



Mondéco Crystal

Application instructions

Preparation/Substrate

Surfaces to be coated should be sound and provide adequate strength for the proposed end use. The surface profile and levels should be appropriate for the system to be applied. Substrate humidity must not exceed 100% RH (surface dry).

Blasting, scouring or diamond grinding removes laitance. Irregularities, damage and cracks can be filled with epoxy screed (e.g. Flowtex F1 Mortar) or levelled with an epoxy cement scratch-coat (e.g. Flowcem DPM).

All mobile joints must pass through the coating and must be sealed tight. Anchor grooves must be cut on both sides of such joints. Welded joints and cracks in the concrete may be coated, but if movement occurs the coating will also crack.

All residues must be removed to provide a dry, dust free open textured surface. The surface profile and levels should be appropriate for the system to be applied.

Contact us for advice if there are impurities, such as oils etc., in the concrete. Follow our instructions for connections to grid drains, cesspools, pipes and pipe inlets.

Sealing of Concrete Surface

Prime using **Flowprime** in order to fully seal the prepared concrete surface.

When mixing **Flowprime**, pour all of Hardener B into the Base A container. Mix using a slow speed rotary mechanical mixer and helical spinner until a homogenous mixture is obtained. Avoid entraining too much air. Immediately after mixing, pour out all of the resultant mixture onto the floor surface and spread quickly using a double-lipped rubber squeegee and/or roller. Ensure that the primer permeates any surface irregularities.

Whilst the primer is still wet scatter the surface with 1.1mm silica quartz.

Allow the primer to harden until the surface can be walked on, approximately 15 hours at 20°C. At lower temperatures the hardening time is longer. It is critical there are no dry patches after priming.

Sweep and vacuum up all excess unbound silica quartz.

Consumption of primer:	approx. 0.3 kg/m ² (depending on porosity and texture of surface.)
Consumption of silica quartz	approx 0.5kg/m ²



Mixing Mondéco Crystal

Mondéco Crystal is supplied in a 4 pack format.
Base A, Hardener B, Filler C, Filler D (GLASS)

Check that the batch numbers of the coloured components are the same for the entire surface. Remember, never split batches/components. Incorrect mixing ratios or poor mixing can result in irregular hardening or variations in colour, etc.

Stir or shake Base A to re-disperse any settlement during transport or storage. Pour all of the Base A and Hardener B into a clean, dry, suitably sized forced action mixer (e.g. Pan Mixer 30L mix size). Mix for 20-30 seconds until homogenous. Add the Filler C, followed by Filler D component to the mixer and mix for **3 minutes**, ensuring that all fillers and resins are scraped into the mix from the sides of the mixing vessel.

The mixing time is critical to ensure that a homogenous mix is obtained.

Notes:

A larger forced action mixer can be used for mixing multiple units. However, the speed of application must be increased to compensate for the mix quantity and the critical mix times detailed above must be observed.

Before the next mix, scrape out any residual material from the mixing vessel and dispose of before starting the next mix; otherwise the working time of the following mix could be reduced.

Remember never attempt to proportion the resin and hardener components.
Incorrect mixing ratios or poor mixing can result in irregular hardening or variations in the final finish.

Application of Mondéco Crystal

Pour the material into a screed box (laying box) that is set to the correct depth to give the required thickness (confirmed by measuring the coverage rate of one unit). Pull the box slowly (across the width of the area to be applied) allowing the material to flow from the bottom of the box and achieve consistent coverage. The surface can then be compacted and finished with a trowel.

Alternatively, the mixed product can be poured out directly to the floor, spread to the desired thickness and finished with a trowel.

Maximum application width is determined by material and ambient temperature conditions, which affect the working life of the product and determines the speed of installation/man power.
Finishing must be completed as quickly as possible and within 10 minutes after the material has been applied.

As a guide (for substrate and material temperatures up to 20°C) a competent team of 4-5 men could lay a maximum bay width of 10m. At higher temperatures the bay width should be reduced by up to a half.

The thickness is guaranteed by measuring, and checking how much material has been used (every 50m²).
Consumption Mondéco Crystal 10mm: 20kg/m²

Allow the product to harden until the surface can be walked on (approx. 16 hours at 20°C). At lower temperatures the hardening time is longer. The ambient humidity during application and cure must not exceed 85% RH.

Mondéco Crystal can be applied in layers 8-12mm thick.

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During prolonged interruptions in work the seam is placed where it is least visible e.g. along drains or door openings etc.

Moulding

As it is possible to combine different colours or designs on the same floor surface, the boundaries between the colours should be set up using strips. These boundaries can be either permanent (e.g. stainless steel, marine brass, aluminium or plastic) or temporary (e.g. wood).

The height of the strips from the sub-floor must correspond to the thickness of the Mondéco before grinding, typically the strip must be 1mm less than the final thickness, because the sub-floor is generally not perfectly flat and the strips sit on small particles when fitted i.e. 5mm strip for a 6mm installed thickness, which is then ground to 4 mm.

The moulding should be installed prior to primer application, any primer and 1.1mm scatter sand must be removed from the top of the moulding by wiping. This must be done whilst the material is still wet.

Grinding

Depending on the temperature in the location, grinding may begin after 48 hours cure/hardening. Grinding should be done using a diamond grinding machine with suitable diamond or abrasive heads. The initial grinding is commonly a dry process and wet for the final stages.

The initial grinding process utilises coarse abrasive heads to remove the top surface layer and expose the aggregate. This is followed by successively finer abrasive heads to remove the scratches generated on the first cut.

