COLORBOND® steel Antistatic

Revision 0 October 2024

This literature supersedes all previous issues

Prepainted – PP

GENERAL DESCRIPTION

COLORBOND® steel Antistatic, designed by BlueScope, specifically for the manufacture of sandwich panels for cleanrooms. To determine if warranties apply, please contact your nearest BlueScope sales office for advice.

TYPICAL USES

Cleanroom panels require protection against electrostatic discharge (ESD) by dissipating static electricity and keeping the indoor environment dust-free. For material selection advice, please contact your nearest BlueScope sales office.

AUSTRALIAN STANDARD

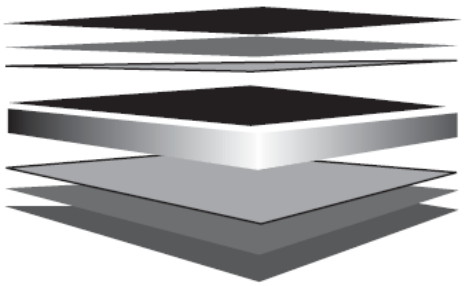
Paint Coating – AS/NZS 2728 Type 3;
Substrate – AS 1397

MALAYSIAN STANDARD

Paint Coating – MS 2383 C3;
Substrate – MS 1196

PRODUCT INFORMATION

PREFERRED SUBSTRATE	ZINCALUME® G300S AZ150 steel (aluminium/zinc alloy-coated steel) (Refer Note 8)
PRETREATMENT	Corrosion resistant proprietary conversion coating
PRIMER COAT	Custom formulated corrosion inhibitive primer with antistatic properties. Nominal dry film thickness 5µm each side
FINISH COAT	Custom formulated super polyester paint system with antistatic properties. Nominal dry film thickness 20µm on the top or weather side.
BACKING COAT	Custom formulated Epoxy Grey Backer for improved core adhesion. Nominal dry film thickness 7µm
COLOUR	Only available in Cardamine White



Finish Coat with Antistatic properties (Nominal 20µm) (Refer Note 4 & 5)
Corrosion Inhibitive Primer with Antistatic properties (Nominal 5µm)
Conversion Coating

ZINCALUME® AZ150 Steel Substrate

Conversion Coating
Universal Corrosion Inhibitive Primer (Nominal 5µm)
Backing Coat (Epoxy Grey Backer, Nominal 7µm) (Refer Note 6)

DIMENSIONAL CAPABILITIES*

ZINCALUME® G300S AZ150 STEEL	
PREFERRED BASE METAL THICKNESS, mm*	**MAXIMUM WIDTH, mm**
0.48, 0.50	1219

Notes

* The dimensional tolerances for thickness, width, flatness, and camber shall be in accordance with the requirements of AS/NZS 1365. Not every combination of thickness and width may be available. Supply conditions may be subject to dimensional restrictions and are subject to BlueScope Sales and Marketing confirmation. Slitting and shearing available on request from BlueScope Sales Offices. For requirements outside the standard product range please contact your local Sales Office.

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ATTRIBUTES TESTED DURING MANUFACTURE

PROPERTY	TEST & EVALUATION METHOD(S)	RESULTS
Antistatic Characteristic		
Surface Resistivity	ASTM D-257	10^6 to 10^9 ohms per square at 100 volts
Specular Gloss		
Specular Gloss at 60°meter	AS/NZS 1580.602.2; ASTM D523	Nominal 25 ± 10 units
Adhesion		
Reverse Impact	AS/NZS 2728 (Appendix E)	≥10 joules
T-bend	AS/NZS 2728 (Appendix F)	Maximum 6T. Refer Note 7
Hardness		
Pencil	AS/NZS 1580.405.1	HB or harder

