

Appraisal of a Building Product



The N&C Nicobond Plastic Ply Timber Floor Reinforcing Sheet

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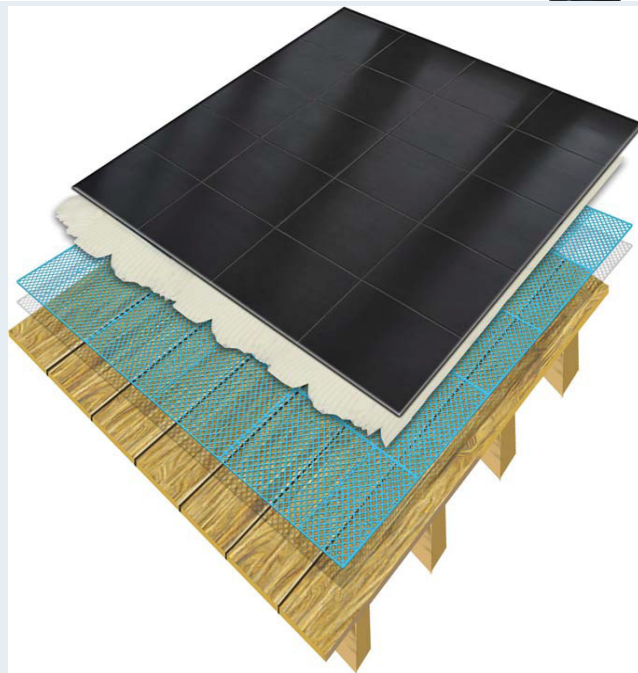
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General Information

Specific Performances with the NZ Building Code

Clause B1 - Structure

The Nicobond Plastic Ply System when used in accordance with this Appraisal will meet Performance Requirements of B1.3.2 of the New Zealand Building Code.

Clause B2 - Durability

The Nicobond Plastic Ply System when used in accordance with this Appraisal will meet Performance B2.3.1(c) 5 years, B2.3.1 (c) 5 years

and B2.3.2 of the New Zealand Building Code.

Clause E3 - Internal Moisture

The Nicobond Plastic Ply System when used in accordance with this Appraisal will meet Performance requirement of E3.3.3 of the New Zealand Building Code.

Clause F2 - Hazardous Building Materials

The product contains no hazardous materials complying with clause F2.3.1 of the Building Code.



T915 Completed December 2009
Verification of Clauses B1, B2,
E3 and F2
of the New Zealand Building Code



Description of Product

The Nicobond Plastic Ply reinforcing sheet is a novel method for fixing tiles and natural stone to timber floors. It eliminates the need to use heavy compressed fibre-cement or thick plywood as the substrate for tiling over timber floors to prevent stressing of the tiles and grouting.

In each of the four corners and at the centre there are holes which allow for nails or screws to be used for additional fixing to the floor if required.

The Nicobond Plastic Ply reinforcing sheet is approximately 1.5mm thick and is comprised of durable recycled plastic ingredients, fixed by way of self-adhesive backing sheet with option for nail or screw fixing if necessary for heavy commercial traffic. The sheets are laid in stretcher-bond pattern to a clean and dust-free surface, prior to applying the tile adhesive over. Where the tiles or stone is to be installed over the Plastic Ply in a wet area such as a bathroom or kitchen, a waterproof membrane shall be applied over the tile adhesive, prior to a second application of tile adhesive.

The New Zealand Building Code states. 'E3.3.3 - *Floor surfaces of any space containing sanitary fixtures or sanitary appliances must be impervious and easily cleaned.*'

Applicant

The applicant is Creative Living Limited.

Purpose of this Appraisal

The purpose of this Appraisal is to verify compliance with the relevant clauses of the NZ Building Code based on overseas service history, the manufacturer's technical information, and assessments and testing carried out by BEAL.

Trade Literature

The following literature describes the correct method of installation:

The N&C Nicobond Plastic Ply Timber Floor reinforcing sheet brochure (supplied with the product).

Scope & Limitations

The Nicobond Plastic Ply System has been appraised as an internal reinforcement sheet system to be used with timber framing complying

with NZS3604, with tiles or natural stone and all accessories complying with the performance requirement of Clause E3.3.3.

The timber floor shall have joist spacings of no greater than 600mm centers as described in NZS3604.

Detailed Information

Technical Description

The Nicobond Plastic Ply reinforcing sheet supplied in 600mm x 500mm sheets, 1.5mm thick. The sheets have a self-adhesive sheet attached to the back with a removable peel-off layer to protect the adhesive. In each of the four corners and in the centre there is a hole for using a screw to provide additional adhesion of the sheet to the floor if required.

The timber floor must be sealed with an acrylic or PVA primer before the sheets are laid onto the timber floor in a stretcher-bond pattern.

Once the sheets have been installed, an adhesive classified by AS4992.1 as C2S1 or C2S2 can be applied to adhere the tiles or natural stone. Where the tiles or natural stone are to be installed into an area where water fixtures will be present, then a waterproof membrane that has been shown to meet the performance requirements of the NZ Building Code, will need to be applied over a layer of the tile adhesive. When this has cured, then the tile adhesive can be applied for fixing the tiles or natural stone.

Storage & Handling

All products shall be stored and protected from the weather and to prevent accidental damage.

How to install the product

The product shall be installed as described The N&C Nicobond Plastic Ply Timber Floor reinforcing sheet brochure (supplied with the product).

Basis of Appraisal

[BEAL use the Compliance Verification Procedure to demonstrate compliance with the



relevant clauses of the NZ Building Code based on a risk-analysis procedure.]

Clause B1 - Structure

The ability of the Nicobond Plastic Ply System to provide the support of the tiles and natural stone over timber flooring was assessed by way of a range of tests carried out at the BEAL facilities.

