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Fire Testing of ColorCote® Pre-painted Metal Substrates

ColorCote® range of products are used in the manufacture of roofing and vertical cladding & rainwater goods in New Zealand buildings. The safety of those using these buildings is paramount and fire ratings are an important component of this.



Methodology

ColorCote® pre-painted metal substrates have been tested by the CSIRO Division of Materials Science and Engineering, NSW Australia in accordance with International Standard ISO 5660-1:2002 Reaction-to-fire tests – Heat release, smoke production and mass loss rate – Part 1: Heat release rate (cone calorimeter method) and Part 2: Smoke production rate (dynamic measurement), at 50kW/m².

All test samples were exposed in the horizontal orientation with the standard pilot operating.

The number Group 1-S was determined in accordance with the Verification Method C/VM2 Appendix A Paragraph A1.2 and Paragraph A1.3 of the New Zealand Building Code.

The average specific extinction area was determined in accordance with Verification Method C/VM2 Appendix A Paragraph A1.2 of the New Zealand Building Code.

Results

All products in the ColorCote® range of roofing and cladding materials were tested to the requirements of ISO 5660-1:2002 and the results are as follows:

		Group Number	Average Specific Extinction Area	Peak Heat Release Rate kW/m ²	Total Heat Released MJ/m ²
ZinaCore	(0.55mm)	Group 1-S	47.9	6.1	0.23
MagnaFlow	(0.55mm)	Group 1-S	80.6	0.7	1.23
AlumiGard	(0.90mm)	Group 1-S	53.5	4.5	0.11

Assessment certificates are available on request.