Coated Steel - Prepainted
Data Sheet

May 2023 - This literature supersedes all previous issues

Sign Writing Panel prepainted steel

General description

Sign Writing Panel prepainted steel (SWP) has been specifically designed by BlueScope to provide a durable, mar-resistant, high-gloss product with superior overpaintability for the signwriting industry.

Typical uses

Signs. For material selection advice, please contact Steel Direct.

Australian and International standards

Substrate - AS 1397:2021

ISO 9001:2015 Quality System certified

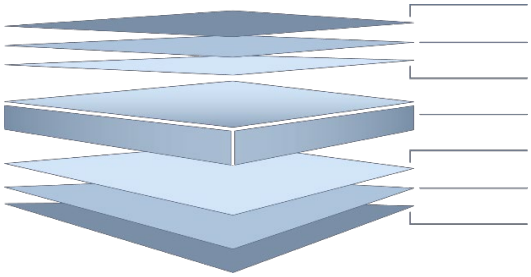
Preferred substrates

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

For substrate properties please refer to the relevant Metallic (AM) Coated steel datasheet or AS 1397:2021.

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

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



Finish Coat (Finish Coat + Primer = nominal 20µm) {Refer Notes 1, 2, 4 & 5}
Universal Corrosion Inhibitive Primer
Conversion Coating
Aluminium / Zinc / Magnesium alloy-coated steel with Activate® technology substrate
Conversion Coating
Universal Corrosion Inhibitive Primer
Backing Coat (Backing Coat + Primer = nominal 10µm total) {Refer Note 6}

Attributes tested during manufacture

Property	Test & Evaluation Method(s)	Results
Adhesion		
Reverse impact	AS/NZS 2728:2013 (App. E)	≥10 joules
T-bend	AS/NZS 2728:2013 (App. F)	Maximum 6T. Refer Note 7.
Specular gloss		
60º meter	AS/NZS 1580.602.2:1995 (R2013); ASTM D523-14 (2018)	≥70 units

Product attributes

Property	Test & Evaluation Method(s)	Results
Hardness		
Pencil	AS/NZS 1580.405.1:1996 (R2013)	HB or harder
Resistance to humidity		
Cleveland (500 hours)	ASTM D4585/D4585-10 (2018); AS/NZS 1580.481.1.9:1998 (R2013) (Blisters); AS 1580.408.4-2004 (R2019) (Adhesion)	Blister density: ≤3. Blister size: ≤S2. Undercut from score: ≤2mm. No loss of adhesion or corrosion of base metal.
Resistance to colour change		
QUV (1000 hours)	ASTM G154-16 & ASTM D2244-21 (Colour)	ΔE CIEDE2000: Intermediate colour: ≤6 units
Resistance to chalking		
Natural well washed exposure (10 years)	AS/NZS 1580.457.1:1996 (R2013) & AS/NZS 1580.481.1.11:1998 (R2013) (Chalk Method B)	Chalk rating: ≤4. Refer Notes 9 & 10.
QUV (1000 hours)	AS/NZS 1580.457.1:1996 (R2013) & AS/NZS 1580.481.1.11:1998 (R2013) (Chalk Method B)	Chalk rating: ≤4
Resistance to solvents		
Exposure	ASTM D1308-20 (3.1.1); ASTM D2244-21 (Colour); AS/NZS 1580.481.1.9:1998 (R2013) (Blisters)	No discolouration or blistering. Refer Notes 9 & 11.

Important notes

1. Sign Writing Panel prepainted steel (SWP) has been developed to provide a surface that will accept overpainting. However, since a wide range of paints and inks with different properties are available, it is expected that customers carry out small 'in house' evaluations to ensure that adhesion of inks and paints meet individual requirements. This is particularly important where the painted surface has been protected with CORSTRIP® film. In such cases a preparatory, light wipe with a suitable solvent is recommended.

2. Product may not be suitable if it is intended to use Sign Writing Panel prepainted steel (SWP) 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 BlueScope prepainted steel product, please refer to Technical Bulletins TB1a, TB1b, CTB16, CTB21 and CTB22. Before purchase, you should check on suitability by visiting the BlueScope website or by contacting Steel Direct for advice.

3. Note occasionally strippable film may be supplied in lieu of CORSTRIP® film for operational reasons. The CORSTRIP® film/strippable 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. Please contact your relevant waste management provider to discuss requirements for recycling this type of material.

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 80 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, but for aesthetic reasons is not recommended for exposure to sunlight. Performance Requirements are generally not applicable to backing coats. Where specific Performance Requirements are deemed necessary for the reverse surface coating, a "double sided" product should be specified, in which case a topcoat of full nominal thickness will be applied.

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 2728:2013 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 2728:2013. Variations for in-situ performance may occur due to complexity of building design and location.

11. Sign Writing Panel prepainted steel (SWP) 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.