PRODUCT ATTRIBUTES

PROPERTY	TEST & EVALUATION METHOD(S)	RESULTS
Resistance to Abrasion		
Scratch	AS 2331.4.7	Typically 1500g
Flexibility		
T-bend	ASTM D4145	Maximum 10T (no cracking). Refer Note 7
Resistance to Humidity		
Cleveland (500 hours)	ASTM D4585; AS/NZS 1580.481.1.9 (Blisters); AS 1580.408.4 (Adhesion); AS 1580.481.3 (Undercutting, Corrosion)	Blister density: ≤3. Blister size: ≤S2. Undercut at scribed lines: ≤2mm. No loss of adhesion or corrosion of base metal.
Resistance to Corrosion		
Cyclic corrosion (1000 hours)	AS/NZS 2728 (Appendix I), AS/NZS 1580.481.1.9 (Blisters); AS 1580.408.4 (Adhesion); AS 1580.481.3 (Undercutting, Corrosion)	Blister density: ≤2. Blister size: ≤S2. Undercut at scribed lines: ≤1mm. No loss of adhesion or corrosion. Refer Note 2
Resistance to Colour Change		
QUV (2000 hours)	ASTM G154 & ASTM D2244 (Colour)	ΔE CIELAB 2000: ≤4 units
Resistance to Solvents, Acids, Alkalis		
Exposure	ASTM D1308 (3.1.1) & ASTM D2244 (Colour); AS/NZS 1580.481.1.9 (Blisters)	No discoloration or blistering. Refer Notes 2, 9 & 11

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Fire Hazard Properties#		
Simultaneous determination of ignitability, flame propagation, heat release and smoke release	AS/NZS 1530.3 (Ignitability index; Spread of flame index; Heat evolved index; Smoke developed index)	Ignitability index: 0 rating in scale of 0 – 20; Spread of flame index: 0 rating in scale of 0 – 10; Heat evolved index: 0 rating in scale of 0 –10; Smoke evolved index: 2 rating in scale of 0 – 10.
Fire classification	BS 476-6 (Fire propagation); BS 476-7 (Surface spread of flame)	Fire propagation index, I <12; sub-index, i_1 <6; Surface spread of flame: Class 1. Classification: Class O.
	SANS 53501 – 1 (Reaction to fire)	Degree of flammability: Very limited contribution to fire; Smoke production: Low emission rate and speed; Droplets generation: No droplets; Classification: A2-s1, d0

#These test results relate only to the behaviour of the test specimen of the material under the particular conditions of the test and they are not intended to be the sole criterion for assessing the potential fire hazard of the material in use.

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IMPORTANT NOTES

1. All warranties for a product, if any, are subject to eligibility. Terms and conditions apply. Nothing in this document is intended by BlueScope to extend, modify or otherwise affect any stated product warranty. To find out more, please contact your nearest BlueScope sales office.
2. If it is intended to use COLORBOND® steel Antistatic 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, please contact your nearest BlueScope sales office for specialized advice. For selection of the most appropriate COLORBOND® steel product, please refer to Technical Bulletins TB1a, TB1b, CTB16, CTB21, CTB22.
3. Customers should use product promptly (within 6 months) to avoid the possibility of storage related corrosion.
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. This backing coat has been specifically designed to facilitate adhesion to foam cores, for common foam core adhesives. It is the manufacturer's responsibility to test the suitability of their adhesives to this backer.
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 After Painted Thickness (APT) 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 nearest BlueScope sales office 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 complexity of building design and location.
11. COLORBOND® steel Antistatic has good resistance to accidental spillage of solvents such as methylated spirits, white spirit, mineral turpentine, toluene, and trichloroethylene and dilute mineral acids and alkalis. However, all spillages should be immediately removed by water washing and drying.
12. We recommend storage in bore vertical orientation to prevent coil slump. If you wish to know more about the consequence of coil slump, please refer to our Fact Sheet 2, link: https://www.nsbluescope.com/my/wp-content/uploads/sites/7/2020/10/Fact-Sheet-Coil-Slump.pdf.
13. Use of aged coil might lead to quality issue during roll-forming process. To determine if warranties apply for aged coil, please contact your nearest BlueScope sales office for advice.

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