Exterior Hot Water System prepainted steel

Revision 6 December 2013

This literature supersedes all previous issues

Prepainted - PP

GENERAL DESCRIPTION

Exterior Hot Water System pre-painted steel, designed specifically by BlueScope Steel Limited to provide a cost effective product for Hot Water System wrappers.

TYPICAL USES

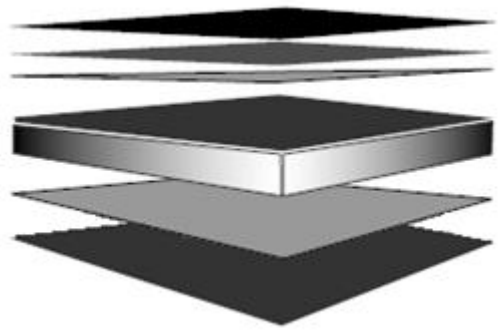
Exterior hot water system wrappers. For material selection advice, please contact BlueScope Steel Direct.

AUSTRALIAN STANDARDS

PREFERRED SUBSTRATES

ZINCALUME® G300S AM100 steel with Activate™ technology {Refer Note 8}		

Please refer to current price list or BlueScope Steel Limited State Sales Office for availability of colours and dimensions.



CORSTRIP® protective film may be available on request {Refer Note 3}

← Finish Coat (Finish Coat + Primer = nominal 17µm) {Refer Notes 4 & 5}

← Universal Corrosion Inhibitive Primer

← Conversion Coating

← ZINCALUME®- Zinc/Aluminium alloy coated steel with Activate™ technology Substrate

← Conversion Coating

← Backing Coat (nominal 5µm total){Refer Note 6}

ATTRIBUTES TESTED DURING MANUFACTURE

Property	Test & Evaluation Method(s)	Results
Adhesion		
Reverse Impact	AS/NZS 2728 (App. E)	≥10 joules
T-bend	AS/NZS 2728 (App. F)	Maximum 6T. Refer Note 7.
Hardness		
Pencil	AS1580.405.1	HB or harder
Specular gloss		
60º meter	AS/NZS 1580 602.2; ASTM D523 (test & eval)	Nominal ± 10 units

Exterior Hot Water System prepainted steel

Revision 6 December 2013

This literature supersedes all previous issues

Prepainted - PP

PRODUCT ATTRIBUTES

Property	Test & Evaluation Method(s)	Results
Flexibility		
T-bend	ASTM D4145	Maximum 10T (no cracking). Refer Note 7.
Resistance to abrasion		
Scratch	AS/NZS 2331.4.7 (test & eval)	Typically 2000g
Resistance to humidity		
Cleveland (500 hours)	ASTM D4585; AS/NZS 1580.481.1.9 (Blisters); AS/NZS 1580.408.4 (Adhesion)	Blister density: ≤3. Blister size: ≤S2. No loss of adhesion or corrosion.
Resistance to corrosion		
Salt spray (500 hours)	AS/NZS 2728 (App. I); ASTM B117; AS 2331.3.1; AS/NZS 1580.481.1.9 (Blisters); AS/NZS 1580.408.4 (Adhesion)	Blister density: ≤2. Blister size: ≤S3. Undercut from score: ≤2mm. No loss of adhesion or corrosion. Refer Note 2.
Resistance to colour change		
Natural well washed exposure (10 yrs)	AS/NZS 1580.457.1 & ASTM D2244 (Colour)	ΔE cielab 2000: Light colour: ≤4 units. Intermediate colour: ≤6 units. Dark colour: ≤10 units. Refer Notes 9 & 10.
QUV (2000 hours)	ASTM G154 & ASTM D2244 (Colour)	ΔE cielab 2000: Intermediate colour: ≤5 units.
Resistance to chalking		
Natural well washed exposure (10 yrs)	AS/NZS 1580.457.1 & AS/NZS 1580.481.1.11 (Chalk Method B)	Chalk rating: ≤4. Refer Notes 9 & 10.
QUV (1000 hours)	ASTM G154 & AS/NZS 1580.481.1.11 (Chalk Method B)	Chalk rating: ≤4.
Resistance to Solvents		
Exposure	ASTM D1308 (3.1.1); ASTM D2244 (Colour); AS/NZS 1580.481.1.9 (Blisters)	No discolouration or blistering. Refer Notes 9 & 11.
Resistance to heat		
Exposure 100°C continuous (500 hrs)	ASTM D2244 (Colour)	Colour change: ΔE cielab 2000: ≤3 units.

Exterior Hot Water System prepainted steel

Revision 6 December 2013

This literature supersedes all previous issues

Prepainted - PP

IMPORTANT NOTES

1. Where PIR foaming is employed, it is the responsibility of the manufacturer to ensure the foam is compatiable with the Shadow Grey backer. If not, contact BlueScope Steel Direct for advice.
2. Product may not be suitable if it is intended to use Exterior Hot Water prepainted steel in an exterior application within 1km of salt marine locations, severe industrial or abnormally corrosive environments; in areas not washed by rain, or in applications where it will be wholly or partly buried in the ground. For selection of the most appropriate COLORBOND® steel product, please refer to Technical Bulletins TB1a, TB1b, CTB16, CTB21 and CTB22. Before purchase, you should check on suitability by visiting the BlueScope Steel website or by contacting BlueScope Steel Direct for advice.
3. The CORSTRIP® protective film should be removed from the painted steel strip immediately on installation. Sunlight can increase adhesion of the protective film to the painted surface if left uncovered outside.
4. Finish Coat - the coating applied to the exposed surface of the prepainted coil which is expected to meet the Performance Requirements.
5. The product is supplied with a nominal 25 unit (60°) gloss Finish Coat
6. Backing coat - a thin coating applied to the reverse surface of the prepainted coil. It also gives additional durability to the reverse surface during the service life of the product. For aesthetic reasons the Backing Coat is not recommended for exposure to direct sunlight.
7. The minimum internal bend diameters for forming processes to achieve no paint cracking (visible using x10 magnification) and to avoid paint adhesion issues are specified by the T-bend flexibility and T-bend adhesion results respectively- where 1T equals the total coated thickness (tct) in mm of the material. These results are based on testing at 20-25°C.
8. For most products, the metallurgical ageing process which is inherent in the paint stoving cycle will result in some loss of ductility compared with unpainted product. However, minimum strength levels designated by relevant standards will still be applicable.
9. Improper storage or use of non-approved roll-forming lubricants may cause brand transfer and paint blushing, and may adversely affect colour and long term durability. Product in coil or sheet pack form must be kept dry. If the coil or sheet pack becomes wet, it must be separated and dried (refer AS/NZS 2728 Appendix L, and also Technical Bulletin TB7). Contact Steel Direct to obtain advice on appropriate rollforming lubricants.
10. Values quoted are for panels exposed in accordance with AS/NZS 2728. Variations for in-situ performance may occur due to complexity of building design and location.
11. Exterior Hot Water System prepainted steel has good resistance to accidental spillage of solvents such as methylated spirits, white spirit, mineral turpentine, toluene, trichloroethylene and dilute mineral acids and alkalis. However, all spillages should be immediately removed by water washing and drying.