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AR 400 Series Slat Profile.

The AR400 series slat is coated before forming, which ensures all metal surfaces are protected from corrosion. The shape of the profile has been designed specifically to suit the domestic roller shutter market along with many commercial applications. The slat is roll formed in our Adelaide manufacturing facility to the highest of world standards. The German built roll forming machine is the most advanced of its type in Australia today.

Technical Specifications.

Base Material.

Aluminium Alloy:	3105	Temper:	H18
Thickness Finished:	0.36mm	Strip Width:	137mm
Tensile Stress (Rm):	200 – 240 Mpa.	0.2% Proof Stress (Rp0.2):	175 Mpa min.
Elongation (A50):	7% min. (Typ. = 10%)	Elongation (A10):	5% min. (Typ. = 8%)

PU. Foam. – Greenlink SF65LD

Chemical Component:	SF65LD Isocyanate and SF65LD Polyol		
Mixing Ratio:	100:124	Free Rise Density:	65 kg/m ³
Mixing Speed:	7,500 RPM.	Finished Contained Density:	84.2 kg/ m ³
Mixing Time:	5 seconds.	Curing Temperature:	72°C
Rise Time:	42 seconds.	Specific Gravity:	Polyol 1.08 g/ml Isocyanate 1.23 g/ml

Coating.

The base material has a two-coat system of primer plus topcoat, which is based on a polyurathane/polyamide binder. The polyester is cross-linked with melamine or blocked isocyanate resins and modified with Polyamide to provide the high resistance to abrasion.

Type:	Polyester ABR (Abrasion Resistant)		
Pre Treatment:	Hot sulphuric acid with alternating current, anodizing a coating thickness of max. 0.10 microns of aluminium oxide.		
Primer:	Specially formulated flexible primer with a nominal film thickness of 5 microns.		
Top Coat:	Modified Polyester ABR with a nominal thickness of 20 – 25 microns.		
Testing:	The coated aluminium is tested using various devices such as a Spectrophotometer and a Specular Gloss Meter, according to ISO 6270 standards. The standard periodic tests on this material are Colour Test, Gloss Test, Pencil Hardness, Erichsen (indentation test), Impact Resistance, and Bending, Salt Spray, Humidity Resistance, Weather -O – Meter and the Natural Weathering Resistance test.		

Mechanical Properties.

The AR400 series slat is a double walled cavity, curved 40mm profile with PU foam injected during the roll forming process. This process provides economical strength and insulation qualities while maintaining exceptional working performance of the slat. The curved shape of the slat provides minimal roll sizes and optimal lateral strength.

Nominal Thickness:	8.7mm	Weight per sqm:	4.0 kg.
Cover Size:	39.977 mm.	Max. Usable Size:	3.6 x 2.2m or 8.0m ²
Manufacturing Length:	5.8 metres.	Pack Size:	20 x 6m = 116m/pack.
Number of slats per 1 metre of height:	25 slats		

Performance:

The AR400 series slat profile has been tested to the above listed details and is expected to perform satisfactorily 20 years in normal climatic conditions, and when fitted under the specifications listed. During this period, normal weathering of the coating is expected with a reduction in gloss and a gradual uniform colour change over the lifetime of the coating. The coating of the AR400 series slat profile carries a nominal 5-year warranty against fading due to normal weathering conditions.

