

# AQUAPLATE® steel

## Designed for: Water Storage

Revision 9, Nov 2010. This literature supersedes all previous issues.

### GENERAL DESCRIPTION

AQUAPLATE® steel, developed by BlueScope Steel Limited, is a laminated galvanized steel product with exceptional durability, designed to meet the stringent quality requirements for the storage of drinking water. For material selection advice, please contact your nearest BlueScope Steel Sales office.

### TYPICAL USES

Water storage tanks. Tank material is suitable for potable spa, rain, bore or river water. To determine if warranties apply, please visit the BlueScope Steel website or contact your nearest BlueScope Steel sales office for advice.

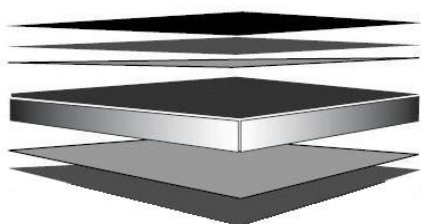
### AUSTRALIAN STANDARDS

Substrate - AS 1397      Food grade polymer film - AS/NZS 4020

### PREFERRED SUBSTRATES

ZINCFORM® G300S Z275 steel (painted or double-sided laminate)      ZINCFORM® G300S Z450 steel (galseal) {Refer Note 4}

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



← Food Grade Polymer Film (200µm thick), Available in Potable Grey ONLY

← Custom Formulated Adhesive (7-12µm)

← Conversion Coating

← Galvanized Steel Substrate

← Conversion Coating

← Backing Coat (Galseal, 5µm) An Exterior Manufactured Articles preprepared reverse paint finish is also available. (Film thickness according to AS 2728)

### EXPECTED PRODUCT SERVICE PERFORMANCE

| Property   | Test & Evaluation Method(s)   | Results   |
|--|---|---|
| <b>Flexibility (film to substrate)</b>             |   |   |
| T-bend   | ASTM D4145-83   | 1T or less  |
| <b>Resistance to abrasion (film)</b>               |   |   |
| Taber Abraser - 1000g H-22 wheels                  | AS/NZS 1580.403.2; NCCA Tech. Bull. 4.3.2 (test & eval)   | 50mg per 100 cycles   |
| <b>Resistance to humidity (film to substrate)</b>  |   |   |
| Cleveland (500 hours)                              | ASTM D4585; NCCA Tech. Bull. 5.4.5 & AS 1580.408.4 (Adhesion)   | No loss of adhesion, no blistering  |
| <b>Resistance to corrosion (film to substrate)</b> |   |   |
| Salt spray 2000 hours (edge sealed)                | AS/NZS 2728 (App. I), ASTM B117; AS 2331.3.1; NCCA Tech. Bull. 5.4.6 & AS/NZS 1580.481.1.9 (Blisters) | No blistering. Refer Note 1   |
| <b>Resistance to chemicals</b>                     |   |   |
| Exposure   |   | See Notes 5 & 6   |
| <b>Resistance to fire</b>                          |   |   |
| Exposure   | AS/NZS 1530.3 (test & eval)   | Ignitability index: 17 rating in scale of 0-20<br>Spread of flame index: 0 rating in scale of 0-10<br>Heat evolved index: 1 rating in scale of 0-10<br>Smoke evolved index: 5 rating in scale of 0 - 10 |
| <b>Resistance to temperature</b>                   |   |   |
| Exposure   |   | Maximum continuous services temp of 65°C  |

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Continued

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## LINE TESTED PROPERTIES

| Property  | Test & Evaluation Method(s) | Results            |
|---|-----------------------------|--------------------|
| <b>Adhesion (film to substrate)</b><br>Ball adhesion test | AS/NZS 2728 (App. G)        | 'D' rating minimum |

### IMPORTANT NOTES

- 1 The polymer film is not resistant to prolonged exposure to sunlight and tanks should be covered to prevent degradation of the film. The AQUAPLATE® laminate has been developed for storage of drinking water. Other substances should not be stored without prior consultation with BlueScope Steel Limited Sales Offices.
- 2 All warranties for a product, if any, are subject to eligibility. Terms and Conditions apply. Nothing in this document is intended by BlueScope Steel to extend, modify or otherwise affect any stated product warranty. To find out more, please visit the BlueScope Steel website or contact your nearest BlueScope Steel sales office for advice.
- 3 This Product Data Sheet should be used in conjunction with BlueScope Steel Technical Bulletin No. TB-3 - "AQUAPLATE® steel for water tanks."
- 4 The minimum recommended bend radii for forming processes are specified by the maximum T-bend adhesion and T-bend flexibility values, to avoid paint adhesion and cracking issues, respectively.
- 5 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.
- 6 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 your nearest BlueScope Steel Sales office to obtain advice on appropriate rollforming lubricants.
- 7 The AQUAPLATE® lining can withstand spillages of, but not prolonged immersion, of the following chemicals:
  - alkalis of all concentrations,
  - mineral acids of all concentrations,
  - petrol, kerosene, mineral turps, and alcohol,
  - aqueous solutions of inorganic compounds.

The product should not be permitted to come in contact with:

- low molecular weight organic acids such as acetic lactic, formic and stearic acids,
- aromatic hydrocarbons (e.g. toluene),
- chlorinated hydrocarbons (e.g. 1,1,1-trichloroethane),
- ketones (e.g. MEK),
- esters (e.g. cellosolve acetate)

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Please ensure you have the current datasheet for this product as displayed at [www.bluescopesteel.com](http://www.bluescopesteel.com)

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