

Ecoflor[®] MicroConcrete Flooring Application Procedure

Application Instructions for Ecoflor[®] MicroConcrete on Internal Flooring & Other Horizontal Surfaces



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Concrete Services Group Pty Ltd - September 2023.

1. Purpose:

This guide is intended to provide basic instructions for the application of Ecoflor® MicroConcrete to simulate a Burnished Concrete Floor, Polished or with a raw industrial look. A three-dimensional surface that reflects both the light and dark shades of the same colour. A trowelled method used on existing flooring surfaces on internal or external flooring, and other horizontal surfaces such as benches, stair treads and landings in commercial and residential buildings.

2. Introduction:

Ecoflor® MicroConcrete Flooring System includes a white cementitious base coat; 600 Cement, a white cementitious 2nd coat; 300 Cement, and a white micro-fine polishable cementitious finish coat; Micro Cement, for trowel application on interior flooring surfaces. The white cementitious materials may be coloured during the application using Ecoflor® Liquid Colour Pigments. Developed in Australia by Concrete Services Group Pty Ltd as an economical alternative to transform existing plain surfaces. The surface on which Ecoflor® MicroConcrete is to be used must be structurally sound and should only be selected based on suitable conditions to provide an acceptable surface which will aid the serviceability of the resurfacing system during its design life.

3. Description – Concrete Resurfacing:

Ecoflor® MicroConcrete coating system is 1mm thick and applied on existing hardened surfaces, such as existing floors. The cementitious based polymer modified cement blend, has been designed for absolute ease of application. A professional flooring expert is not needed to install it, anyone good with a trowel or competent at DIY could easily give it a go.

The most important thing to remember is that the surface to which you are going to apply the Ecoflor® MicroConcrete Flooring System has undergone proper preparation and has floor design in place.

4. Assessment of the Substrate:

Ecoflor® MicroConcrete can be applied to most flooring substrates including Concrete, FC Sheet, Chipboard Panels and Tiles. Each of these substrates have their own preparation method, which need to be followed for each individual substrate type. This guide solely covers the application process of installing Ecoflor® MicroConcrete to the properly prepared substrate and does not cover the preparation methods for each individual substrate type. (Acceptable substrates are cleaned concrete or newly placed cementitious levelling compound)

For information and instruction on preparation of various substrate types, please contact Ecoflor on 1300 326 356 or sales@ecoflor.com.au

The existing substrate needs to be structurally sound without unacceptable cracking or stepping between the panels and without obvious defects such as Concrete Spalling or laitance (a soft powdery surface) likely to affect serviceability or design life expectations of the Ecoflor® Micro Concrete Flooring System. Existing foreign matter such as tile or vinyl adhesives on floors, paint or sealer compounds must be capable of being completely removed and the surface must be capable of being completely and thoroughly clean of contaminants before acceptance of the Ecoflor® MicroConcrete resurfacing method.

Basic Equipment Requirements for Ecoflor® Micro Concrete Method:

- High Torque Power Drill – geared for variable speed and of good quality.
- Metal Paddle Stirrer – purpose made for mixing low viscosity cements.
- Plastic Measuring Jugs and buckets – capacity from 1 litre to 20 litres.
- Trowels & Squeegee – Magic Trowel recommended for base coats application.
- Floor Sander – Floor Scrubber with sanding screen attachment and orbital sander.
- Dust Extraction – Suitable vacuum machines to attach to sanding equipment.
- Paint Brushes and paint rollers – 10mm Microfibre nap roller.
- Squirrel Mixer – Attach to cordless drill for mixing sealer.
- Safety PPE – Gloves, Dust Mask, Goggles and Work Boots.

Basic Consumable Requirements for Ecoflor® Micro Concrete Method:

- 50mm Masking tape – Painter's grade.
- 50mm Cloth Tape – High strength liquid impermeable.
- Rags – Disposable

Ecoflor® Floor Products:

Ecoflor® 600 Cement 15kg (the material is in a bag within this bucket, use the bucket to mix your products)
Ecoflor® 300 Cement 15kg (the material is in a bag within this bucket, use the bucket to mix your products)
Ecoflor® Micro Cement 10kg (the material is in a bag within this bucket, use the bucket to mix your products)
Ecoflor® Concrete Modifier
Ecoflor® Liquid Colour Dispersion 200ml
Ecoflor® EcoCoat Floor Sealer 5L Kit



The following steps provide details instructions on:

- Step 1: Surface preparation
- Step 2: Mask adjacent structures
- Step 3: Applying the primer coat; Concrete Modifier
- Step 4: Mixing and applying the base coat; 600 Cement
- Step 5: Preparation for applying the second coat
- Step 6: Mixing and applying the second coat; 300 Cement
- Step 7: Preparation for applying the final coat
- Step 8: Mixing and applying the final coat; Micro Cement
- Step 9: Preparation for applying the seal coats

Prior to coating the surface, we strongly recommend trialling your technique and getting familiar with the materials with a practice run. A piece of cement sheeting is perfect for this. Create the finish that you plan to achieve and practice until you can do it. Then go and coat your floors and have fun.

