

Ecoply plywood substrate for Asphalt Shingle Company Limited Pabco shingles

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Pabco fibreglass asphalt shingles are imported into New Zealand from Tacoma, Washington, USA and marketed as a roofing system by Asphalt Shingle Company Limited.

Roof systems of this type, i.e. fibreglass asphalt shingles over saturated felt underlayment in a non-trafficable load supporting substrate are not part of the NZBC E2/AS1 Acceptable Solution. This technical note has been prepared in support of the use of Pabco shingles as an Alternative Solution roof cladding.

Pabco shingle roof systems have a long history of use in the United States and Canada. The application instructions supplied by Asphalt Shingle Company Limited are based on proven techniques and its application in New Zealand. This technical note is written in relation to the use of Ecoply plywood as manufactured by Carter Holt Harvey Woodproducts as solid substrate for the Pabco asphalt shingle roofing system.

Carter Holt Harvey Woodproducts recommends the following in relation to plywood substrates for Pabco shingle roof cladding systems:

- Ecoply plywood F11 DD grade structural plywood used as substrate for sloping roofs 9.5 degree minimum slope,
 - Frame (truss or rafter) spacing not exceeding 600 mm – 12mm plywood thickness
 - Frame (truss or rafter) spacing not exceeding 900 mm – 15mm plywood thickness
- Ecoply Roofing 15 mm is supplied standard with a plastic polymer tongue and groove edge detail.

Building Code Compliance:

B1 Structure: Roof frame spacings for these plywood thicknesses (including the use of the plastic tongue) were determined using the limit states design method in accordance with NZS4203:192 and NZS3603:1993. These comply with verification method B1/VM1 clauses “2.0 Landings” and “6.0 Timber” in the NZBC clause B1 Structure.

B2Durability: Durability of the roofing is subject to the specifications, installation and maintenance requirements of the roofing manufacturer.

The durability of the Ecoply can only be assured as long as the roof cladding excludes moisture.

With good practice and maintenance, roof cladding materials can be repaired or replaced so as to achieve life from the Ecoply in excess of the original roof cladding. With this proviso the durability of Ecoply structural plywood will be in excess of 50 years if installed in accordance with the instructions and limitations of the Ecoply roofing and decking manual and used in association with Pabco singles and the installation procedures of the Asphalt Shingle Company Ltd.

Within these limitations and in the context of buildings within the scope of NZS3604:1999 and the substantial history of fibreglass asphalt shingles on a non-treated substrate throughout the world, the use of standard Ecoply structural plywood without treatment is acceptable..