# The easy way to tile over timber floors





Total peace of mind

# Pastic Py Timber Floor Reinforcing Sheet

A revolutionary reinforcing sheet to support and fix tiles and natural stone to timber floors including T&G Floorboards, Chipboard and Plywood.







## The problems with conventional methods of tiling to timber floors



#### 15mm Plywood

Large, heavy sheets, awkward to work with. Have to be conditioned, cut with a saw, primed and then screwed down. Plywood is sensitive to moisture and humidity changes and is prone to shrinkage and warping. At 15mm thickness it also creates a step which is not desirable.



#### 18mm Chipboard

Large sheets which are awkward to place. The sheets are easy to damage, costly to replace and have to be screwed down. Chipboard is moisture sensitive and is not a suitable material to tile directly onto. At 18mm thickness they also create a step which often requires a door to be cut down.



#### Polyethylene/Plastic Separating Systems

These are designed as disconnecting systems, not reinforcing sheets and although they are well suited to control lateral movement they are not good for controlling deflection. They are also supplied in large rolls which are not easy to handle on site, and need to be bonded with adhesive to the timber base, adding more additional cost in both material and time.



#### Fibre Cement Based Boards

Large sheets which can be awkward to place. The sheets are easy to damage and have to be cut with a saw, creating alot of dust and screwed down. At varying thickness from 6 - 15mm thickness they also create a step which is not desirable.

British Standards state "Timber is not considered to be a suitable base for floor tiling in wet, frequently damp, or high humidity areas, unless appropriate precautions are taken (BS 5385-4).

Noggins might be required between joists in order to achieve the required rigidity. The limit of deflection normally permitted for domestic timber floors (see BS 5268-2) might be too great to avoid damage to tiling systems."

Sub Floor	Size	Thickness	Weight	Moisture Resistance	Installation
Plywood	2400x1200	15mm (min)	Heavy	Low	Conditioned, cut, sawed and screwed
Chipboard	2400x1200	18mm	Heavy	Low	Conditioned, cut, sawed and screwed
Polyethylene separating system	Large rolls	4 - 8mm	Heavy	High	Bonded with adhesive
Fibre cement based boards	2400x1200	6 - 15mm	Heavy	High	Cut, sawed and screwed
Plastic Ply	600x500	2mm	Light	High	Peel off backing and stick to floor

## **The Solution**



A revolutionary solution for fixing tiles and natural stone to timber floors. Prevents problems of damage to tiles and tile joints by avoiding the effects of timber shrinkage, warping and rotting. Plastic Ply eliminates the need to install thick sheets of marine grade plywood (min 15mm) or similar over-boarding products in order to achieve an attractive and sound tiled floor finish.



Bathrooms



Living rooms



Kitchens



Conservatories

## **Features and Benefits**

# Pastic Py Timber Floor Reinforcing Sheet

#### Features

Self Adhesive

Ready to Tile

Ultra Thin (2mm)

Easy to Cut

Easy to Install

Time Saving

Does Not Rot or Warp

**Cost Effective** 

**Moisture Resistant** 

No Drilling Required

Compatible with Undertile Heating

Award Winning Product

Convenient Sheet Size

**Convenient Sized Packs/Boxes** 

**Environmentally Sound** 

### Benefits

Fast Installation
No waiting time
No step
Utility Knife or Scissors
Stress Free
Faster Installation
Great Longevity
Saves Time and Money
Effective Moisture Barrier
Fast Installation
Single Product Solution
International Accreditation
Easy to Handle and Fit
Easy to Transport & Store
50% Recycled Plastic



### PLASTIC PLY WINS INNOVATION AWARD

Nicobond Plastic Ply won the Innovation Product of the year at Tile Association Awards, recognising the contribution Plastic Ply has made to the tiling industry in overcoming the issue of tiling over wooden substrates.

