

2.1.1.2 ENVIRONMENT

AS/NZS 2728: 1997, (Australia/New Zealand Standard – Prefinished / Prepainted Sheet Metal Products for Interior / Exterior Building Applications – Performance Requirements), classifies the atmospheric environment into 7 categories and provides a guide to the selection of prefinished products in these categories.

In Table 2.1B and 2.1C overleaf we have created a guide showing which categories the more common roofing and cladding materials and coatings can be used in. Only 6 of the 7 categories defined by the standard are covered, as the 7th one, Tropical, is not relevant in New Zealand.

For further classification information please refer to AS/NZS 2728:1997

Table 2.1B Atmospheric Classification Definition

Mild	Sheltered areas that are far inland (very few in NZ).
Moderate	Areas that are protected from marine influence. Are inland areas other than those that are far inland.
Industrial	Industrial areas that are inland.
Marine	Large parts of NZ including areas 100m – 400m from the shoreline in sheltered areas (inner harbour and estuaries) and more than 1 km from breaking surf shoreline. Can extend up to 30kms inland depending on topography and prevailing winds.
Severe Marine	Areas that range from 100m to 1km from a breaking surf shoreline. In high wind areas the distance inland will increase. It also includes areas that are less than 100m (but can extend up to 400m depending on prevailing winds) from the shoreline in sheltered areas.
Very Severe Marine	In areas up to and including 100m from breaking surf. Will extend inland 400m or more where strong prevailing winds exist.
Industrial & Geothermal	Areas of high corrosion including chemical plants and geothermal areas.
Severe Chemical Environments (additional to AS/NZS 2728)	Unusually harsh conditions due to moisture generation and/or chemical usage or storage (e.g. cool stores, animal shelters, fertiliser storage). Will require specific material selection for sheeting, fasteners and netting. Contact Dimond for advice.

2.1.1.2 Continued

Table 2.1C Environment Categories and Suitable Sheeting and Fastener Materials

Atmospheric Conditions	Substrates	Prefinished Paint Coating Types	Branded Sheeting Products	Recommended Screw Fastener Material**	Washer Material
Mild	Zinc Coated Steel	-	Galvsteel™	Class 4, minimum	Galvanised
Moderate	Zinc/Aluminium Coated Steel (150g/m ²)	-	Zincalume®	Class 4, minimum	Zincalume®
Industrial	Zinc/Aluminium/Magnesium (MagnaFlow & MagnaFlow X)	Polyester, Acrylic	ColorCote® ZinaCore™ MagnaFlow™ Colorsteel® Endura	Class 4, minimum	Post Painted Steel
Marine	Aluminium	PVF ²	ColorCote® ZinaCore X™ & MagnaFlow X™	Class 4, minimum	Post Painted Steel
	Aluminium	-	Plain or embossed finish	304 Stainless Steel or Alum. **	Aluminium
	Aluminium	Polyester, Acrylic	ColorCote® AlumiGard™	304 Stainless Steel or Alum. **	Post Painted Aluminium
	Stainless Steel	PVF ²	ColorCote® AlumiGard X™	304 Stainless Steel or Alum. **	Post Painted Aluminium
	Stainless Steel	-	-	304 Stainless Steel	304 Stainless Steel
	Copper	-	-	304 Stainless Steel or Bronze	-
	Glass Reinforced Polyester (GRP)	Gel Coat	Duraclad®, Webglass	304 Stainless Steel or Alum.	Weatherlok (UV Stabilised PEA)
Severe Marine	Zinc/Aluminium coated Steel (200g/m ²)	Polyester	Colorsteel® MAXX™*	Class 4, minimum	Post Painted Steel
	Zinc/Aluminium coated Steel (150g/m ²)	PVF ²	ColorCote® ZinaCore X™* & MagnaFlow X™	Class 4, minimum	Post Painted Steel
	Zinc/Aluminium/Magnesium	-	Plain or Embossed	304 Stainless Steel or Alum. **	Aluminium
	Aluminium	Polyester, Acrylic	ColorCote® AlumiGard™	304 Stainless Steel or Alum. **	Post Painted Aluminium
	Aluminium	PVF ²	ColorCote® AlumiGard X™	304 Stainless Steel or Alum. **	Post Painted Aluminium
	Stainless Steel	-	-	304 Stainless Steel	304 Stainless Steel
	Copper	-	-	304 Stainless Steel or Bronze	-
	Glass Reinforced Polyester (GRP)	Gel Coat	Duraclad®, Webglass	304 Stainless Steel or Alum.	Weatherlok (UV Stabilised PEA)
Very Severe Marine	Zinc/Aluminium coated Steel (200g/m ²)	Polyester	Colorsteel® MAXX™*	Class 5, minimum	Post Painted Steel
Industrial	Zinc/Aluminium/Magnesium	PVF ²	ColorCote® MagnaFlow X™	Class 5, minimum	Post Painted Steel
Geothermal	Aluminium	-	Plain or Embossed	304 Stainless Steel or Alum. **	Aluminium
	Aluminium	Polyester, Acrylic	ColorCote® AlumiGard™	304 Stainless Steel or Alum. **	Post Painted Aluminium
	Aluminium	PVF ²	ColorCote® AlumiGard X™	304 Stainless Steel or Alum. **	Post Painted Aluminium
	Stainless Steel	-	-	316 Stainless Steel	Stainless Steel
	Copper	-	-	316 Stainless Steel or Bronze	-
	Glass Reinforced Polyester (GRP)	Gel Coat	Duraclad®, Webglass	316 Stainless Steel or Alum.	Weatherlok (UV Stabilised PEA)
Severe Chemical	Glass Reinforced Polyester (GRP)	Gel Coat	Duraclad®, Webglass (Consult Dimond)	Consult Dimond	Weatherlok (UV Stabilised PEA)

*Use of coil on cut edge protection lacquer may be required. Alum.= Aluminium Alutites for timber only.

** Stainless steel fasteners must be installed with clearance and separation to avoid contact with Aluminium.