

ON A CONCRETE SLAB WITH ACOUSTIC MEMBRANE



GENERAL

Timber is a natural product and will absorb and transpire moisture during its life, so as flooring, there will always be movement in individual boards.

The care taken during handling, installation and finishing will minimise this movement. To achieve the best possible end result with traditional hardwood timber flooring products it is essential that correct procedures are followed.

PRODUCTS

ROSENFELD KIDSON SOLID T&G FLOORING

Solid timber flooring is available in a range of species, grades and sizes. Thicknesses range from 13mm overlay to 21mm thick boards. Refer to Rosenfeld Kidson Solid Timber Flooring Brochure to see the full range.

TIMBER TRIM

Solid timber trim available to compliment flooring choice, such as skirting, architrave and stair nosing etc.

MOISTURE BARRIER

Mapeproof 1K Turbo Moisture Barrier Sealer.

CONCRETE PRIMER

MAPEI Eco Prim T All Purpose Primer.

LEVELLING COMPOUNDS

Ultraplan Eco Self-Levelling Compound.

ACOUSTIC MEMBRANE SYSTEM

MAPEI Mapesonic CR Acoustic Membrane.

ADHESIVES

MAPEI Ultrabond ECO 995 wood flooring adhesive.

COATING PRODUCT

Rubio Monocoat Oil Plus 2C.

Handley Industries Aquapol Water borne Polyurethane Satin/Lo-sheen/Matt/Matt Plus.

Handley Industries Solvent borne Polyurethane Gloss/Satin/Lo-sheen.

BEFORE INSTALLATION

CHECK TIMBER

Prior to laying, check the timber is the correct species, grade and size. Check the quantity is correct and no excessive damage has occurred in transportation.

Check the moisture content of the timber flooring with a calibrated moisture meter to ensure it is within the specified range.

DO NOT START

Do not start laying before the building is enclosed, doors are hung and lockable, including the garage, wet work complete, full lighting available and in the case of air-conditioned buildings the air-conditioning has been operating for four weeks.

INSPECT THE SUBSTRATE

Make sure the concrete floor slab is at the correct moisture content. The concrete slab should be at a maximum of 70% RH when using a hygrometer.

The substrate should be of a suitable finish. Do not start laying if the substrate will not allow work to the required standard.

INSTALLATION

SUBFLOOR PREPARATION

Ensure concrete is clean, free of surface moisture, oils, waxes, efflorescence, old finishes etc. and is not chalky, flaky or dusty. Ensure concrete is level and the slab is in accordance with relevant compliance codes. Diamond grinding may be required to ensure these criteria are met.

New slabs should be cured for more than 28 days, be dimensionally stable and have a moisture content of below 70% RH. Again they should comply with relevant codes (AS2870-1996) and brought to an acceptable standard. Also refer BRANZ Bulletin 506 – Laying Solid Strip Flooring on Concrete Slabs.

MOISTURE BARRIER

Mapeproof 1K Turbo is a one component, solvent free, moisture curing and rapid drying polyurethane surface membrane with very low emission of volatile organic compounds.

Refer to the manufacturer's specifications for detailed application information.

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Number of coats

Two coats as per recommended coverage below. Thorough testing should then be conducted to ensure moisture has been contained as per 16 hour hygrometer test to achieve 70% RH or below.

Please also note that while 70% RH meets the requirement of AS1884-1985, 70% RH will achieve equilibrium moisture content in timber of approximately 13.3% m.c. under normal temperature conditions.

If the correct moisture content is exceeded, additional coats may be required.

Apply Mapeproof 1K Turbo with a roller, a brush or flat trowel.

Apply 0.2-0.4 kg/m² per coat. The product is available in 10kg drums.

Once the Mapeproof 1K Turbo has dried, prior to the application of levelling compounds, a MAPEI primer must be applied, such as Eco Prim T.

Cleaning

Mapeproof 1K Turbo may be removed from clothing and tools while still fresh using Thinner PU or Cleaner L. Once set, it may only be removed using Pulicol 2000.

Health & Safety

Mapeproof 1K Turbo is irritant for the eyes, skin and the respiratory tracks. Please read and understand the Material Safety Data Sheet available from MAPEI.

LEVELLING (IF REQUIRED)

The concrete floor must be level. The maximum allowable tolerance in level is 3mm in 3m.

MAPEI Ultraplan Eco is a self-levelling, ultra quick-hardening smoothing compound for thicknesses from 1 to 10mm, with very low emission level of volatile organic compounds (VOC).

Refer to the manufacturer's specifications for detailed application information.

Priming

The concrete sub-floor should be primed with MAPEI Eco Prim T.

Eco Prim T can be applied with a brush or roller. It is usually diluted 1 to 2 with water when applying on cementitious or anhydrite surfaces.