### **Installation Guide**



Ensure floor is clean and dust free



Prime timber and allow to dry



Remove release paper



Cut the Plastic Ply using scissors



Fix Tiles



Lay the Plastic Ply sheeting directly to the floor in a brick type pattern



Grout using Nicobond Flexible Grout Plus



Cover Plastic Ply with Nicobond Rapidflex Adhesive



Finished Room



# To view the N&C Nicobond Plastic Ply installation movie visit www.ncdirect.co.uk

## **The Retailer**

Plastic Ply is ideal for the retail and DIY markets, with many floors being tiled in the renovation market, the simplicity of Plastic Ply with it's ease of use makes it the perfect tiling accessory.

One of the main benefits of Plastic Ply to the consumer is the ease of fitting. At only 2mm thick it does not create a step, avoiding differing floor levels when tiling, for example, a bathroom which leads onto a landing.

To serve the retail sector Plastic Ply is packaged in convenient packs of 4 sheets, which covers an area of 1.2m<sup>2</sup>. These are then boxed in lots of 12 packs per box.

The retail display stand is a highly colourful and informative unit highlighting all the features and benefits of Plastic Ply. This is supplied as a base unit and a separate counter top display. If space is restricted the counter top display is ideal, whereas if you have room, the complete unit is benificial creating a greater sales impact. This unit is available to the Retailer Free of Charge basis<sup>\*</sup>.





Positioned alongside the tile displays, it is an eye catching product and enables the tile retailer or distributor to offer the complete package of tiles, adhesives, grouts, trims and a timber reinforcement sheet. It will allow the retailer to gain additional sales with a healthy margin instead of the retail or trade customer buying over-boarding products elsewhere.

\*Subject to the purchase of one box of Plastic Ply

## **The Tiling Contractor**

Plastic Ply is a proven tile installation system. As a timber floor reinforcing sheet it provides the tiling contractor with a very economical and effective solution for tiling over timber floors. Plastic Ply offers numerous advantages to the tiler:

- Plastic Ply is not moisture sensitive, no need to pre-condition.
- Plastic Ply is self adhesive, no need to screw down
- Easy to handle, does not require a two man lift as plywood
- Easy to cut around existing sanitary ware with heavy duty scissors so no need to template.
- Easy to carry packs or boxes up flights of stairs
- Easy to store in a van taking up minimal space
- A proven system
- Will save you time and money



Total peace of mind

Plastic Ply will only take 20 minutes to fit an average floor, saving a huge amount of time.

Plastic Ply can be used throughout the home on any timber substate that requires ceramic tiling of natural stone.



Bedrooms



Kitchens



bathrooms

## The House Builder

An increasing number of buildings today are constructed from timber frames, this often means that new solutions are required to meet the ever increasing demands in the house building industry.

When installing tiles over timber substrates, measures need to be taken to prevent the tiles from cracking. For house builders this can be a time consuming and costly exercise.

Damage to tile installations can easily occur due to the unfortunate natural characteristics of timber such as warping and movement as a result of changes in moisture content.

The latest NHBC 2011 Standard in Chapter 8.3 Floor finishes Design Standards 8.3 - D4 and Sitework Standards 8.3 - S3 makes reference under

"Tiles on Wood Based Substrates" to the use of "tile bedding reinforcement sheets."

Many national and regional house builders have recognised the merits of Plastic Ply and are specifing it widely.



These are just a few of the house builders specifying Plastic Ply worldwide



# DESIGN STANDARDS 8.3

NHBC 2011 Standard - Chapter 8.3 Floor finishes Design Standards 8.3 - D4 and Sitework Standards 8.3 - S3.

Plastic Ply now features as an integral part of this important standard.



# Appraisal of a Building Product



#### Contents

#### **1** General Information

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



# **General Information**

# Specific Performances with the NZ Building Code

#### Clause B1 - Structur

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 - Durabilit

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 Moistur

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.

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# 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 Ply System, an evaluation of Durability for the following was carried out: - The expected durability of the materials used in the Plastic Plv

- 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 inhouse 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.]

#### Key Testing Procedures

Objective: To assess the ability of the Nicobond Plastic Ply when installed over nominated timber substrates T & G Floor boards/Chipboard/Plywood to deflect 1.6mm (L/360) when performing as a complete system, preventing the fracture of the finish tiled floor.

