

CCS PATTERNED CONCRETE

March 2022

DESCRIPTION

CCS Pattern Concrete is new concrete which can be integrally coloured concrete or colour topped with CCS Colour Hardeners and textured to achieve the appearance of brick, slate, stone or wood.

PREPARATION

1. Place, screed and float concrete.
2. Request the concrete producer to supply a special pattern concrete mix. Such a mix will normally consist of a smaller aggregate with a maximum size of 10mm and may also include a retarder to allow more workable time.
3. Quantities of concrete ordered should be in proportion to the people available to lay it. For the second load, delay arrival so that you have sufficient time to complete the screeding and floating of the first load.
4. Using specially textured polyurethane mats creates the actual pattern impression. There is a variety of different textured mat designs available for applicators to purchase.
5. Each colour mat has its own unique texture and design so that a contrasting random and unique texturing effect is achieved across the concrete surface.

SET UP

Clear plastic should be used to protect brickwork, pipes and windows.

APPLICATION OF SURFACE COLOUR HARDENER

CCS Colour Hardener is specially formulated to colour and enhance the strength and durability of concrete. It should be applied to the surface of the concrete at a rate of 20kg per 10m² in three applications. Approximately 60% of the material should be applied in the first coat, 30% in the second coat and the remaining 10% is used to touch up any grey spots that may still remain.

The material should be applied in an even manner.

Ideally, trestles should be used so that the applicator can apply the CCS Colour Hardener evenly over all parts of the surface. Space limitations on the job site, however, may mean that the colour hardener is applied by hand from the perimeter of the concrete. If so, the contractor should cast the material by hand parallel to the surface. Do not cast CCS Colour Hardener in clumps.

1. Approximately 60% of the CCS Colour Hardener should be applied in the first coat.

The colour hardener should completely cover the surface.

2. This coat of colour hardener should be left on the surface to allow it to absorb the moisture from the concrete slab beneath it.

As the colour hardener absorbs the water, it will gradually darken.

3. When this occurs, the contractor should use a bull float to float in the first coat.
4. Only one or two passes should be sufficient to float in the first coat.

5. A second application of colour hardener using approximately 30% of the total amount is then applied to cover any remaining grey areas where the first coat missed.

6. The surface should then be steel trowelled. At this point the second load of concrete should be placed, screeded and floated.

APPLICATION OF INTEGRAL OR FULL DEPTH COLOURED CONCRETE

For commercial, high use area or where a contractor prefers less dust, order CCS integrally coloured concrete pattern mix from your concrete supplier. This is an alternative process to applying surface colour hardener.

APPLICATION OF RELEASE AGENT

When the first load of concrete has dried sufficiently to support the applicators weight, a release agent may be cast over the surface so that a thin but complete covering is achieved.

IMPRINTING THE TEXTURE

The texture mats are then applied to the surface.

1. To ensure an imprint is achieved the mats should be tamped using foot pressure, or if the concrete is harder, with a tamper.
2. All points of the mat should be tamped evenly to ensure even imprinting.
3. The floppy mat is bent to whatever extent is necessary to print in areas where the more rigid mat won't fit.
4. A small hand tool is used to flatten out any concrete squeeze ups that may have been caused by the two mats pressing against each other. A small roller is then used to smooth out the affected area.
5. It is important that too much pressure is not applied to the roller otherwise the release agent colour will be impregnated into the concrete leaving a stain where the roller was used. While one applicator uses the tools the other applicator in the team should be colouring and preparing the second load of concrete.
6. Ideally, 4-5 mats and a floppy mat should be used to enable the applicator to go from one side of the driveway to the other without having to lift the mats. Alternatively, use the larger Mega Mats with a feather edge for greater coverage at one time.

WASH DOWN

1. After the concrete has had sufficient time to cure, the release agent should be removed using water pressure. Ideally a minimum of three days should expire from the completion of stamping to the time of release agent removal. This period may need to be extended in colder climates.
2. Three main methods of release agent removal are used – either using a rotary floor cleaner, hose or a gurney water pressure cleaner.
3. The excess release agent should be first hosed off. Using the rotary floor cleaner, the operator then walks at a brisk speed to remove the topcoats of release agents.

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4. The operator can control the amount of contrasting colour (or Release Agent) that he has into concrete by limiting or extending the period that the rotary scrubber is used.
5. If the scrubber is not used, the release agent should be removed with water pressure. If the applicator wishes to remove even more of the coloured release agent, then they can mix a very mild solution of hydrochloric acid and water, (e.g. no more than one part acid to 20 parts water should be used). The concrete should be wetted first.
6. The applicator should then dip a brush or broom into the solution and then scrub the area where the release agent is to be removed. This should be immediately hosed again to ensure that the acid solution doesn't remove more of the release agent than is required.

SEALING

After a minimum of seven days, thoroughly wash the concrete, using a high-pressure water blaster and clean household water.

All concrete surfaces must be thoroughly dry before applying the sealer.

First Coat of Wet Look Sealer

Using CCS Solvent 100, thin the first coat of CCS Hi Build Enduro, CCS Hardseal Advance or CCS Hardseal Matt as per TDS.

These CCS acrylic sealer should be applied using a quality solvent resistant bristle broom head.

Allow a minimum of six hours between coats. For best results, allow 24 hours before applying the second coat.

Second Coat of Sealer

Stir thoroughly and apply as above, however thinning is not required.

Sealing with a Penetrating Sealer

Alternatively where a CCS Clear Liquid Release Agent has been used, a penetrative sealer such as CCS Stain Block or CCS Streetscape can be applied as per the TDS.

CLEAN UP

Wash all equipment thoroughly in CCS Solvent for solvent based sealers or water for water based sealers and allow to dry.

CURING

Curing time depends on the temperature. The sealer is usually touch dry in 20 minutes at 25°C. The concrete can usually be walked on after 24 hours. Allow seven days before parking on the coating sealers.

Final Protective Coat

Apply two coats of CCS Armourthane (20 litres), CCS Decrathane (20 litre kit) or CCS Rapid Floor Polyaspartic (20 litre kit) in accordance with the relevant Technical Data Sheets to obtain a smooth, easy to clean surface. Allow to dry for 72 hours before subjecting to pedestrian traffic and 7 days before vehicular traffic.

USER RESPONSIBILITY-PRODUCT SELECTION AND COMPATIBILITY

CCS warrant that their manufactured product is free from defects as well as being suitable for the purpose for which it is intended as long as it has been used and applied in accordance with the most current Technical Data Sheet from CCS.

In practice, differences in materials, substrates and actual site conditions require an assessment of product suitability for the intended purpose.

The user is responsible for checking the suitability of products for their intended purpose.

Further, combinations of products that form a total system are often required to service particular applications. Due to the multitude of products available to service an application, only products from the CCS system of products must be used in combination with this product to ensure it will be suitable for the purpose for which it is intended.

The product must also not be mixed or used in combination with any other product which is not a product supplied by CCS

For further information consult the Safety Data Sheet and read the product label carefully before use.

Safety Data Sheets are available from

www.concretocoloursystems.com.au or by calling 1800 077 744.

Please note: This is a guide only and not a guarantee of chemical resistance. Please contact our office for further information on individual application requirements.