

Application Guide using Acouslime Products

Acouslime flooring installation products have been developed to work seamlessly together as a System, resulting in quality timber flooring installations if site condition assessment and product instructions are strictly adhered to, as stated in this document.

This document has been compiled from the TDS's for the Acouslime products mentioned below. For any additional information please refer to the TDS's and SDS's on our Website.

INSTALLATION PROCEDURE - Summary of steps. More detail shown below

- STEP 1** - Assess RH (Relative Humidity) IN Slab to determine which Acouslime Moisture Seal is the best to use for your site conditions.
- STEP 2** - Acouslime Moisture Seal application, if required. The Adhesives may suffice on their own up to 85% RH in slab.
- STEP 3** - Acouslime 001 Bond Primer application, if required - bonds levelling compounds to slabs.
- STEP 4** - Acouslime Levelling compounds, if required.
- STEP 5** - Acouslime 3 in 1 Timber flooring adhesive with Moisture Vapour Barrier & Stabiliser
OR
Acouslime 4 in 1 Timber Flooring Adhesive with Acoustics, Moisture Vapour Barrier and Stabiliser

STEP 1 - RH Assessment in Slab

RH - Relative Humidity /Slab Moisture content evaluation

Concrete Moisture Assessment: A 'dry' slab is signified by impedance moisture meter readings of up to 2.0% and in-slab relative humidity (RH) below 75%. Where floors have been covered by previous floor coverings acceptable values are generally up to 3.5% and 80% in-slab RH. High readings require investigation as to possible moisture sources and may require a different slab moisture protection as outlined in the table below.

All new slabs must have an in-situ RH - Relative Humidity / Moisture Content test done before timber flooring installation can begin.

This will determine what type of moisture sealing is required before a job is started, to gain the best results for the site, resulting in a good quality installation that will stand the test of time.

STEP 1 - RH Assessment in Slab (Continued)

RH - Relative Humidity /Slab Moisture content evaluation

The in-situ test involves drilling holes into the slab at a depth of approx. 40% - 20%, dependant on slab. Three test samples are used in various locations for the first 100m2 and then an additional probe for every additional 100 m2. Probes are placed and left for a minimum of 24 hours. Data is sent through electronically, recording the RH moisture content in the slab. (PosiTector CMM IS - Concrete Moisture Meter)

This will determine the best Acouslime product required for moisture sealing the substrate.

If required, we can offer a service (in selected States) to do an in-situ RH test using probes at a specific depth in the slab to establish the RH / Moisture content.

PLEASE NOTE: A surface moisture test is unreliable and does not reflect the true Moisture levels within the actual slab which can result in floor failure if not correctly sealed.

Acouslime product selection based on RH in slab (Relative Humidity/ Moisture Content)

Up to 85% RH	Acouslime Timber Flooring adhesives contain a Moisture Vapour Barrier and can be used for up to 85% RH in slab. A one step process including Adhesive. <u>Proceed to STEP 3 if levelling required</u> Acouslime 3 in 1 has a Moisture Vapor Barrier and stabiliser Acouslime 4 in 1 has a Moisture Vapour Barrier, Acoustics (rated 43dB) and Stabiliser
86% - 90% RH ASTM F2170-02	One coat of Acouslime Moisture Seal to be applied to the substrate.
90% - 98% RH ASTM F2170-02	Two coats of Acouslime Moisture Seal to be applied to the substrate. Allow 2 - 4 hours drying time between coats, dependent on weather conditions.
98% RH Upwards	Slab is too wet/green not suitable for Timber Flooring installation

STEP 2 - Moisture Seal - If required

Please read in conjunction with the TDS's and SDS's on our website

Acouslime Moisture Seal

Refer to table above for number of coats required relating to RH Relative Humidity/ Moisture Content.