Test Method: A point load was exerted onto the test floor at a rate of 1mm/min to achieve the L/360 deflection, where L equals the span length (see drawing below). Floors have been designed with joists spaced at 600mm centres, therefore the the maximum deflection in the floors should be no more than 1.6mm. All floors should not exceed the deflection criteria of L/360, as recommended by The Tile Council of North America

Criteria: All floors should be able to resist a deflection of 1.6mm (L/360) with no visible signs of failure. i.e. tiles cracking.

Result : No failure occurred when the floors were deflected at 1.6mm. The floors were then subjected to maximum deflection of up to 10mm at which point the tiles cracked down the centre under the point load at up to 6.7mm deflection. In a test bed constructed in such a way that the grout line was at the centre the floor achieved a maximum deflection of 10mm, with the observation that there was hairline cracking in the grout.

Comment: The results showed that when the floors are subjected to a downward pressure to form a 1.6mm deflection, the Plastic Ply system prevents the fracture of the finished tiled floor over all nominated timber floor substrates constructed with timber joists at 600mm centres, and in conjunction with Nicobond Rapidflex Adhesive. On average the floors required a deflection before failure occurred; generally through the cracking of tiles.





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#### Products for the Professional

**Product Data Sheet** 

# **Plastic Ply**

#### Decription

A Blue polyethylene based self adhesive timber floor reinforcing sheet material, manufactured using 50% recycled plastic ingredients.

Approved under T915 by the Building Element Assessment Laboratory of New Zealand - Building Code Compliant. There are no equivalent British Standards for this category of products.

#### Uses

To facilitate the secure bonding of ceramic and porcelain tiles, mosaics and natural stones to timber floors and problematical substrates. See Scope and Limitations\*. Plastic Ply is a strong durable sheet material which effectively counteracts deflective forces in a timber floor. In tests conducted under the BEAL Appraisal it was demonstrated that the Plastic Ply could with stand deflective forces far in excess of the L/360 criteria as recommended by the Tile Council of North America (www.tileusa.com).

	Features Meets the criteria of a "Tile bedding reinforcement sheet" as defined by NHBC
:	Strong durable material
:	Self Adhesive
:	Ready to Tile
:	Ultra Thin
:	Easy to cut
;	Moisture Resistant

Practical sheet size for convenient handling

\*Existing wooden floors must be rigid, stable and capable of supporting additional load without flexing and have sufficient ventilation beneath them.

Any loose boards should be secured prior to applying Plastic Ply. If there is excessive flexing or movement within the floor the addition of extra noggins may be required.

Plastic Ply is designed for use on timber floor surfaces only; if in doubt please contact your local stockist for advice prior to tilling.



#### **Application Method**

The timber floor should be dimensionally stable, sound and free from grease, waxes, dust and any contamination which may prevent adhesion.

Prime timber using Nicobond Universal Bonding Agent & Sealer diluted 4 parts by volume water to 1 part UBAS. Allow to dry.

Remove release paper from the underside of the sheet and lay theself adhesive backing directly on to the timber floor. Smooth out so that the sheet is completely flat. If the Plastic Ply is being affixed on an external balcony or terrace then the Plastic Ply must also bescrewed down through the screw holes provided.

The Plastic Ply is very easy to cut using a Stanley/Utility Knife or strong scissors.

The Plastic ply shall be laid brick/stretcher bond pattern, this ensures maximum strengthening properties of the Plastic Ply.

Using the straight edge of a notched trowel cover the Plastic Ply with a layer of Nicobond Rapidflex Adhesive (C2 S1 category adhesive) ensuring the voids in the sheet are completely filled. A 3mm layer of adhesive is then applied to the Plastic Ply surfacein which to bed the tiles. In a wet room environment the Nicobond Wet Room Tanking Sheet would be laid onto the wet layer of adhesive covering the Plastic Ply and tiles then installed on the tanking Sheet.

Once the floor tiles have set in accordance with the recommended timescales the tile joints may be grouted using Nicobond Rapidlflex Grout or Nicobond Flexible Grout (CG2 category grout).