B2 - Durability

For assessing the durability of the Nicobond Plastic PlySystem, an evaluation of Durability for the following was carried out:

- The expected durability of the materials used in the Plastic Ply
- The durability of the nominated tile adhesives
- The durability of the nominated waterproofing membrane
- The durability of the nominated sealer

E3 - Internal Moisture

The Nicobond Plastic Ply System was assessed for functional performance based on a range of tests carried out at the BEAL facilities.

The Nicobond Plastic Ply System was also evaluated in practical building situations to assess the following:

- Ease of installing the system
- Potential risks of non performance when being installed
- Any external factors that could effect the quality of the installed product
- Ease of repair or maintenance (where applicable)
- The impact of other building products /systems when in contact
- Comparison with other similar Products.

These assessments and tests demonstrated compliance with the requirements of Clause E3 (Internal Moisture) of the NZ Building Code.

F2 Hazardous Building Materials

BEAL considered the materials used in the installation of Nicobond Plastic Ply System, and concluded that no threat is presented. Installers of the Nicobond Plastic Ply System shall wear appropriate protective clothing.

Product QA Information

- The overseas manufactured Plastic Ply sheet, is manufactured to an in-house standard.

- All aspects of the supply, installation and maintenance shall be as described in the New Zealand representative's Building Product Quality Plan.

[Required by BEAL to demonstrate continuous compliance with the NZ Building Code.]



Verification of Compliance



Methods Used

- Testing and assessment by a laboratory or testing facility (BEAL)
- In service history of AAC - over 16 years in Australia and 12 years in New Zealand
- In service history of the Nicobond Plastic Ply

This appraisal uses the Compliance Verification Procedure for demonstrating Compliance with the performance requirements of the NZ Building Code, as the 'method' for demonstrating compliance with the relevant clauses of the Building Code.

The following documentation was consulted:

- New Zealand Building Act 2004
- New Zealand Building Code
- AS 4992.2 - Ceramic Tiles - Grouts and Adhesives
- AS 4858 - Wet Area Membranes
- AS 2358 - Adhesives for fixing ceramic tiles
- AS 4858 - Wet Area Membranes
- AS 1859 - Reconstituted wood-based panels - Specifications - Particleboard
- NZS 3604 - Timber Framed Buildings
- AS/NZS 2269 - Plywood—Structural
- BEAL Test Report TR091123 - Compatibility of tile adhesives
- BEAL Test Report TR091204 - Tile deflection testing
- BEAL Test Report TR091201 - Compatibility of the self-adhesive side with timber floor types
- BEAL Test Report TR091221 - Waterproof system hydrostatic test
- Various ASTM Standards and Test Methods
- An assessment for ease of use carried out by BEAL.
- Technical and trade literature provided by the manufacturer.



Conditions of this Appraisal

1. The Product(s) or system continues to comply with the quality assurance measures of the manufacturer, Nicholls & Clarke Group of Companies (UK). These quality assurance measures have been viewed and approved by BEAL.
2. The products comply with the conditions of this appraisal and with Creative Living Ltd's Building Product Quality Plan.
3. Creative Living Ltd. continues to have quality of the product or system components and installation training process monitored and their Building Product Quality Plan audited annually by BEAL.
4. The overall quality and performance of the product(s) or system are maintained. A finding of substandard product or a system will require a Special Product Audit being conducted by BEAL.
5. Creative Living Ltd. shall notify BEAL of any changes in specification or quality assurance measures prior to them coming into effect.
6. BEAL staff use New Zealand or appropriate international Standards or a BEAL Test Method or Standard (in the absence of a relevant New Zealand Standard) for carrying out testing and assessments. The evaluation of products is performed either at BEAL's facilities or at a nominated laboratory and carried out by experienced and qualified specialists.
7. The system has been tested against one or more of the following criteria which was applicable at the time of the appraisal:
 - a measurable criteria described in the Building Code, or
 - a relevant New Zealand or Australian Standard, or
 - an appropriate requirement set out in a New Zealand Department of Building & Housing document, or
 - a requirement set out in a BEAL "Test Method"
8. BEAL's verification of the building product or system complying with one or more abovementioned criteria is given on the basis that the criteria used were those that were appropriate to demonstrate compliance with the Building Code at the date of this appraisal. In the event that the criteria is withdrawn or amended at a later date, this Appraisal may no longer remain valid.
9. This appraisal will be reviewed within five years from the date of issuance unless audits require otherwise. In the event that there are changes not ap-

Authorised Signatory -



18 December 2009

C R Prouse - Director

Date of Issue

BEAL's new approval logo is the assurance that a building product complies with the requirements of the New Zealand Building Code.



Using the latest in Australasian and overseas testing and assessment methods and criteria, BEAL's logo is a sign of confidence -

- ◆ Confidence for the architect or designer that the product literature and details will meet their specific needs;
- ◆ Confidence for the Building Certifying Authority that the product has been evaluated in a rigorous manner to demonstrate or otherwise, compliance with the relevant Clauses of the NZ Building Code;
- ◆ Confidence for the builder and installer that the Technical Manuals are clear and easy to understand.

BEAL's new 'Approval Logo' is being promoted throughout the building industry thus ensuring maximum exposure for all products that carry this logo. For further information contact Colin Prouse at BEAL on (+64) 4 233 6661 or e-mail at sales@beal.co.nz

Contact Details



The manufacturer of the N&C Nicobond Plastic Ply Timber Floor Reinforcing Sheet is Nicholls & Clarke Group of Companies (UK)

The New Zealand representative of Nicholls & Clarke Group of Companies is Creative Living Ltd. who can be contacted at:

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Further information about this Appraisal can be directed to Mr Colin Prouse