Updated Oct 2023

Technical Data / Producer Statement

APPLICATIONS

CosyWall™ is designed to provide effective thermal insulation for external timber framed wall cavities constructed before 1990, with suitably fixed internal linings. It is suitable for the following external claddings.

- ☑ Weatherboard Cladding
- ☑ Fibre Cement Cladding
- ☑ Plywood Cladding
- ☑ Stucco Cladding
- ☑ Brick Cladding

Note: CosyWall™ is unsuitable for wall cavities with poorly fixed linings.

Available from Licensed Installer:

Distributed by Safe-R Insulation (NZ) Limited.
8b Peters Way, Silverdale, Auckland, New Zealand.

CodeMark
CMNZ70016

PRODUCT DESCRIPTION

CosyWall™ insulation (CWI) is a full external wall cavity insulation system (EWCIS) for providing thermal insulation to wall cavities lined on both sides. The system includes an assessment of building suitability, licensed installation of water-resistant glass wool insulation and durable external cladding repair. The insulation is manufactured in selected plants by melting and spinning a blend of inert, natural minerals.

It is non-combustible, water-resistant, breathable, won't settle or shrink and has a trouble free history of insulating New Zealand external wall cavities since 2002. CosyWall™ is packed in plastic weather tight bags.

THERMAL EFFECTIVENESS

(NZBC H1, AS/NZS4859.1:2018)

CosyWall™ fills all except the narrowest wall cavities (e.g.: frame corners), without joins, gaps or edge crushing common with batting installation. The high-density dry-fill process eliminates settlement and curing shrinkage away from framing timber, which is common with liquid foam materials. Total thermal effectiveness is guaranteed with installation of design thickness and weight. When CosyWall™ is added to a wall, compliance with NZ Building Code (NZBC) clauses H1.3.1(a) and H1.3.2 is achieved via H1/AS1, clauses 2.1, 2.2 and 2.3.

The minimum Total R-values R1.9 / R2.0 (depending on zone) stipulated in Tables 2 of NZS4218 and NZS 4243, are exceeded respectively with all wall cavities >75mm. Alternatively, licensed installers can complete a design on an individual building in accordance with NZS4218 calculation method, using the table figures.

INSTALLATION

Can only be undertaken licensed installers, following the pre-assessment, insulation installation and cladding/lining reinstatement procedures detailed in the CosyWall™ manuals.

TABLE ONE - THERMAL RESISTANCE COSYWALL® CAVITY WALLS

1) Weatherboard >1950 with nogs. Deduct R0.2 if Sheet cladding.
2) Weatherboard <1950 510c/c, no horizontal nogs
3) Brick with 40mm cavity, no building paper

Total R-values assume 18% thermal bridging as per H1/AS1 & may alter in walls with more or less framing timber.

For a total R-value of:	Requires material R-value of:	Min thickness (mm)
2.2 (1)	2.8	90
2.6 (2)	2.9	105
3.3 (3)	3.9	138

BUILDING CODE COMPLIANCE

This designated "Design", "Construction" or "Construction without Building Consent" statement covers the use of CosyWall™ insulation material to meet or exceed NZ Building Code sections B1, B2, C3, E2, F2, H1 requirements when used in buildings at any geographical location in accordance with this document AND alteration to specific buildings via installation of the total CosyWall™ insulation system do not alter NZBC existing building compliance relating to clauses B1, C2, E2, G9, H1.

Compliance with these clauses is via a mix of acceptable and alternative solutions, as detailed below, with evidence supporting the claims available as Appendix 1 (A1), if required.

CosyWall™ usually requires BCA consent. A building risk assessment is undertaken for each site prior to consent application. Upon work completion licensed installers must provide site records to the BCA and state the installed thickness and bags used (weight) on a card fixed inside the power box.

Durability (NZBC B2.3.1)

CosyWall™ will satisfy the requirements of NZBC clause 2.3.1(a) & B2/AS1 Table 1 of 50 years durability in lined wall cavities, as the only materials are water-resistant glass wool and polyester resin cladding repair filler. Both are industry recognised as achieving 50-year durability. Vibration tests showed no settlement or shrinkage in wall cavities.

Durability of the existing structure is not reduced, as CosyWall™ EWCIS is dry applied, water-resistant, non-wicking and vapour permeable. Should future leaks occur, CosyWall™ does not extend framing timber drying time sufficient to increase framing timber decay.

Effect on Existing Structure (NZBC B1.3.2)

The structural performance of the framing, claddings & internal linings is not reduced by CosyWall™ EWCIS. Structural timber framing is not altered and there is no introduced or accumulated moisture to cause damage. The size & spacing of any holes through sheet bracing have minimal structural effect. CosyWall™ does not promote corrosion on metal building components.

Fire Properties & Electrical Wiring (NZBC C2.2, C3.7, G9.3.1)

CosyWall™ is non-combustible, and needs no additional treatment to prevent the spread of flame. Fire development via the "flue effect" is inhibited inside wall cavities lined with building paper or without horizontal blocking.

Clauses C2.2, C3.7 compliance isn't affected, as fire rated walls and cavities with heating equipment are avoided. Clauses G 9.3.1 compliance isn't affected, as CosyWall does not deteriorate TPS wiring, all rubber insulated wiring is avoided and other wires do not overheat within CosyWall at legal current loads.

External moisture (NZBC E2)

CosyWall™ insulation EWCIS complies with clause E2 via an alternative solution, utilizing similar methodology of acceptable solution E2/AS1, clause 3 site assessment weather tightness risk factors. CosyWall™ insulation is installed dry, does not transfer water via wicking and, if soaked, dries within 30 days.

The system does not affect existing building compliance with clauses E2.3.2, as any cladding damage is re-instated. CosyWall™ reduces possibility of water entering cavities and diminishes cavity condensation risk.

Internal moisture (NZBC E3)

Compliance with NZ Building Code (NZBC) clauses E3.2 (a)& (c) is not required for an altered existing building,but is achieved with CosyWall™ via E3/AS1 clause1.1.1(a). The minimum Total R-values of R1.5 stipulatedin E3/AS1, are exceeded with wall cavities >65mmwith sheet or other claddings of higher R-value.

Health Effects

CosyWall™ complies with NZBC section F2.3.1, as non-hazardous materials. It is low bio-persistent mineral wool with no added formaldehyde, which is odourless and does not provide food for vermin. The product does not represent a health risk to installers or occupiers of insulated buildings. Facemasks and overalls should however be worn when working with all insulation or dusty drywall materials.