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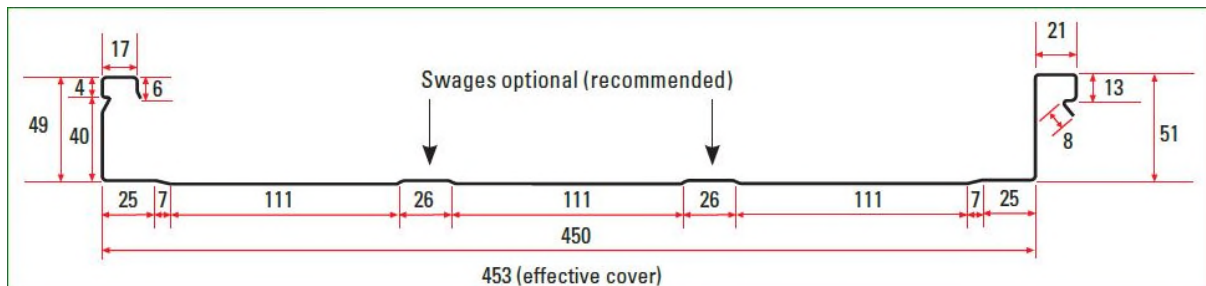
26 May 2020

Eurostyle Eurolok roof cladding - Compliance with E2 External Moisture

Introduction

You have asked for an analysis of the compliance of the Eurostyle Eurolok roofing profile with the NZBC Code Clause E2 External Moisture.

Eurostyle Eurolok is a wide tray roofing and walling system that is secret fixed and locked together but can additionally be seamed to provide an angle seam appearance with ever greater wind loading capacity. It is designed to be self-supporting on purlins or girts.



This style of roofing is described in the New Zealand Metal Roof and Wall Cladding Code of Practice:

Standing seam roofs are similar to trough sections in that they have a wide pan and a vertical rib, and they are secret fixed. They are usually wider, having a single tray of 300 mm to 500 mm wide, which gives a unique appearance. Standing seam roofs are based on traditional manufacturing methods using folding and hand tools, rather than roll forming (see 15.4), but now they are also available roll-formed in most iterations. They are traditionally installed on sarking, but high tensile versions (that do not require continuous support) are available.

Compliance with E2 External Moisture

NZBC Code Clause E2 has two performance clauses directly relevant to Eurostyle Eurolok roof cladding:

E2.3.1 Roofs must shed precipitated moisture. In locations subject to snowfalls, roofs must also shed melted snow.

E2.3.2 Roofs and exterior walls must prevent the penetration of water that could cause undue dampness, damage to *building elements*, or both.

Acceptable Solution E2/AS1 External Moisture provides details of roofing profiles, and their use, that must be accepted as complying with E2.

For profiles, or uses, not covered by E2/AS1, the Acceptable Solution can be used to show how the differences are compensated for or otherwise justified. Acceptable Solutions and Verification Methods provide good guidance for assessing an alternative solution.

Although E2/AS1 covers trough profile roofing with vertical ribs, it is restricted to profiles with vertical ribs at a minimum height of 38 mm, and flat or lightly profiled pans of 210 mm maximum between crests. (para 8.4.4). Such profiles are acceptable for a roof pitch not less than 3 degrees (para 8.4.5).

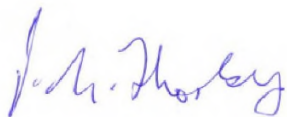
By comparison, Eurostyle Eurolok has a rib height of 49mm and a trough depth 43mm to the bottom of the edge seam. Eurostyle Eurolok can be installed either with a locked finish (as a typical interlocking trough section profile) or as a seamed finish (where the edge seam is rolled over during installation). The effective capacity of the roof to carry water is not affected by this.

The greater height of the vertical ribs of the Eurostyle Eurolok roofing profile means it has an even greater capacity to carry and discharge rainwater than the trough profile roofing specified in E2/AS1.

Although the pan width of Eurostyle Eurolok roofing (which is available in pan widths 450mm or 365mm) is greater than the trough profile roofing in E2/AS2 this does not affect the water carrying and discharge capacity of Eurostyle Eurolok roofing.

Conclusion

The attributes of the Eurostyle Eurolok roofing profile directly applicable to compliance with the performance requirements of NZBC Code Clause E2 exceed the acceptable profile attributes for trough profile roofing with vertical ribs specified in the Acceptable Solution E2/AS1, and therefore by comparison with E2/AS1 the Eurostyle Eurolok roofing profile complies with the NZBC Code Clause E2.



P N Thorby

Director