

Roofing in coastal areas



RSC TECHNICAL BULLETIN

When working in coastal environments or heavily polluted areas, you need to take care when choosing the products that you are working with.

In severe conditions, such as marine locations, metals can corrode at an accelerated rate when exposed to seawater, high winds, heavy pollution etc. This can significantly reduce the lifespan of the roof. It pays to do your homework and make sure that the roofing you choose will be able to withstand the conditions.

When assessing whether stainless steel should be used, Bluescope Steel classifies the following locations in Victoria as either 'Surf', 'Exposed' or 'Calm'.

VIC AREA	SURF	EXPOSED	CALM
METRO	■ Bass Strait (Mornington Peninsula)	■ Port Phillip Bay (Altona to Portsea beaches)	■ Port Phillip Bay (Williamstown) ■ Yarra River (Docklands and Melbourne CBD) ■ Maribyrnong River
REGIONAL	Open Bass Strait Surf Beaches ■ Warrnambool ■ Lorne ■ South coastline ■ Phillip Island ■ Venus Bay ■ Seaspray	■ Bellarine Peninsula ■ Eastern Shoreline of Westernport Bay ■ North Coastline ■ Phillip Island	■ Geelong Coastline ■ Anderson Inlet East of Inverloch ■ Corner Inlet to Port Albert ■ Gippsland Lakes (Paynesville, Metung) ■ Lakes Entrance

Once you have identified the category of marine conditions, you then need to make an assessment of the location proximate to the shoreline.

The following chart will help you determine the appropriate materials to use.

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ROOFING PRODUCTS	DISTANCE FROM BREAKING SURF OR EXPOSED MARINE	DISTANCE FROM CALM MARINE
ZINCALUME® steel COLORBOND® steel COLORBOND® Coolmax® steel COLORBOND® Metallic steel	>200m	>100m
COLORBOND® Ultra steel	>100m	>0m
SUPERDURA® Stainless steel	>0m	>0m

For the majority of homes, COLORBOND® steel will be suitable to withstand the conditions, but if you are building within 200m from the coastline, you may need to consider something with greater corrosion resistance.

Bluescope Steel makes corrosion resistant products to be used in these situations including COLORBOND® Ultra steel, and SUPERDURA® Stainless steel. It is important that you choose carefully, as it may affect the validity of the Bluescope warranty.

COLORBOND® Ultra steel

This color coated steel is designed for use in severe conditions such as extreme coastal and heavy industrial. If the building is within 100m to 200m of breaking surf, or if there is a smell of salt or salty sea spray in the air, then it is recommended that you use COLORBOND® Ultra.

COLORBOND® Ultra is available in six colours – Dune®, Monument®, Surf Mist®, Wallaby®, Windspray® and Woodland Grey®.



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STAINLESS STEEL

In very extreme conditions, stainless steel is often a better choice due to its much greater ability to resist corrosion. It is the high proportion of chromium in stainless steel (over 10.5%) that gives stainless steel this ability. The chromium reacts with oxygen to form a passive oxide layer over the stainless steel. If the protective layer is broken (by scratching for example) it will reform.

This strong resistance to corrosion is one of the key reasons stainless steel is so highly valued, particularly in situations where environmental conditions are extreme, such as coastal or highly polluted industrial areas.

SUPERDURA® Stainless steel

This product is recommended for sites that experience very extreme coastal conditions within 100m of breaking surf or in close proximity to industrial areas where there is a high level of emissions present.

SUPERDURA® is made up of grade 430 stainless steel and is the hardest wearing product in Bluescope's coated steel range.

FASTENERS AND ACCESSORIES

Despite choosing highly durable roof sheets, it could all come undone with an inferior choice of fasteners.

As a rule of thumb, use class 4 screws with COLORBOND® Ultra and stainless steel if using SUPERDURA® Stainless Steel.

References

Bluescope Technical Bulletin - Australian salt marine classification (May 2019)
Steel Select, "Specifying for marine and industrial environments" (January 2019)
Bluescope Coated Steel Prepainted Datasheet, SUPERDURA® Stainless Steel, (September 2021)
Lysaght Product Advisory Bulletin, Fasteners, (May 2021)