
ECO OUTDOOR INSTALLATION TIPS

FLOORING
TECHNIFIRMA™

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FLOORING • WALLING • FURNITURE

LOS ANGELES • SAN FRANCISCO
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Installations Tips

Please note these tips are guides only and should be used in addition to the relevant Australian Standards for trade practices. Note that installation may vary from site to site with varying conditions experienced on that site (i.e. Soil conditions, pool surrounds, driveways, wet areas etc.). The contractor and specifier should decide if these suggestions are suitable for their application or require further adjustment. A site sample of the proposed method of installation should be completed to ensure that this method is appropriate for the site conditions. These tips are given in good faith and to the best of our knowledge and experience at the time of printing. In no way do these tips replace the services of professional contractors and/or consultants.

There are two recommended installation methods for this range; raised laying with support (pedestal systems) or, laying on a screed with adhesive.

i) Raised Pedestal Systems

This is a method where tiles are laid over a suspended sub-structure, typically used as pedestals. It is a solution often used on balconies and terraces where you do not want to pierce a sub-structure/membrane.

Raised flooring technology is composed of a load-bearing structure with adjustable supports combined with balance accessories, which together help in absorbing expansion and structural movement.

There are various pedestal models available from a range of suppliers. It is advised you work closely with the engineer, builder and chosen pedestal supplier on your specific project for correct installation method and tools.

ii) Adhesive Installation

This is the ideal laying solution for areas frequented by a large number of pedestrians or high vehicle traffic (driveways, car parks, garage ramps), as the laid surface is extremely resistant to both dynamic and concentrated loads.

Foundations/Substrates

For an area to be successfully tiled, the substrate or foundation preparation is very important and is the first element to influence the end quality of the flooring. This is because the sub base or 'laying support' carries out a number of functions in protecting the surface layer of the Stone. For these stones we recommend the following:

Pedestrian traffic only: reinforced concrete 75mm thick.

Vehicle Traffic: Reinforced (F72 mesh) concrete base 100mm thick min. 25MPA

** Engineer's advice should be sought in the design of all concrete.

Contractors should also consider drainage and/or waterproofing issues to minimise the risk of rising humidity, which can bring salts contained in the soil or in the bedding layers to the surface.

Slope

When dealing with outdoor flooring, special attention must be paid during planning in order to respond adequately to rainwater run-off. This is done by dividing the floor field into different drainage surfaces if necessary and giving them effective slope and perfect levelness. This will avoid trapping water and moisture on the floor surface

since they cause undesirable and unsightly effects due to rings, saltpetre efflorescence and dirt build up. The following slopes are recommended:

Small flooring surfaces: gradient > 1%

Large flooring surfaces: gradient > 2%

Control Joints

Control joints are recommended for the substrate (concrete sub base). The joints in the concrete base should be continued through the mortar bed and grout joint.

Control joints help absorb variations in the flooring caused by temperature swings and other movement in the sub grade, concrete base, mortar or actual tile itself. In addition to structural concrete joints, tiled surfaces should also include appropriate control joints every 20m² that penetrate through tile and the bedding mix, but not through the concrete substrate. Generally, the overall floor field is divided into compartments where technical expansion joints are set out in a crosswise and/or longitudinal direction (minimum 5mm joints every five meters).

Use of control joints will greatly reduce the chance of unsightly surface cracks appearing.

Storage

Ideally store crates indoors away from direct sunlight and rain and on a level surface. Do not stack crates on top of one another.

Waterproofing/Membranes

Drainage design and waterproofing should be considered prior to installation as part of a broader 'moisture management plan'. To assist in dealing with efflorescence and other moisture related issues, we recommend coating the substrate (ideally the bedding screed) with a waterproofing compound/membrane prior to tile installation. Examples are Mapelastic Smart (Mapei helpline 1800 652 666) or Hydro Ban (Laticrete helpline 1800 331 012).

Selection of adhesive for bedding tiles

We recommend using synthetic tile adhesives, to bed tiles. Research and development of adhesives are continually improving. There are many reputable companies with a wide range of products available. Examples are Mapei (p: 1800 652 666) and Laticrete (p: 1800 331 012). It is essential to follow manufactures instructions.

In certain environments, fast setting tile adhesives (such as Granirapid by Mapei) should be used.

Laying

General tips in working with adhesives are as follows:

1. Prepare a sub floor (screed) that is perfectly flat to make it easy to keep the material elements level with each other, since only a thin (5-10mm) layer of adhesive is used (therefore offering very little laying tolerances).
2. Clean the laying surface (remove debris, dust oil etc), once the screed is completely dry.
3. Prepare a uniform layer of adhesive using a notch trowel 8-10mm thick, and back butter the base of the tile as well.
4. Lay tile elements so the timing corresponds to the drying time required for the adhesive used, without letting the glue create a film due to prolonged exposure to air. It is recommended to check the tile has adhered correctly to the glue layer when laying.

5. Consistent open joints should be allowed for at a minimum 3mm spacing.

Laying Advice

1. It is advisable to create the appropriate transverse and longitudinal gradients during levelling to allow for optimal drainage.
2. The incorporation of a drainage substrate is recommended in order to facilitate runoff and prevent water pooling.

For site specific requirements we suggest you contact Mapei p: 1800 652 666 or Laticrete p: 1800 331 012

For all laying techniques, we recommend that after an area is laid it should not be loaded for a period of time to enable the bedding layer to strengthen. Pedestrian traffic: 2 days Vehicle Traffic: 2-3 weeks.

Cutting

Ideally it is recommended that cutting be done using a bench saw with a wet diamond blade. The stone should be washed immediately after it is cut to avoid cutting paste drying and staining the surface of the product.

Grouting Compound

It is recommended to use a high-grade pre-bagged grouting compound that is suitable for the application.

Grouting Methods

1. Dampen grout joints and tile with a sponge
2. Place grout into joints, ensuring no voids, to the full depth of the paving stones
3. Remove any excess grout with a trowel
4. Sponge clean the paving surface with water, ensuring all excess grout has been removed.

Cleaning

The surface should be cleaned when grouting material has set. Cleaning will enable any grouting residue to be removed.

1. Sweep excess dirt from surface.
2. Use a pH neutral cleaner and apply to surface in liberal quantities and in manageable sections.
3. Gently agitate the surface with a stiff broom and/or nylon pad (such as Doodlebug by 3M).
4. Remove residue from surface with a wet-vac or squeegee.

It is important that no acidic cleaners are used.

Using a cleaning and sealing professional may be appropriate to achieve best results.

Anti-Slip Treatment

You should consider anti slip treatments depending on where your tiles are being installed and other site considerations. Please refer to our technical details for indicative testing data. There are many reputable companies working in this area such as Cyndan (www.cyndan.com.au) and Dry Treat (www.drytreat.com.au).

Acceptable Characteristics

Variation in colour and/or surface finish may occur from tile to tile. We suggest blending tiles from all pallets delivered whilst laying as it is the responsibility of the user to inspect tiles prior to laying. Minor marks and small chipping are not structural and therefore not considered defects. Any tile with excessive chipping or variation in thickness and dimension prior to laying, may be subject to a warranty claim.

Given the very low water absorption rate of this product, localized pooling of water can occur even if the tiles are laid properly.