForce data sheets
Breaking strength of fabric	80 to 750 lbf/in (warp) across those styles; 7781 is 570 / 450 lbf/in warp / fill	Hexcel HexForce data sheets
Service temperature	Not set by the glass; set by the resin and cure (see the resin pages)	—

Key points

- **Not primary structure.** The sources place it in secondary structure.
- **Not for radomes or advanced composites by AC 43.13-1B 3-2 methods.** Those need the manufacturer’s data.
- **No strength allowable here.** Laminate strength depends on resin and ply schedule, which the SRM gives.

SOURCES · FAA-H-8083-31B, AMT Handbook — Airframe, Volume 1, Chapter 7 · AC 43.13-1B, Change 1, Chapter 3, Fiberglass and Plastics · Hexcel HexForce Style 108 Fiber Glass Fabric Product Data · Hexcel HexForce Style 1080 Fiber Glass Fabric Product Data · Hexcel HexForce Style 120 Fiber Glass Fabric Product Data · Hexcel HexForce Style 7580 Fiber Glass Fabric Product Data · Hexcel HexForce Style 7781 Fiber Glass Fabric Product Data

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Educational reference only, not approved data. Always consult the applicable SRM, AMM, or AC 43.13-1B and your certifying authority.