APPLICATION & SURFACE PREPARATION

- **First Coat:** Apply with a roller or a brush in a single coat. The screed must be free of oil, wax, & dirt. Allow to dry for 2 - 4 hours. The low viscosity of the product combined with the high absorption properties allow a perfect penetration into the screed which enables the restore of uneven and dusty screeds. For full screed restoration please consult our technical service for further details.
- **Second Coat:** (If required refer to RH readings under Performance) Apply with a roller or a brush in a single coat. It must be applied crosswise from the 1st coat layer to form a continuous film. The screed must be free of oil, wax, and dirt. Allow to dry for 2 - 4 hours. The low viscosity of the product combined with the high absorption properties allow a perfect penetration into the screed which enables the restore of uneven and dusty screeds. For full screed restoration please consult our technical service for further details.

COVERAGE

- **First Coat:** Approx. 8 - 10m² per litre, subject to varying substrates.
- **Second Coat:** Approx. 10 - 12m² per litre, subject to varying substrates.

PERFORMANCE

- **First Coat:** Acouslime Moisture Seal will block moisture in concrete slabs up to 90% RH (ASTM F 2170-02)
- **Second Coat:** Acouslime Moisture Seal will block moisture in concrete slabs up to 98% RH (ASTM F 2170-02)
- Acouslime Moisture Seal will block moisture in concrete up to 85% RH (ASTM F 2170-02) over radiant heated slabs.

Maximum waiting time for laying	36 hours
Minimum waiting time for laying*	2 - 4 hours

*Dependant on weather Conditions

STEP 3 - Bond Primer for Levelling Cements - If required

Please read in conjunction with the TDS's and SDS's on our website

Acouslime 001 Bond Primer

After assessing which system of Moisture Sealing works for your floor based on the RH value of the slab, the floor then needs to be assessed to make sure it is level within 3mm beneath a 3m straight edge.

Acouslime 001 Bond Primer MUST be applied to the areas that require levelling to make sure that the Acouslime Self Levelling or Self Levelling Fast Flow cements bond to the surface being levelled.

SURFACE PREPARATION

- All defective host substrate must be removed before application.
- Defective material includes cracked or structurally weakened surfaces.
- Host concrete must be roughened and aggregate exposed to ensure a good bond.
- Chloride contaminated concrete. A concrete corrosion expert must be consulted.

APPLICATION

- **Applying Primer**
 Apply the primer with a roller, broom, brush or spray over the concrete substrate.
- **Priming Concrete Floors.**
 Use straight from the container. Do not dilute with water or solvent.
 Porous concrete substrates may require a second coat to seal the surface.
 Best results are achieved when your cement products are applied just as the primer is tacky to touch.

Coverage - 1 litre will cover:	8 to 9 square metres approx.
Drying time on Concrete	25 - 30 minutes approx.

STEP 4 - Levelling Cements - If required

Please read in conjunction with the TDS's and SDS's on our website

Acouslime Self Levelling Cement
Acouslime Fast Flow Self Levelling Cement

SURFACE PREPARATION

- All Slabs need to be flat to within 3mm beneath a 3m straight edge
- All surfaces must be free from dust, oils, and surface contaminants. This may require cleaning with high-pressure water blasting or saturation to the surface using water prior to applying materials
- All defective host substrate must be removed before application
- Defective material includes, cracked or structurally weakened surfaces
- Host concrete must be roughened and aggregate exposed to ensure a good bond
- **The surface MUST first be primed with ACOUSLIME 001 Bond Primer**
- For Chloride contaminated concrete, a concrete corrosion expert must be consulted.

Water Ratio Limits per 20 Kg Bag

5.0 – 5.4 litres for Trowelable mix

MIXING INSTRUCTIONS

- Place 80% of the water into the mixing container
- Slowly add 70% of the powder to the mixing container & mix for 1 minute
- Add the final 20% of the water to the container
- Slowly add the remainder of the powder to the container
- Mix for 3 minutes or until uniform

APPLYING MIXED MATERIAL

- Application Thickness 1mm to 30mm
- Do not exceed the recommended thickness in any layer
- Coverage - 2 kg covers 1 square metre at 1mm of thickness (approximately)
- Do not mix more material than can be placed in 15 minutes
- Apply small amounts of mixed material into the surface and trowel to a smooth finish

