SKYCORE ACN40500

SKYCORE ACN40500 series aircraft panel material is a very strong construction of 2-ply 7781 style fiberglass-phenolic skins on 9 pound per cubic foot, 1/8 inch cell, [1]Nomex® honeycomb core. This construction, typically 0.5 inch thick, exhibits excellent strength to weight ratios, and fulfills the most stringent requirements of flammability, and smoke and toxic gas emissions.

QUALITY

Founded on years of experience, high quality materials, and a very controlled process, the color, texture, and integrity of this product is guaranteed.

PROPERTIES

SKYCORE ACN40500 is a flat, smooth, honeycomb core composite panel. Shapes are sawed or routed, ditched and potted to form corners, joined with mortise, tenon, and glue techniques, or bracket, screw, and potted insert techniques. Decorative laminates can be applied directly with hot vacuum or pressure techniques, or cold bonded with contact or pressure sensitive adhesives.

TYPICAL APPLICATIONS

Floor Panels

Cargo Boxes

FORMAT

SKYCORE ACN40500 is available in sheets nominally 48, 54, and 60 inches (1219, 1372, and 1524 mm) wide ±0.5 inches (±12.7 mm), by 96 inches (2438 mm) long ±0.5 inches (±12.7 mm), and 0.5 inches (12.7 mm) ±0.010 inches (±0.25 mm) thick. Thicknesses from 0.125 inches (3.18 mm) to 1.25 (31.8 mm) inches ±0.010 inches (±0.25 mm). Other sizes, and thicknesses from 0.125 inches (3.18 mm) to 1.25 (31.8 mm) inches ±0.010 inches (±0.25 mm), are available upon request.

[1] Nomex® is a registered trademark of DuPont

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skyline products

Skyline Products
P.O. Box 287
495 Territorial Road
Harrisburg, Oregon 97446

Tel.: (541) 995-6395
Fax: (541) 995-8425
Sales@Skyline-Products.com
www.Skyline-Products.com

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CHARACTERISTIC	TEST METHOD	UNIT	TEST VALUE
THICKNESS	Caliper	inch / mm	0.50±0.010 / 12.7±0.25
WEIGHT	ASTM D 461 (11)	lb/ft^2 / g/m^2	0.84±0.084 / 4100±410
LONG BEAM FLEXURAL FAILURE LOAD	MIL-STD 401 W (Warp) Direction	lbf (per 3 inches)	500
LONG BEAM FLEXURAL STRENGTH [1]	MIL-STD 401 W (Warp) Direction	ksi	35
SHORT BEAM FLEXURAL FAILURE LOAD	MIL-STD 401 W (Warp) Direction	lbf (per 3 inches)	750
CORE SHEAR STRENGTH [2]	MIL-STD 401 W (Warp) Direction	psi	263
CLIMBING DRUM PEEL STRENGTH	MIL-STD 401 W (Warp) Direction	lbf (per 3 inches)	45
FLATWISE COMPRESSIVE STRENGTH	FAR 25.853 (d) FAR 25 App. F Pt. IV	psi	1600
IMPACT STRENGTH	ASTM 5420 Gardner IM-IG-1140	in-lb	48
MAXIMUM SERVICE TEMPERATURE	Experiment	°F / °C	220 / 104
FLAMMABILITY (60 sec)	FAR 25.853 (d) FAR 25 App. F Pt. I	Flame time (sec) Burn length (in) Drip time (sec)	2.3 1.0 0
SMOKE DENSITY	FAR 25.853 (d) FAR 25 App. F Pt. V ASTM E-662	Ds 4-minutes Ds maximum	8 15

[1] Flexural Strength F_L = [P*(L-A)]/[4*(H-t)*B*t*1000], where F_L = Flexural Strength in Compression (ksi), P = Total Load at Failure (lbs), L = Support Span Length = 20 inches, A = Loading Span Length = 10 inches, t = Facesheet Thickness = 0.021 inches, H = Total Panel Thickness, B = Panel Width = 3 inches

[2] Core Shear Strength F_C = [P]/[2*(H-t)*B], where F_C = Core Shear Stress (psi), P = Total Load at Failure (lbs), t = Facesheet Thickness = 0.021 inches, H = Total Panel Thickness, B = Panel Width = 3 inches

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