

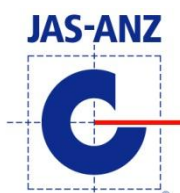
New Zealand Building Code Material Group Numbers for Radiata Pine Plywood Tested to ISO 5660



TECHNICAL NOTE

The information in this technical note relates specifically to EWPA certified New Zealand manufactured plywood and cannot be used with any other plywood.

Alternative plywood products can differ in a number of ways which may not be immediately obvious. Substitution is not appropriate and could in extreme cases lead to premature failure and/or buildings that do not meet the requirements of the New Zealand Building Code.



Introduction

The New Zealand building code specifies the performance requirements for protection from fire for buildings. In 2012 changes to the current system were made which come into effect on 9th of April 2013. Under the new system introduced verification method C/VM2 provides options on how to comply with the building code.

The introduction of the new regulation meant that plywood to be sold in NZ needs to have material group classification compliant with the new rules.

Testing

On behalf of its members, the Engineered Wood Products Association of Australasia (EWPAA) contracted the Australian Wool Testing Authority (AWTA) and BRANZ to test structural plywood manufactured to AS/NZS 2269 in accordance with ISO 5660 Reaction to fire tests (Heat release, smoke production and mass loss rate) Part 1: Heat release rate (cone calorimeter method).

The plywood tested was supplied by New Zealand manufacturing members and represented all New Zealand manufacturers. The samples were :

- Radiata pine of different thicknesses
- Structural grade and manufactured in accordance with AS/NZS 2269.
- Randomly sampled to ensure a representative sample.
- Prepared at the EWPAA laboratory.
- Untreated or treated with different commercially available treatments

The data was analysed using the equations of Kokkala et al¹ and is displayed in the table below.

Results

The table below summarises the test configurations and associated material groups.

Material	Species	Origin	Thickness	Treatment	Material Group
Plywood	Radiata Pine	New Zealand	7mm	Untreated	Group 3
Plywood	Radiata Pine	New Zealand	7mm	CCA Treated	Group 3
Plywood	Radiata Pine	New Zealand	12mm	Untreated	Group 3
Plywood	Radiata Pine	New Zealand	12mm	ACQ Treated	Group 3
Plywood	Radiata Pine	New Zealand	12mm	LOSP Treated	Group 3
Plywood	Radiata Pine	New Zealand	12mm	CCA Treated	Group 3
Plywood	Radiata Pine	New Zealand	19mm	Untreated	Group 3
Plywood	Radiata Pine	New Zealand	19mm	ACQ Treated	Group 3
Plywood	Radiata Pine	New Zealand	19mm	LOSP Treated	Group 3
Plywood	Radiata Pine	New Zealand	19mm	CCA Treated	Group 3

1. Kokkala, M.A. Thomas, P.H. and Karlsson, B. Rate of Heat Release and Ignitability Indices for Surface Linings. Fire and Materials Vol 17, 209-216 (1993)).