Coated Steel - Prepainted
Data Sheet

May 2023 - This literature supersedes all previous issues

General Manufactured Articles prepainted steel

General description

General Manufactured Articles prepainted steel (GMA) has been specifically designed by BlueScope to be used for a range of interior general manufactured articles requiring good formability.

Typical uses

Various manufactured articles for interior use. For material selection advice, please contact Steel Direct.

Australian and International standards

Substrate - AS 1397:2021

Substrate - AS/NZS 1365:1996 (R2016)

ISO 9001:2015 Quality System certified

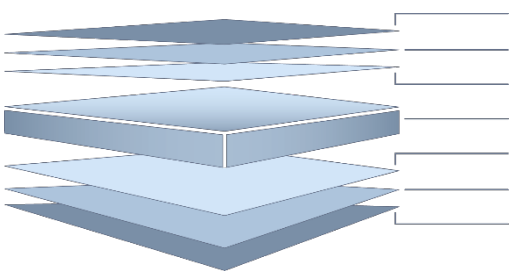
Preferred substrates

AM100 G300S steel with Activate® technology {Refer Note 6}.

For substrate properties please refer to the relevant Metallic (AM or Z) Coated datasheet or AS 1397:2021 or AS/NZS 1365:1996 for uncoated substrate.

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 1}.



Finish Coat (Finish Coat + Primer = nominal 25µm) {Refer Notes 2 & 3}
Universal Corrosion Inhibitive Primer
Conversion Coating
Aluminium / Zinc / Magnesium alloy-coated steel with Activate® technology substrate (can also be zinc-coated or uncoated)
Conversion Coating
Universal Corrosion Inhibitive Primer
Backing Coat (Backing Coat + Primer = nominal 10µm total) {Refer Note 4}

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 5.
Specular gloss		
60° meter	AS/NZS 1580.602.2:1995 (R2013); ASTM D523-14 (2018)	Nominal ± 10 units for 25 gloss product, ≥ 70 units for nominal 80 gloss product

Product attributes

Property	Test & Evaluation Method(s)	Results
Flexibility		
T-bend	ASTM D4545-10 (2018)	Maximum 10T (no cracking). Refer Note 5.
Resistance to abrasion		
Scratch	AS 2331.4.7-2006 (R2017)	Typically 2000g
Hardness		
Pencil	AS/NZS 1580.405.1:1996 (R2013)	HB or harder
Resistance to solvents, acids, alkalis		
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 7 & 8.
Resistance to heat		
Exposure 100°C continuous (500 hours)	ASTM D2244-21 (Colour)	Colour change: ΔE CIEDE2000: ≤3 units

Important notes

1. 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.

2. Finish Coat - the coating applied to the exposed surface of the prepainted coil which is expected to meet the Performance Requirements.

3. A range of Finish Coat gloss levels between 10 and 80 units (60°) may be available.

4. 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.

5. 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.

6. 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.

7. 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.

8. General Manufactured Articles prepainted steel (GMA) 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.