LET'S GET STARTED: Step 1. Surface Preparation:

All surfaces must be clean, structurally sound and free of dust, moisture, oils and other surface contaminants. Clean concrete and other types of cementitious surfaces are best for the application of Ecoflor® MicroConcrete, Seek technical advice from Ecoflor®.

Step 2. Mask Adjacent Structures:

Dismantle internal doors and remove from the area, if applicable.

Apply 50mm painter's grade masking tape along adjacent vertical surfaces eg. Architraves, skirting boards, kitchen joinery, slide door rails and horizontally on adjacent flooring. Ensure that masking is applied flat and pushed neatly into internal corners. Follow by applying 50mm cloth tape (high strength) directly over the top of the Painter's grade masking tape. Cover and protect any other horizontal surfaces.

Step 3. Applying The Primer Coat:

Use Ecoflor® Concrete Modifier mixed with clean water at a ratio of 1:1 (mixed). Apply to the surface as though painting with a brush or roller. Spread evenly with a full coverage. Broom application is best in a circular motion. Do not allow to pool. Let it thoroughly dry.

Step 4. Mixing and applying the base coat; 600 Cement

The intended purpose of Ecoflor® 600 Cement with coarse aggregate is to produce a tough surface. It is applied as the base coat with a trowel method. Using this method, a 15KG bucket of 600 Cement can cover well over 12m² or 0.8m² per 1Kilo. Only mix enough 600 Cement that can be comfortably trowelled out and applied in around 30 minutes. On warmer days this time is reduced.

1st mix the modifier with water 1:1 or 50/50

Mix ratio of water and modifier for 15kg of Ecoflor® 600 Cement -1.8 litres of Water mixed with 1.8 litres of Ecoflor® Concrete Modifier. Mix the water and modifier and lightly blend. Shake well your Liquid Colour Pigment and add to the water and modifier mix (Use 1 premeasured 200ml container per each 15kg bucket of Ecoflor® 600 Cement

Slowly add 15kg Ecoflor® 600 Cement powder whilst continuing to mix (using your High Torque Power Drill with Metal Paddle Stirrer)

Continually blend the mix while adding the Ecoflor® 600 Cement powder until a creamy mix is achieved. Scrape the sides of the bucket to remove any unmixed dry powder. Mix consistency should achieve a state of flow that can be readily trowelled and spread evenly on to the floor. We recommend applying to whole floor at one time, so mix enough for that area using the ratios provided. If you are not mixing the whole 15kg, use about 250ml of your liquid which you have mixed (modifier, water & colour) per 1 Kilo of powder, get a consistency that works well with your tools and environment. 1kg should cover around 0.8m² if applied at 0.6mm thick.

Apply the mixed material to the floor using the preferred application tools ensuring complete coverage of the area and uniform thickness. Trowel flat any ridges and use a random trowel pattern (not radial motion) as the trowel pattern may become visible upon completion. Avoid any unnecessary build up particularly along edges and internal corners.



Special Precautions: Mixing processes and application procedures will require modification on days of high ambient temperatures and/ or low humidity and general difference in environmental conditions between summertime and wintertime.

Technical advice from Ecoflor® about product precautions and limitations and control of workmanship procedures in such conditions is recommended.

Allow to completely dry.

Step 5: Preparation for applying the second coat 300 Cement.

Using a floor sander or scrubbing machine with a sanding screen attachment and dust extraction. Sand over the whole floor (dried base coat) with 80-100 grit sandpaper to remove superfluous knobs and excrescences. Hand tools will be required to sand small areas and along edges and corners.

Sanding method will vary depending on the size of the job.

E.G a small area can be sanded with an orbital sander or with a handheld sander block.



Mix and Apply Primer Coat - Ecoflor® Concrete Modifier. 1 part modifier: 1 part water. Blend the adhesive mix with a purpose made paddle attachment to an appropriate power drill. Once mixed, apply the adhesive to the surface using a broom or roller, ensuring an even coverage of the contents. Allow to dry.

