



Alcoa Architectural Products

ENGINEERING PROPERTIES

US Equivalent

Typical Engineering Properties

Composite designed REYNOBOND panels consist of a thermoplastic compound core faced with two sheets of aluminum, Alloy 3105-H25, mill edge. There are two varieties, an LDPE core and an FR core.

Property	Units	RB120	RB160	RB200	RB240	RB160FR	RB200FR(2)	SOLID ALUMINUM(3)
Thickness	Inches	0.118	0.157	0.197	0.236	0.157	0.197	0.197
Weight	lb/Ft ²	0.94	1.12	1.32	1.51	1.63	2.02	2.78
Allowable Bending Stress(4)	lb/in ²	11,500	11,500	11,500	11,500	11,500	11,500	11,500
Coefficient of Expansion ASTM E228	in/in/°F	-	1.31x10 ⁻⁵	-	-	-	-	1.31x10 ⁻⁵
Stiffness (EI)	lb in ² /in	807	1,140	-	1,896	1,262	3346	6434
Flexural Modulus Aged per ASTM C393	lb/in ²	8.3x10 ⁶	6.0x10 ⁶	-	4.0x10 ⁶	6.7x10 ⁶	6.9x10 ⁶	10x10 ⁶
Moment of Inertia	in ⁴ /in	0.97x10 ⁻⁴	1.89x10 ⁻⁴	3.14x10 ⁻⁴	4.58x10 ⁻⁴	1.89x10 ⁻⁴	4.04x10 ⁻⁴	6.37x10 ⁻⁴
Section Modulus	in ³ /in	1.65x10 ⁻³	2.41x10 ⁻³	3.19x10 ⁻³	3.88x10 ⁻³	2.41x10 ⁻³	4.10x10 ⁻³	6.47x10 ⁻³
Tensile Yield ASTM D-638-82a	lb/in ²	8,300	6,405	-	5,314	6,367	5,720	19,000
Flatwise Tensile ASTM C-297-61 (80)	lb/in ²	1,483	1,371	-	1,099	-	722	-
Min. Bond Strength ASTM D-1781-76	in-lb/in	40	40	40	40	(1)	(1)	-
Flatwise Shear ASTM D-1002-72 (83)	lb/in ²	1,297	1,221	-	2,055	1,128	1,170	-
"R" Thermal Resistance (core only)	$\frac{Ft^2 \cdot hr \cdot ^\circ F}{BTU}$	0.034	0.051	0.069	0.086	0.026	0.031	0
STC Sound Transmission Coefficient ASTM E90		-	26	-	-	-	29	-
Maximum Width	Inches	62	62	62	62	62	62	-
Maximum Length	Inches	243	243	243	243	243	243	-

(1) For RB200 FR and RB160 FR, minimum value of 20 lbs/in. per ASTM D903.

(2) RB200 FR has a fire resistant polymeric compound core with 0.7mm thick aluminum skins.
LDPE and RB160 FR core panels have aluminum skins 0.5mm thick.

(3) Solid aluminum properties are based on Alloy 3105-H25.

(4) Allowable stress may be increased by 33% for wind load.

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