THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT · THEAVIATIONPOINT.COM · THE AVIATION POINT

Foam Core for Sandwich Structure

Foam cores shape and stiffen wing tips, controls and fuselage sections on light aircraft and homebuilts.

Rohacell IG / IG-F (PMI closed-cell foam)

Property	31	51	71	110
Density, lb/ft³ (kg/m³)	2.00 (32)	3.25 (52)	4.68 (75)	6.87 (110)
Compressive strength, psi (MPa)	58 (0.4)	130 (0.9)	217 (1.5)	435 (3.0)
Tensile strength, psi (MPa)	145 (1.0)	275 (1.9)	406 (2.8)	507 (3.5)
Shear strength, psi (MPa)	58 (0.4)	116 (0.8)	188 (1.3)	348 (2.4)
Shear modulus, psi (MPa)	1,885 (13)	2,755 (19)	4,205 (29)	7,250 (50)

Foam against honeycomb at about 3 lb/ft³

Core	Density	Compressive, psi	Plate or core shear, psi
Nomex HRH-10 – 1/8 – 3.0	3.0 lb/ft³	300	175 L / 100 W
Rohacell 51 IG-F	3.25 lb/ft³	130	116

Key points

- **Not a substitution table.**
- **Process limits.** Foam crushes or distorts under cure pressure and temperature above its rating.

SOURCES · Evonik, ROHACELL IG and IG-F mechanical properties · Hexcel HexWeb HRH-10 Product Data Sheet · FAA-H-8083-31B, AMT Handbook — Airframe, Volume 1, Chapter 7

SCAN · OPEN THIS GUIDE
theaviationpoint.com/materials/composites/foam-core/

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