Step 6. Mixing and applying the second coat; 300 Cement

The intended purpose of the Ecoflor® 300 Cement with superfine aggregate is to produce a smoother surface. It is applied to the base coat in a thin coat with a trowel method. Using this method, a 15KG bucket of 300 Cement can cover well over 15m² or 1.5m² per 1Kilo. Only mix enough 300 Cement that can be comfortably trowelled out and applied in around 30 minutes. On warmer days this time is reduced.

Apply 300 Cement by trowel on method. We recommend a thin trowel application for the second coat to limit visible surface imperfections and trowel lines.

1st mix the modifier with water 1:1 or 50/50

Mix ratio of water and modifier for 15kg of Ecoflor® 300 Cement -1.8 litres of Water mixed with 1.8 litres of Ecoflor® Concrete Modifier. Mix the water and modifier and lightly blend.

Shake well your Liquid Colour Pigment and add to the water and modifier mix (Use 1 premeasured 200ml container per each 15kg bucket of Ecoflor® 300 Cement.

Slowly add 15kg Ecoflor® 300 Cement powder whilst continuing to mix as before. **Apply to the surface as before and allow to dry.** 1kg should cover around 1.5m² if applied at 0.3mm thick.

Step 7: Preparation for applying the final coat.

Repeat step 5. Include sanding and priming as before.

Step 8: Mixing and applying the final coat; Micro Cement

The intended purpose of the Ecoflor® Micro Cement is to produce an ultra-smooth surface. It is applied to the base coat in a thin coat with a trowel method. Using this method, a 10KG bucket of Finish Coat can cover well over 20m² or 2m² per 1Kilo. Only mix enough Micro Cement that can be comfortably trowelled out and applied in around 30 minutes. On warmer days this time is reduced.

Apply Micro Cement by trowel on method. We recommend a thin trowel application for the final coat to limit visible surface imperfections.

Mix Micro Cement – 1.5 litres of Water to 1.5 litres of Ecoflor® Modifier and lightly blend then add the colour and mix well to disperse colour pigments. Slowly add 10kg Ecoflor® Micro Cement.

Continually blend the mix while adding the Micro Cement. Mix consistency should achieve a state of flow that can be readily trowelled onto the surface without segregation of materials.

Important Warning:

Do not add any liquid to unstiffen if the mix is curing or setting in the bucket, (doing this would change the colour) just remix with the mixing paddle to soften the mix.

Apply the mixed Micro Cement to the floor using the steel trowels, ensuring complete coverage of the area and trowel on tightly avoiding surface texture. Avoid any unnecessary build up particularly along edges and internal corners.

Allow to dry.



Step 9: Preparation for Applying the Seal Coats:

Commence by removing all masking tape. Using a steel spatula, shave and knock down any build-up of dry material along edges and internal corners, if any.

Using a floor sander or scrubbing machine with a sanding screen attachment and dust extraction. Sand over the whole floor with 100 -120 grit sandpaper to remove superfluous knobs and excrescences. Hand tools will be required to sand edges and corners. At this stage give the floor minimal sanding. Over sanding will polish the surface and reveal too much movement on the surface.

Vacuum all dust and debris completely.

Sanding grit will vary depending on the desired outcome of the finished sheen.

E.G a higher grit sandpaper can be used to achieve a higher polished surface. (Not recommended)

Application of Clear Sealing Compound:

The intended purpose of sealer application to the completed works is to aid curing that promotes durability and stain resistance of the hardened Ecoflor® MicroConcrete coating, and to aid normal surface cleaning maintenance by flooring owners.

Application: We recommend 3 coats of Ecoflor® EcoCoat Matt sealer. Follow the instructions on the Technical Data Sheet of your chosen sealer type.



Materials Safe Handling Advice:

Concrete Services Group Pty Ltd provides Materials Safety Data Advice including recommended personal protection equipment (PPE) where required for products produced and/or marketed by Concrete Services Group Pty Ltd in compliance with Work Cover. This information is available with product purchases for reference to end-users.

Normal Maintenance Requirements:

Flooring owners are required to upkeep a reasonable standard of maintenance of the finished work to ensure an acceptable probability of serviceability and durability.

Principles of normal maintenance with respect to residential flooring are advised in **Maintaining Your New Ecoflor Micro Concrete Floor** document – and must not preclude routine cleaning of the decorative surface including regular removal of spillages and general sweeping of the floor etc to preserve decorative appearance.

Eco-Friendly wash out buckets after use and either reuse them for other purposes or recycle them appropriately.

Product Manufacturers Disclosure:

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