



**FUTURAL™**

# TECHNICAL DATA

## ALUMINUM BASE PROPERTIES

CLASSIFICATION	FUTURAL®	FUTURAL® LITE
Alloy/Temper	3003H24	3003H24
Standard Thickness	3mm (Tolerance +/-0.15mm)	2mm (Tolerance +/-0.15mm)
Standard Width	1250mm / 1500mm (Tolerance +/-2mm)	1250mm / 1500mm (Tolerance +/-2mm)
Standard Length	2500mm / 3200mm / 4000mm (Tolerance +/-8mm)	2500mm / 3200mm / 4000mm (Tolerance +/-6mm)
Panel Weight	≥7.69kg/m <sup>2</sup>	≥4.99kg/m <sup>2</sup>
Tensile Strength	140 - 180 Mpa	140 - 180 Mpa

## MATERIAL DATA

PHYSICAL PROPERTY	VALUE
Tensile Strength - ultimate, Ft <sub>u</sub> * (MPa)	152
Tensile Strength - yield, Ft <sub>y</sub> * (MPa)	124.2
Compressive strength, F <sub>cy</sub> (MPa)	96
Shear strength - ultimate, F <sub>su</sub> (MPa)	83
Shear strength - yield, F <sub>sy</sub> (MPa)	69
Bearing strength - ultimate, F <sub>bu</sub> (MPa)	276
Bearing strength - yield, F <sub>by</sub> (MPa)	172
Compressive MOE, E (MPa)	70,000
Thermal Expansion Coefficient	23
Fatigue strength (MPa)	60
Modulus of Resilience (Kj/M <sup>3</sup> )	130
Embodied carbon (kg-CO <sub>2</sub> /kg)	8.1
Elongation (%)	26

## KYNAR 500® PVDF DATA

PHYSICAL PROPERTY	TEST STANDARD	RESULT	COMMENTS
Nominal Coating thickness	TP-ET-02	35µm	5.0µm
Colour Uniformity	AAMA 2605-22 Section 8.1	Average ΔEH=0.04	Pass
Specular Gloss	AAMA 2605-22 Section 8.2	10-90	Pass
Dry Film Hardness	AAMA 2605-22 Section 8.3	Scratch hardness: H	Pass
Film Adhesion	AAMA 2605-22 Section 8.4	Dry: Class 5B Boiling Water1: Class 5B Wet2: Class 5B	Pass
Impact Resistance	AAMA 2605-22 Section 8.5	No removal of film from substrate	Pass
Abrasion Resistance	AAMA 2605-22 Section 8.6	Volume of sand used: 80L The coating can withstand a volume of 80L of sand.	Pass
Muriatic Acid Resistance (15 min spotl)	AAMA 2605-22 Section 8.7.1	No blistering and no visual change in appearance	Pass
Mortar Resistance (24hr pat test)	AMA 2605-22 Section 8.7.2	No loss of film adhesion or visual change in appearance	Pass
Nitric Acid Resistance	AAMA 2605-22 Section 8.7.3	ΔEH=0.5	Pass
Detergent Resistance	AAMA 2605-22 Section 8.7.4	No loss of adhesion of the film to the metal, no blistering and no significant visual change in appearance	Pass
Window Cleaner Resistance	AAMA 2605-22 Section 8.7.5	No blistering or noticeable change in appearance and no removal of film under the tape within or outside of the cross-hatched area	Pass

## REACTION TO FIRE

TEST ITEMS	TEST STANDARD	RESULT	CLASS
Fire Rating to EN 13501-1	EN ISO 1716	Pass	A1
	EN 13823	Pass	

## CLASSIFICATION

The classification has been carried out in accordance with EN 13501-1.

FIRE BEHAVIOUR		SMOKE PRODUCTION		FLAMING DROPLETS
A1	-	s	Not applicable	- d
				Not applicable

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**M A T E R I A L - M A C H I N E R Y - F A B R I C A T I O N - R E C Y C L I N G**