PLEASE NOTE: Cementitious products should not be mixed if the temperature is expected to exceed 30 °C and or change in temperature exceeds +/- 12 °C

Self Levelling Cement can be pumped please refer to the TDS on our Website

Mixing time	3 to 4 minutes
Walkable hardness	4 hours approx

STEP 5 - Acouslime timber flooring adhesives with Moisture Vapour Barrier

Please read in conjunction with the TDS's and SDS's on our website

Acouslime 3 in 1 Timber Flooring Adhesive

with Moisture Vapour Barrier to 85% RH and Stabiliser **Available in 16kg Tubs**

Acouslime 4 in 1 Timber Flooring Adhesive

with Moisture Vapour Barrier to 85% RH, Acoustics (rated to 43dB) and Stabiliser
Available in 16kg Tubs

SURFACE PREPARATION

- Prior to installation of the timber flooring, all substrates including concrete slabs and cured floor levelling compounds, must be clean, and dust free, with no traces of waxy residue, oily substances, grease, coatings or residues of acid or basic detergents due to cleaning.
- The Substrate should be free of powder and sound structurally, no flaking or loose material.

PLEASE NOTE: Surface preparation, cleaning and careful drying is essential for the adhesive to form a strong lasting bond with the flooring substrate. Pre-Adhesion tests are strongly advisable before proceeding. Application of Solid and Engineered timber flooring must be installed to manufacturer's instructions and adhere to ATFA industry standards.

Trowel size required

Acouslime 3 in 1	4mm V Notch Trowel to achieve Moisture Vapour Barrier	13 -14m² per 16kg Tub
Acouslime 4 in 1	5mm V Notch Trowel to achieve Acoustics* and a Moisture Vapour Barrier *Rated 43dB by Acoustic Engineers	9 - 10m² per 16kg Tub

* Based on test results with different scenarios please call if you would like copies of the reports

APPLICATION

Once the tub has been opened, remove the aluminium foil covering the product and set aside, to reuse later if required.

- Apply AcouSlime Adhesives with the correct trowel (3 in 1 and 4 in 1 are different) as shown in the table above, distributing it evenly to obtain a good 'wetting' of the surface.
- Proceed with laying the timber flooring within 60 minutes of application to the substrate. A full bed that is correctly applied, will provide Moisture Vapour Barrier protection based on the subfloor moisture levels provided above. Acouslime 4 in 1 has the additional benefit of also being acoustically rated when a 5mm V Notch trowel is used.

STEP 5 - Acouslime timber flooring adhesives with Moisture Vapour Barrier (Continued)

Please read in conjunction with the TDS's and SDS's on our website

Acouslime 3 in 1 and 4 in 1 Timber Flooring Adhesives

APPLICATION - Continued

- Position the timber flooring in place with the necessary pressure to ensure good contact between the timber flooring and the adhesive. Leave a border of at least 10mm between the timber flooring and the wall; or the requirement indicated by manufacturer's installation instructions for timber flooring being used.
- Monitor trowel angle and wear to ensure the application rate is maintained.
- Any excess adhesive on the top of the boards should be wiped off thoroughly as you go with a water dampened cloth. (pH neutral) Any residue can be peeled off when dry, however this may be more time consuming, taking longer to complete the job.
- In the case of partial use of a tub, cover the adhesive using the aluminum foil that was set aside, ensuring it adheres to the product and firmly close the tub lid. The tub must be used up generally within a week, once opened.
- The product must not be diluted in any manner.
- Application conditions - Ambient Temperature; apply at a temperature between 5°C and 40°C. The optimal temperature is between 15°C and 25°C.
- Ambient Humidity Apply at a humidity between 40% and 80%
- Cleaning of equipment - When the adhesive has still not hardened, it can be removed from the trowel using some paper or a wet cloth. Once it has hardened, then removal must be effected mechanically.
- Disposal - When the product has cured it can be disposed of into regular waste due to its non-toxic composition.