

ECOPLY® STRUCTURAL

BARRIER



ECOPLY® BARRIER IN NON-RESIDENTIAL APPLICATIONS AND COMPLIANCE WITH THE NEW ZEALAND BUILDING CODE

Ecopy® Barrier provides a weathertight rigid air barrier for drained and vented cavity systems outside the building frame, providing structural bracing (as designed), and forming a strong secondary line of defence against moisture penetration into the building envelope.

Ecopy® Barrier is suitable for use in both residential and commercial buildings and consists of a 7 mm thick CCA treated structural plywood panel which is coated on the face and edges using a polyester powder coating process for increased sheet durability and protection from moisture penetration. Ecopy Barrier meets the New Zealand Building Code (NZBC) requirements for rigid underlays as outlined in Section 9.1.4 and the performance requirements of Table 23 of the Acceptable Solution for External Moisture E2/ AS1.

SCOPE OF USE

Ecopy Barrier, installed on timber framing as a part of cavity wall construction with a NZBC Clause E2 compliant cladding, will assist in meeting the performance requirements of the NZBC for use as a rigid air barrier in buildings beyond the scope of NZS 3604 - Timber framed buildings. For non-residential applications the Ecopy Barrier system has been third party tested, with a cladding system complying with NZBC Clause E2, for wind pressures up to Ultimate Limit States (ULS) of 4.5kPa and Serviceability Limit States (SLS) of 3.3 kPa in accordance with AS/NZS 4284 - Testing of Building Facade (AS/NZS 4284), demonstrating compliance with all aspects of the test procedure.

Ecopy Barrier will assist in the total cladding systems' compliance with NZBC Clause E2 when:

- Installed behind a cladding system that meets the performance requirements of NZBC Clause E2
- Installed in accordance with the Ecopy Barrier Specification and Installation Guide
- Installed on timber framing, minimum 90x45 SG8, conforming with performance requirements of NZBC Clause B1 at maximum 600 mm spacing
- Nogging/Dwangs are installed at maximum 1.35 m spacings centre-to-centre

The durability of Ecopy Barrier is subject to the requirements of NZS 3602 - Timber and Wood Based Products for use in building, in accordance with NZBC Clause B2 Durability and the requirements of NZBC Clause E2 External Moisture.

COMPLIANCE WITH THE NEW ZEALAND BUILDING CODE

Ecopy Barrier, specified and employed in accordance with Ecopy Barrier Specification & Installation Guide, assists in meeting the following provisions of the NZBC:

Clause B1 Structure: Performance B1.3.1, B1.3.2, B1.3.4(d)

Ecopy Barrier is Product Certified by the Engineered Wood Products Association of Australasia (EWPAA) as being manufactured in accordance with the joint New Zealand / Australian Standard (AS/NZS 2269) - Plywood-Structural. The EWPAA is accredited for product certification by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ).

Ecopy Barrier, being manufactured in accordance with AS/NZS 2269, can be designed in accordance with B1/MM1 6.1 NZS 3603 Timber Structures.

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Clause B2 Durability: Performance B2.3.1(a)

Ecoply Barrier is compliant with NZBC Clause B2.3.1 (a), not less than 50 years when used where the cladding durability requirement or serviceable life is not less than 50 years.

Clause E2 External Moisture E2.3.2

Ecoply® Barrier system has been tested, with a compliant cladding system, in accordance with AS/NZS 4284 demonstrating compliance with all aspects of the test procedure for wind pressures up to 3.33 kPa SLS and 4.5 kPa ULS. When used as part of a wall cladding system, Ecoply Barrier will contribute to meeting this requirement.

Clause F2 Hazardous Building Materials: F2.3.1

Ecoply Barrier plywood meets this requirement and will not present a health hazard to people.

CONCLUSION

Ecoply Barrier, as an Alternative Solution, will assist in meeting the requirements of the New Zealand Building Code for non-residential applications in relation to the abovementioned Clauses when installed in accordance with Ecoply Barrier Specification & Installation Guide, and installed behind a cladding system that meets the performance requirements of NZBC Clause E2.

References:

NZBC B1/VMI - Structure
NZBC B2/AS1 - Durability
NZBC E2/AS1 - External Moisture
Ecoply Barrier Specification and Installation Guide
AS/NZS 4284 - Testing of Building Facades
AS/NZS 2269 - Plywood Structural
NZS 3602 - Timber and Wood Based Products
NZS 3603 - Timber Structures
NZS 3604 - Timber Framed Buildings
Window Engineering Consultants - Report No. 1419, Weathertightness testing of Ecoply Barrier with Shadowclad external cladding in accordance with AS/NZS 4284: 2008 Testing of Building Facades