Material tables

Table C.1.1.1A: Material selection (see notes on next page)

Paragraphs 2.1.1.1, 4.2.1.2, 4.2.1.5, 4.2.4.1, 4.2.5.1, 4.2.9.1, 4.2.10.1, 4.2.11.1, 4.3.1.1, 8.1.2.2, 8.2.3.3, 8.2.2.3, 8.3.2.2, 8.4.2.1, 8.3.2.2, 8.4.7.1,9.1.9.8, 9.4.3.2, 9.6.2.1, 9.6.4.1, 9.8.5.1, and C.1.1.1

Category	Material	Exposure (2),(3),(5),(7)	Type	Acceptable exposure zone(1),(4),(5),(7) for 15 years	Acceptable exposure zone(1),(4),(5),(7) for 50 years for hidden elements
Claddings and flashings	Aluminium, zinc Copper, lead, or stainless steel	Hidden(3) Exposed Sheltered		B,C,D,E	B,C,D,E
	Factory painted				
	Aluminium-zinc-magnesium (combinations) coated or galvanised steel, to AS 1397 and AS/NZS 2728 with AM100, ZM274, and AZ150 minimum coatings	Hidden(10) Hidden(10) Exposed(9) Exposed(9) Sheltered Sheltered	Type 4 Type 6 Type 4 Type 6 Type 4 Type 6	B,C,D,E B,C,D,E B,C,D B,C,D,E B,C B,C,D	B,C,D B,C,D,E
	Pressed metal tiles coated to minimum AZ150 or AM100 to AS 1397, AS/NZS 2728 or with post-form factory painting to Paragraph 8.3.2.3.	Exposed Sheltered	Type 6 Type 6	B,C,D,E B,C,D	
	Non-factory painted				
	Aluminium-zinc-magnesium (combinations) coated steel, to AS 1397 with AZ150 or AM125 minimum coatings	Hidden(10) Exposed(9) Sheltered		B,C,D,E B,C B	B,C,D
	Galvanised steel Z450 to AS 1397	Hidden(10) Exposed(9) Sheltered		B,C,D B,C B	B,C
	Non-metallic				
	Bituminous material, or uPVC	Hidden Exposed (uPVC) Sheltered(uPVC)		B,C,D,E B,C,D,E B,C,D,E	B,C,D,E
	Butyl rubber	Hidden Exposed Sheltered		B,C,D,E B,C,D,E B,C,D,E	B,C,D,E
Fixings(8)	Aluminium, bronze, and stainless steel (Types 304 and 316)(11)	Hidden Exposed Sheltered		B,C,D,E B,C,D,E B,C,D,E	B,C,D,E
	Nails – Hot-dip galvanised steel to AS/NZS 4680	Hidden(6),(10) Exposed Sheltered		B,C,D B,C B	B,C
	Screws – galvanised steel, painted or unpainted, to AS 3566.2	Hidden(6),(10) Exposed Sheltered	Class 3 Class 4 Class 4	B,C,D,E(4),(5) B,C,D B,C	B,C,D,E

Material Selection

E2 EXTERNAL MOISTURE ACCEPTABLE SOLUTION E2/AS1

Material tables

Notes:

(1) Exposure zones are as per NZS 3604 Section 4.

(2) Refer to manufacturer's information for maintenance requirements in Exposed and Sheltered locations.

(3) The term "hidden" means concealed behind another element such that no part is visible. Hidden elements require a 50 year durability under the Building Code. The term "exposed" means having surfaces exposed to rain washing. The term 'sheltered' means being visible, but not rain washed. For diagrammatic outline, refer NZS 3604 Figure 4.3(a). Exposed and sheltered elements require a 15 year durability. Where an element can be categorised as both 'sheltered' and 'exposed', the 'sheltered' condition will apply.

(4) AS/NZS 2728 lists atmospheric classes derived from ISO 9223 for Australia and New Zealand, determined by exposure to wind-driven sea-spray. NZS 3604 references atmospheric classes B (Low), C (Medium) and D (High). E2/AS1 references atmospheric zones B,C,D,E. For the purposes of *cladding* selection, Zone E (Severe marine classified as breaking surf beach fronts) has been included. Designers must consult metal supplier's information for specific durability requirements of sites in Zone E.

(5) The geographic limits of atmospheric classes in NZS 3604 and AS/NZS 2728 may vary. Table C.1.1.1A uses the limits outlined in NZS 3604.

(6) Includes fixings protected by putty and an exterior paint system of primer, undercoat and two top coats of paint.

(7) Microclimates based on evidence from adjacent structures of corrosion caused by industrial or geothermal atmospheres are outside the scope of this acceptable solution.

(8) Refer to Table C.1.1.1B and Table C.1.1.1C for compatibility of fixings with metal *claddings*.

(9) *Roof* only. Coated steel wall claddings must be considered as 'sheltered'.

(10) Hidden steel coated elements in ventilated cavities in zones D and E (exposure to salt air) must be considered as 'sheltered'

(11) The use of stainless steel fixings is not recommended by steel manufacturers for use with coated steel in severe marine and industrial environments, as they are considered to cause deterioration.