When the adhesive is completely dry, it is possible to apply the levelling compound. Drying time varies with environmental conditions (temperature and humidity), approximately between 2 and 5 hours. However, it is recommended not to wait more than 24 hours.

Consumption varies from 0.10 to 0.20 kg/m², depending on the porosity of the substrate and on how it is applied.

Mixing

Pour a 23 kg bag of Ultraplan Eco into a bucket containing approximately 5.6 litres of clean water and mix with a low speed electric mixer to obtain a homogeneous lump-free mix.

Larger quantities can be prepared in on-site cement mixers. After 2-3 minutes of slackening, re-stir the mix. The mix is then ready to be used.

It is recommended to add approximately 20-30% of 0/4 or 0/8 grain sand when Ultraplan Eco is used for thicknesses more than 10 mm (max. 20 mm). For further information consult MAPEI Technical Services Department.

The quantity of Ultraplan Eco mixed at any time must be used within 20-30 minutes (at +23°C).

Application

Apply Ultraplan Eco in a single coat from 1 to 10 mm with a large metal trowel or rake and keeping the trowel slightly inclined to obtain the desired thickness.

When a second coat of Ultraplan Eco is required, it is recommended to apply it as soon as the first one is set to light foot traffic (approximately 3 hours at +23°C).

Curing

When installing wood flooring, wait 24 hours. Check the humidity content with a carbide hygrometer.

ACOUSTIC MEMBRANE INSTALLATION

Once the levelling compound has cured, the Mapesonic CR acoustic membrane can be installed using Ultrabond ECO 995.

MAPEI Ultrabond ECO 995 is a premium moisture-control, sound reduction and wood flooring adhesive.

Refer to the manufacturer's specifications for detailed application information.

Before laying rolls of soundproofing material, remove the protective plastic backing sheet. The product must be laid in a continuous layer, with special care at the corners of the room and at the joints between sections.

On clean, dry surfaces unroll the sheets of Mapesonic CR in the direction of the longest side of the room. Leave 24 hours to acclimatise before cutting them to size.

Roll the sheets up again to half their length, with the remaining part lying on the substrate, and spread the Ultrabond ECO 995 on the exposed part of the surface.

After laying the sheet, massage the surface with a rigid roller or flat trowel, starting from the centre and working towards the edge. Repeat the laying procedure for the second part of the roll.

Do not apply too much pressure on the surface while applying Mapesonic CR or until the adhesive used for bonding has completely set. 24-48 hours after laying the sheets, the new flooring may be bonded.

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FLOORING INSTALLATION**Layout**

Leave a 6-8mm gap around the perimeter of the floor to accommodate movement – this can be covered by the skirting.

Install movement control joints within the floor area to accommodate movement where the floor width exceeds 9m or at 9m maximum centres for strip flooring – fill joints with either compressible cork or a sealant formulated for use with timber flooring.

When laying over concrete, softwood panel substrates or an existing floor, boards should be staggered to provide the look of a floor similar to that laid over joists. It is good practise to ensure that end-joints are 300-450mm apart and that joints do not cluster together or align.

Installers also need to consider how the boards will be distributed in the floor in terms of length, grade, feature and colour. It may be necessary to lay from more than one pack at a time so that timber variation can be blended through the floor. Single boards with highly contrasting appearance should not be installed in highly visible locations.

Application

MAPEI Ultrabond ECO 995 is also used to fix the timber flooring.

Refer to the manufacturer's specifications for detailed application information.

MAPEI Ultrabond ECO 995 is ready to use and requires no mixing.

Select the appropriate trowel clip that is provided. For wooden flooring 12mm+ in thickness, use the clip that measures 10 x 4.5 x 10 x 1.5mm. Using the trowels flat side, key the Ultrabond ECO 995 into the subfloor, creating a void-free surface. Once the adhesive has been keyed in, immediately spread using the appropriate trowel attachment.

Trowel ridge lines should be perpendicular to the wood flooring installation direction. Hold the trowel at a 60° to 90° angle to the subfloor, making sure 100% coverage is achieved. Only apply as much as can be installed within 45 minutes.

Timber should be laid into wet adhesive and secured or weighted, as per industry standards. Press the timber board firmly into the adhesive to make the glue bond to both the timber and the concrete and tap each board in place to ensure the tongue of the board is well fitted into the groove of the adjoining board – remember to tap on a packer and not directly on the board being installed.

Curing

Floors may have light foot traffic after approximately 12 hours.

Clean-up

Immediately clean any adhesive smudges from the flooring material's surface with Ultrabond Urethane Cleaner while adhesive is still fresh/wet. Ultrabond ECO 995 is very difficult to remove when cured.

