Rhine Bond ® Engineering Properties

(Metric Equivalent)

Typical Engineering Properties

Composite-Designed *Rhine Bond* ® Panels
consist of a thermoplastic compound core faced with two sheets of Aluminium.

Coating : Polyester (PE) coating [10 years Limited Color Retention Warranty]
Polyvinylidene Fluoride (PVDF) coating [15 years Colour Retention Warranty]
Core : High Density Polyethylene (HDPE)

Property	Units	*Rhine Bond* ® PE	*Rhine Bond* ® PVDF
Thickness	mm	3	4
Weight	kg/m^2	4.5	5.5
AL Skin Thickness	mm	0.3	0.3/0.5
Core Material Thickness	mm	2.4	3.4 / 3
Coating		Polyester	PVDF KYNAR 500
Film Thickness	µm	27	27
Specular Gloss	%	30 - 35	30 - 35
Pencil Hardness		HB-F	HB-F
Temperature Resistance	^oC	-50 to +80	-50 to +80
BOND INTEGRITY **Min Bond Strength ASTD 1781**	Nm/m	178	178
Flatwise Shear ASTM D1002	Mpa	8.94	8.42
Allowable Bending Stress	Mpa	79.3	79.3
Coefficient of Expansion ASTM E228	$mm/mm/^oC$	$2.36x10^{-5}$	$2.3x10^{-5}$
Stiffness (EI)	Mpa cm^4/m	$9.1x10^3$	$12.8x10^3$
Flexural Modulus ASTM 393	Mpa	$57.2x10^3$	$41.4x10^3$

Moment of Inertia	cm^4/m	0.159	0.31
Section Modulus	cm^3/m	1.065	1.555
Tensile Yeild ASTM D638	Mpa	57.23	44.16
Flatwise Tensile ASTM C297	Mpa	10.22	9.45
"R" Thermal Resistance (Core Only)	$\frac{m^2K}{w}$	$6.0x10^{-3}$	$9.0x10^{-3}$
STC Sound Transmisson Coefficient ASTM E90	db	25	26
Standard Width	mm	1220, 1250 & 1500*	1220, 1250 & 1500*
Standard Lengths	mm	2440, 3050 & 4000*	2440, 3200 & 3660*

BLUE RHINE

Rhine Bond

Building Bond for the Future

** select colours only,please check with respective Area Managers*