

Steel walling products – selection guide

Introduction

This Technical Bulletin serves as a guide to selecting the most appropriate BlueScope product for your walling needs considering intended location and the environmental factors likely to be encountered during service. Selecting the correct product for the location will contribute to ensuring that your wall achieves a long service life.

The ability of COLORBOND® prepainted steel and ZINCALUME® aluminium/zinc/magnesium alloy coated steel with Activate® metallic coating technology¹ to excel in the climatic conditions of Australia is the result of the advanced coating technologies applied to the base steel strip. Below is a brief description of BlueScope's walling products.

ZINCALUME® steel

Aluminium/zinc/magnesium alloy coated steel strip (Type AM as per AS1397:2021: Continuous hot-dip metallic coated steel sheet and strip – Coatings of zinc and zinc alloyed with aluminium and magnesium).

COLORBOND® steel

Combines an aluminium/zinc/magnesium alloy coated steel substrate with a range of factory applied high-durability coating systems to cope with exposure to various environments.

- COLORBOND® steel – for exterior walling. Available in a Classic, Matt or Metallic finish.
- COLORBOND® Ultra steel – for severe exterior environments.

SUPERDURA® Stainless prepainted steel

Incorporates a stainless steel substrate with factory applied high-durability coating systems and is suited to very severe exterior environments.

Performance of steel walling

Like steel roofing (please refer to: [Technical Bulletin TB-1A Steel roofing products - selection guide](#)) the performance of steel walling can be influenced by a number of factors, including the environment, particularly its proximity to a salt marine influence. Typically, walling experiences less natural washing by rainfall when compared to roofing, which has influenced product recommendations.

Table 1 serves as a GUIDE ONLY for the selection of a walling product for your location. In combination with a REGULAR 6 MONTHLY MAINTENANCE PROGRAM, this should provide optimum performance and longevity.

Table 1: Recommended BlueScope product guide for walling in marine environments

Recommended walling products	Distance from breaking surf or exposed marine	Distance from calm marine
COLORBOND® steel in a Metallic finish * ZINCALUME® steel *	> 1000m	> 1000m
COLORBOND® steel in a Classic finish COLORBOND® steel in a Matt finish	> 800m	> 200m
COLORBOND® Ultra steel	> 500m	> 100m
SUPERDURA® Stainless steel	> 0m	> 0m

NOTE:

- i. Absolute performance is subject to local conditions including, but not limited to, prevailing winds, and presence of unwashed areas.
- ii. Distance is as measured from the high water/tide mark.
- iii. Table 1 applies to salt marine influences only. For installations subject to severe or heavy industrial conditions or internal humidity, it is essential to contact Steel Direct for advice on suitable products.
- iv. Definitions and examples of surf, exposed and calm marine are outlined in Technical Bulletin TB-35 Australian Salt Marine Classifications.

* For commercial applications

Unwashed areas

A common issue in the case of walling is in areas not naturally washed by rainfall, known as “unwashed areas”. Since walls are vertical surfaces, they can be sheltered from general rain washing, particularly towards the top of the wall, adjacent to overhanging eaves. In these regions dust and dirt, that would otherwise be washed away by rain, tends to build up. Condensation can be absorbed by the dust and dirt leading to an increase in the time that the material is in contact with sufficient moisture to initiate corrosion (i.e. time of wetness). The associated effects of these unwashed areas can be accelerated in the vicinity of a salt marine influence, when the build-up of dust and dirt includes marine salts, and/or other pollutants (e.g. industrial fall out), unwashed area corrosion is further exacerbated. The potential for corrosion to occur in unwashed areas can be reduced by regular washing with fresh clean water.

Design

To improve the thermal efficiency of a building, modern building design often incorporates large overhanging eaves, verandas and walkways in combination with walling made with COLORBOND® steel, SUPERDURA® Stainless steel and/or ZINCALUME® steel. It is important for a designer to recognise that the inclusion of such overhanging features will create unwashed areas. Where unwashed areas are created, selecting a suitable product (refer to Table 1) and implementing a regular maintenance regime will aid in the longevity of the walling product. Wall cladding installed with the formed profile in a horizontal orientation creates inherent unwashed areas which may hold dust and dirt. Accordingly, a more regular maintenance program than quoted may be required.

Consideration also needs to be given to ensuring that the wall cladding is installed in such a way that it is not immersed in concrete, dirt, soil or other moisture retaining substances. Ensuring a free drip edge is achieved on the bottom edge of the walling so that water is allowed to drain freely away from the entire walling surface is also important. More information can be found on the above topics in the following Technical Bulletins:

[Technical Bulletin TB-13](#) General guide to good practice in the use of exterior BlueScope coated steel products

[Corrosion Technical Bulletin CTB-16](#) Immersion

[Technical Bulletin TB-40](#) Design, installation, and maintenance – Guidance for BlueScope coated steel products used in exterior applications

Maintenance, fasteners and accessories

Maintenance, in the form of regular washing with clean fresh water, should be performed at 6-month intervals. To support product longevity, information should be sought on the correct choice of fasteners, accessories, and good storage and handling practice. Please refer to:

[Technical Bulletin TB-4](#) Maintenance of exterior BlueScope coated steel products

[Technical Bulletin TB-7](#) Care of BlueScope coated steel products during transport and storage

[Technical Bulletin TB-13](#) General guide to good practice in the use of exterior BlueScope coated steel products

[Technical Bulletin TB-16](#) Fasteners for roofing, walling and accessory product – selection guide

Thermal efficiency of steel walling

Properly insulated steel walling has inherent thermal efficiency benefits due to its low thermal mass. Thermatech® solar reflectance technology provides further thermal efficiency benefits and is incorporated in COLORBOND® steel's core colour range in the Classic and Matt finish (except for Night Sky®) and COLORBOND® Ultra steel core colours. This technology is designed to reflect more of the sun's heat on hot, sunny days.²

For more information on Thermatech® solar reflectance technology, as well as other notes on thermal efficiency, please refer to:

[Technical Bulletin TB-39](#) Thermal performance of roofing materials

Related BlueScope Technical Bulletins

[Technical Bulletin TB-1A](#) Steel roofing products – selection guide

[Technical Bulletin TB-4](#) Maintenance of exterior BlueScope coated steel products

[Technical Bulletin TB-7](#) Care of BlueScope coated steel products during transport and storage

[Technical Bulletin TB-13](#) General guide to good practice in the use of exterior BlueScope coated steel products

[Technical Bulletin TB-14](#) Professional's guide to Australian Standards for steel sheet and strip products

[Technical Bulletin TB-16](#) Fasteners for roofing, walling and accessory product – selection guide

[Technical Bulletin TB-39](#) Thermal performance of roofing materials

[Technical Bulletin TB-40](#) Design, installation, and maintenance – Guidance for BlueScope coated steel products used in exterior applications

[Corrosion Technical Bulletin CTB-16](#) Immersion

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To ensure you have the most current information

1800 800 789

steeldirect@bluescopesteel.com
For more information contact Steel Direct