ACCLIMATISATION

Following installation and prior to finishing, flooring should be left for a period of four weeks or more to allow acclimatisation to the final ambient room conditions, with air-conditioning systems running, if present.

FINISHING**Protection**

Timber floors must be protected from damage that could occur before the floor is coated and/or the building work is finished – typically softboard sheets can be laid over the surface to provide protection from foot traffic and dropped tools before and after sanding and coating.

Preparation

Epoxy fill knots, if present e.g. 'Feature Grade Oak'. Solid timber floors require sanding before the application of a coating system to ensure joints are level and all machine marks in the timber are removed. Good preparation of the surface is crucial for an optimum finish. The surface must be clean, dry and free from wax, grease or dust. All previous coatings must be removed. The surface should be fine sanded with a 150# sandpaper or screen disc and then vacuumed thoroughly.

Recommended floor finishing options include Rubio Monocoat Oil and Handley's Polyurethane.

RUBIO MONOCOAT OIL PLUS 2C

Refer to the manufacturer's specifications for detailed application information.

RMC Cleaner is a cleaner which, following the sanding and vacuuming processes thoroughly cleans the surface preparing it for treatment with Rubio Monocoat Oil.

Colouring and protecting is done with RMC Oil Plus 2C.

Carefully mix and stir the two components. Apply a small amount of RMC Oil Plus 2C and spread it out with a cloth, a brush or polisher with a thin beige pad. Treat one zone of 5-10m² at a time.

Leave to react for a couple of minutes. Remove all excess oil with a non-fluffy cloth or polisher with a thin white pad with 15 minutes per zone. The surface should feel hand-dry after removal of the excess product.

In a well ventilated room, the surface can be used 24-36 hours after the application.

HANDLEY'S WATERBOURNE & SOLVENTBOURNE POLYURETHANES

Refer to the manufacturer's specifications for detailed application information.

Waterbourne polyurethanes are not recommended on dark-coloured timbers, such as Kwila and Jarrah.

Apply the first coat evenly with a Handley approved floor coating applicator, 10mm nap roller or soft brush and allow to dry (3 to 6 hours). Lightly sand with 240# sandpaper, vacuum thoroughly and apply a second coat. Repeat this procedure until the desired finish has been attained – normally 3-4 coats are sufficient.

Coverage is approximately 8-10 sq m²/ltr (depending on porosity).

As complete curing of a polyurethane floor takes a full 7 days (usually waterproof after 3 days), care must be exercised during this time. Avoid dragging furniture etc. over the surface. Use protective mats in traffic areas. To extend the life of the floor, mats should be used in doorways in order to remove dirt and grit from feet.

Protective pads should be used on the legs of furniture. The floor should be swept frequently and washed with hot water and a small amount of dishwashing detergent, after seven days curing.

DOCUMENTS

The following documents may be applicable to this work:

NZBC C/AS2-AS7	Protection from fire
NZBC C/VM2	Protection from fire
NZBC D1/AS1	Access routes
NZS 3604	Timber-framed buildings
AS/NZS 2269.0	Plywood – Structural – Specifications
AS 4586	Slip resistance classification of new pedestrian surface material
ISO 9705	Fire tests – Full scale room test for surface products
BRANZ BU 330	Thin flooring materials – 2 Preparation and laying
BRANZ BU 506	Laying Solid Strip Flooring on Concrete Slabs
ATFA	Australian Timber Flooring Association – Solid Timber Flooring Industry Standard Technical Publication Version 3 – June 2016

MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents relating to this part of the work:

Rosenfeld Kidson Solid Timber Flooring Brochure
 Rosenfeld Kidson Solid Timber Flooring Specification
 Rosenfeld Kidson timber flooring profile drawings
 MAPEI Mapesonic CR Technical Data Sheet
 MAPEI Ultrabond ECO 995 Technical Data Sheet
 MAPEI Ultrabond ECO 995 Material Safety Data Sheet
 MAPEI Eco Prim T Technical Data Sheet
 MAPEI Eco Prim T Material Safety Data Sheet
 MAPEI Mapeproof 1K Turbo Technical Data Sheet
 MAPEI Mapeproof 1K Turbo Material Safety Data Sheet
 MAPEI Ultraplan Eco Technical Data Sheet
 MAPEI Ultraplan Eco Material Safety Data Sheet
 Handley Industries Aquapol Water Bourne Polyurethane – Satin, Low-sheen, Matt and Matt Plus
 Handley Industries Solvent Bourne Polyurethane – Gloss, Satin or Low-sheen
 Rubio Monocoat Application Instructions
 Rubio Monocoat Care and Maintenance Guide
 Rubio Monocoat Oil Plus 2C Material Safety Data Sheet



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