Suggested grinding stages:

First Cut	(25/40# diamonds in metal)
Second Cut	(60/80# diamonds in metal)
Third Cut	(120/140# diamonds in metal)
Fine Polish	(150# diamonds in metal)

Polishing

Fine grinding segments should be used to polish off the grouted surface and not expose further pin holes.

Suggested polishing stage:

Fine Polish	(500# diamonds in metal)
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Alternatively use a fast pass with the 300# diamonds in metal before finishing with the 500#.

Second Fine Polish	(800# diamonds in metal)
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Clean surface thoroughly with a rotary scrubber and white (non marking) Scotch-Brite pads, then allow the coating to dry.



Grouting Pinholes

Thoroughly wash and vacuum clean the surface before applying **Thixogrout** to seal any holes/pin holes in the screed.

Make sure that the screed is dry before commencing grouting and ensure that any pinholes do not contain grinding dust.

Mix grouting materials using a slow speed drill and helical spinner until a homogenous mixture is obtained. Do not entrain too much air.

Immediately after mixing, work Thixogrout in using a rubber or steel spatula.

Work close to the surface so that no valleys or peaks remain in the material.

All excess material must be removed.

Note: If the grout is over-worked with a steel trowel, the grout will darken.

Grouting should be done in two applications (if necessary); once the first layer has set, apply a second (with a reduced amount if required) to fill any micro-pores that could have blown through the first application layer. Leave to harden for at least 24 hours before grinding/polishing.

Final Grind

Final grinding segments should be used to polish off the grouted surface and not expose further pin holes.

Remove grout residue with a fast pass of 200# resin diamond heads on triple head grinders and followed by:

Second Polish 400# resin diamond heads on triple head grinders

Fine Polishing 800# resin diamond heads on triple head grinders

Clean surface thoroughly with clean water, then allow the screed to dry.

Sealing

Before applying the topcoat remove all the loose particles. Carefully vacuum clean and ensure surface is dry.

Apply the Flowseal LS by roller with a short pile mohair roller to obtain a smooth surface structure.

Do not mix overlarge quantities of topcoat at any one time. If the topcoat starts to gel/harden during the application, this will result in an uneven surface finish. Do not mix more than can be consumed within 15 minutes.

Allow the sealer to harden until the surface can be walked on, approx. 15 hours at 20°C. At lower temperatures the hardening time is longer.

Buffing (Kwikshine)

Kwikshine is applied in multiple coats; ensuring that the floor is clean and dry before application.

Pour the Kwikshine into a bucket or tray, place a clean new mop (high quality micro-fibre flat mop head) or applicator into the polish and lightly squeeze out the surplus (excess polish will leave a grainy finish on the surface).

Apply the first coat (thinly and evenly) in one direction (e.g. West to East) over the total area of the floor. Allow to dry for approximately 1 hour.



Apply the second coat (thinly and evenly) at right angles to the first (e.g. North to South). Leave a gap of approximately 150cm (6") from the skirting board or wall (on this and any further coats of polish) to avoid a build up.

Allow to dry for 1 hour and buff using floor polisher using white buffing pad.

Note:

- Always apply polish with a new, clean or specially designated mop or applicator.
- Do not use a mop which has been used for other purposes such as polish stripping.
- Any polish left in a bucket or tray should be discarded and not returned to the container, as this will contaminate the remaining polish.

Repairs/Restoration

In the case of major damage, the entire area to be repaired should be stripped to the concrete substrate and then primed before the application of a fresh Mondéco layer (as described previously).

Surfaces that require freshening up (or light surface blemishes) may be repaired by re-grinding, grouting and polishing (there may be a slight colour difference after repair).

Note that:

Flowcrete products are often multiple-component systems. Poor mixing, or incorrect mixing procedures, can result in irregular and incomplete hardening, which in turn can result in an inferior final result.

The temperature should be over 15°C to achieve the best results during application. The temperature of the substrate should be at least 10°C, although a temperature of 15-25°C is recommended. Conditions of high humidity combined with sudden falls in temperature should be avoided during the cure period as this can lead to condensation effects and prevent the product from hardening. The temperature of the substrate should exceed the "dew point" by more than 3°C during application and hardening.

The product should be stored in such a way that the temperature is the same as the room temperature where the product is to be applied, i.e. between 15-25°C. This improves the mixing, flow, penetration and hardening of the product.

Application temperatures can affect the workability of the product. At temperatures below 15°C, the Filler C component can be reduced by a maximum of 10% by weight to improve the fluidity.

It is important that the material is kept warm, to maintain its fluidity. It is also necessary to warm up the filler component; otherwise it will act as a heat sink and cool down the mixture.

The surface can normally be walked on after approx. 15 hours at 20-25°C. Complete hardening takes 5-7 days.

Grout should not be applied in thicker coats than specified because the cure (hardening) can be impaired.

There are often several types of products at a workplace. Sort the products separately to avoid mistakes.



Consumption of Materials

Flowprime	approx. 4m ² /ℓ
Silica Quartz	approx. 0.5kg/m ²
Mondéco Crystal	approx. 20 kg/m ² (for 10mm)
Thixo Grout	approx. 0.15 kg/m ²
Flowseal LS	approx. 0.1 kg/m ²
Kwikshine	approx. 0.02 kg/m ²

Cleaning of tools

Clean tools directly after use with soap and water.

Any recommendation or suggestion relating to the use of the products made by Flowcrete SA (Pty) Ltd whether in its technical literature, or in response to a specific enquiry, or otherwise, is based upon data believed to be reliable, however the products and information are intended for use by Customers having requisite skill and know-how in the industry and therefore it is for the Customer to satisfy itself of the suitability of the products for its own particular use and it shall be deemed that the Customer has done so at its sole discretion and risk.