	Application Data
Sheet Size :	600 x 500mm
Thickness :	2mm
Packaging :	Supplied in packs of
	4 sheets per pack (1.2m <sup>2</sup> ).
	Outersof 12 packs per box
	(14.4m²).
Shelf Life	Up to 1 year unopened

www.ncdirect.co.uk

# **Recommended Products to use with Plastic Ply**

Nicobond range of products which are recommended for use with Plastic Ply.

# Nicobond Universal Bonding Agent and Sealer (UBAS)

A high quality PVA bonding agent, multipurpose, can be used as a household adhesive, for woodwork or as a simple additive to sand/cement mortar



#### Nicobond Single Part Flexible Glass Tile Adhesive

Highly flexible standard set wall and floor tile adhesive



#### **Nicobond Flexible Grout Plus**

A superior, highly flexible grout with anti efflorescent, anti mould and the unique Aquablok technology water repellent properties



- Colour: White, Jasmine, Silver Grey, Cappuccino, Coffee, Black
- 복 Joint Width: 2 20mm
- Coverage: See Directory
- Pot Life: 45 60 mins
- Setting: Approx 3hrs
- Ready for Use: 8 12hrs
- Available in: 10, 2.5 kg

#### Nicobond Rapidflex

A fast setting, high performance, single part flexible and waterproof tile adhesive, bonds all types of tiles to a wide variety of substratess



# Nicobond Large Format Floor

#### Tile Adhesive

A fast setting flexible and pourable adhesive designed to be of fluid consistency for larger format tiles



#### **Nicobond Rapidflex Grout**

Designed for flooring applications this fast setting grout can be used in joints up to 15mm wide



- Colour: Grey, Charcoal
- 본 Joint Width: 5 15mm
- Coverage: See Directory
- Y Pot Life: 30 mins
- Setting Time: 1½ 2 hrs
- Ready for Use: Approx 3 - 4 hrs
- Available in: 20, 10 kg



# The online easy to use Tile Adhesive, Grout & Screed Selector.

The new innovative tile adhesive, grout & screed selector tool that allows you to select the very best products most suited to your usage, environment and application in under 30 seconds.

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Nicobond Product Selector	Bearch Results		
Type of Application Timber Relatorcement	RAPIDFLEX A fast setting, bigh performance, single part flexible and		
Substrate Timber reinforcement	waterproof tile adhesive, bonds all types of tiles to a wide variety of substrates.		
Tile type & size Floor ceramic up to 30x20	Concur: write, orey Max Bed Thickness: 12 mm Coverage: 2-4 kg/m2 Advised Thickness: 12 minute		
Product type Bisgle Part Cemest	Grouting: 1-4 hrs Pet Life: 30-46 mins Open Time: 10-15 mins Available to: 20, 10 kg Product Data Sheet Material Safety Data Sheet	Nicobond	

Available online now at www.ncdirect.co.uk, the fabulous new tool is set to drastically reduce decision making time and aid in the selection of the products for the most demanding projects and environments, as well as everyday tiling.



All calls are charged at local rate.



# A business dedicated to a sustainable future

As a leading manufacturer and distributor of tile adhesive systems, grouts and floor screeding compounds we understand the need to work towards creating a sustainable business. We have already taken great strides but recognise there is still more to do. We continue to focus on six key 'green' steps that help us move forward in further reducing our impact on the community and its surrounding environment.

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# 1.Product Development

We develop products that minimise their impact on the environment. All elements including the raw materials, the manufacturing process and the type of packaging are considered. Recycled and recyclable materials are used wherever possible.

# 2.Carbon Footprint

Our manufacturing processes, buildings, delivery and travel policies are monitored continuously which has already reduced our carbon emissions.

# 3.Waste Reduction

The latest manufacturing techniques and the use of grey water technologies have reduced the amount of waste our manufacturing facilities create.



We have made significant progress to date and now recycle all our plastics, wood, cardboard and paper.

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# 5.Energy Saving

Our aim is to keep our energy consumption to a minimum and to use the greenest sources wherever possible.

# Sustainable future

# 6.Social Responsibility

We believe that a sustainable and responsible business will ultimately become a more successful one. We work closely with our local communities and a national charity that help disabled children and young people live a life of greater freedom.



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