

Concrete Colour Palette

Version VII

Lake Eyre Aerial Image

GENERATING GREAT PROJECT OUTCOMES

In partnership with leading concrete manufacturers and specifiers, CCS has provided the colour component to iconic projects around Australia since 1994. With excellent pigments and comprehensive technical support, concrete suppliers and specifiers know that they can rely on CCS to generate great project outcomes.

High strength pigments made to endure

Only high-tint strength, long lasting pigments are used to create CCS Pigment Concentrates.

CCS Pigments consist of blends of synthetic iron oxides, titanium dioxides, chrome oxides and cobalt aluminium with maximum resistance to UV light and the aggressive alkaline conditions in concrete. They are manufactured in accordance with a Quality System certified to ISO 9001 and conform to the relevant world standards for pigments.



Specify different surface finishes to create contrast and greater interest

A practical and cost effective way of creating greater contrast is to vary the surface finish in specific areas of the concrete slab.

The below photos depict a job where a single colour was used but with different surface treatments. The left hand photo is a Trowel finish whereas the right is an Exposed Aggregate finish. Removing 3mm of the surface layer of the concrete reveals the colour of the aggregates which significantly alters the final appearance.





TROWELLED SURFACE FINISH WITH CCS CARAMEL

EXPOSED AGGREGATE FINISH WITH CCS CARAMEL



Project completed with CCS Snow and Off -White Cement. Design by Architects H2O.



Protect and enhance your project with a CCS sealer



Where a raw or natural finish is desired, specify a *Penetrating* type Sealer

CCS Stain Block

For optimum penetration

This top of the range sealer penetrates deeply into the concrete pores to assist in repelling moisture, oil and stains. It is ideal for dense concrete surfaces as well as natural stone such as travertine, granite and sandstone.

CCS Stain Block Enhancer includes additives to provide a slight enhancement of the surface colour.

CCS Streetscape

This is a well-proven, water based sealer that provides oil and moisture repellance but at a more economical cost than Stain Block.

Depiction of the subtle effect that *Penetrating* sealers have on surface colour.



The above examples demonstrate the same coloured concrete before, (far left) and after treatment with each of the three types of penetrating sealers.

Surface-Coating Sealers

CCS Armourthane

A very tough, high solids polyurethane. It provides excellent wear and chemical resistance on all light commercial flooring type applications.

CCS Decrathane Gloss

A water based version of CCS Amourthane, with a reduced effect on surface colour enhancement.

CCS Hi-Build Enduro Acrylic Sealer

An all purpose sealer with good gloss retention. Best suited to residential type applications or on commercial jobs, where a low cost, but functional surface protection is required.





The above examples demonstrate the same coloured concrete before, (far left) and after treatment with each of the three types of surface-coating sealers.

The difference between *penetrating* and *surface-coating* sealers.

Penetrating sealers 'sink' into and cover the inside of the pores of the concrete.



MICROSCOPIC CLOSE UP OF CONCRETE SURFACE USING A PENETRATING SEALER

A surface-coating sealer covers the whole surface area.



MICROSCOPIC CLOSE UP OF CONCRETE SURFACE USING A SURFACE-COATING SEALER



CONCRETE COLOUR SYSTEMS. Rich pigment blends for full depth coloured concrete







How to order or specify your preferred colour



Step 1

Select a colour and communicate this to your builder or Concrete Placer. They will instruct their concrete supplier to order sufficient bags of the CCS colour for the size of your project.



Step 2

The necessary number of bags of the specified colour will be delivered to the concrete plant in readiness for addition to the concrete truck.



Step 3

On the day of concrete placement, the Concrete Producer will add the bags of pigment to the concrete truck at their manufacturing site. The coloured concrete will be delivered to your project site. The coloured concrete will be laid by your Concrete Placer.

Suggested Specification

Grey concrete is to be integrally coloured with Concrete Colour Systems CCS < colour name > by adding <1 or 2 > pre-formulated bags (refer to quantity nominated under colour swatch) per cubic metre of 25 or 32MPa concrete. Create surface texture using a broom (or nominate alternative finish). Cure with Australian Standards compliant CCS Slab Clad R curing compound or a used wet hessian cloth. At the completion of the curing period, remove dirt and remnants of the curing compound with CCS HD Degreaser. Rinse and allow the concrete to completely dry. **Application of Sealer** (Specifier to nominate if a penetrating or surface coating sealer is desired)

Coat concrete with < CCS Stain Block / Streetscape > penetrating sealer. (refer to sealer page and nominate your preferred sealer)

Alternatively Coat concrete with < CCS Hi-Build Enduro / Decrathane / Armourthane >

(refer to sealer page and nominate your preferred sealer)

For more information regarding the placement of coloured concrete, please refer to our 'Guidelines for Integrally Coloured Concrete', available at www.concretecoloursystems.com.au

surface-coating sealer.



Pathway completed with CCS Kalgoorlie



This project used a combination of CCS Grape, Obsidian and Pewter.

Variations between colour achieved on the job site versus the swatches

Due to the robust nature of laying coloured concrete on job sites, variations in colour between the enclosed swatches and the final concrete colour are to be expected. The enclosed swatches are accurate representations of mixing the CCS pigment with concrete made under laboratory conditions.

In contrast, when coloured concrete is placed on a job site, its final colour will be affected by the influence of the weather conditions (wind, temperature and rain); the concrete placement finishing practices; the level and consistency of water addition to the concrete mixture; and the subsequent impact of efflorescence.

Consequently, when it is essential that the final colour is to be determined before installation, a representative job site sample should be prepared prior to the start of the actual job.

The site sample should be created using the intended raw materials, finishing techniques and desired sealer by the preferred contractor. This sample should then be reviewed and approved once the sample has cured for 14 - 28 days.

Popular surface finishes for creating or enhancing the character and feel of decorative concrete.



ROCK SALT

A pitted or 'volcanic stone' look is created by adding 10mm grains of rock salt to the wet surface.



TEXTURED IMPRINT MATS

Large stamping mats that can be pressed into wet concrete to create unique patterns and designs.



COVING TROWEL

The use of a coving trowel to finish concrete creates an attractive and durable finish for areas requiring extra traction and a rustic look.



MACHINE TROWEL

A very smooth and burnished surface finish. This method can assist in creating an industrial theme, or faux aged appearance, with significant colour variations across the surface.



SAND BLASTING

Ideal for embedding symbols, logos or unique patterns, this method removes the top layer of the cured concrete to reveal a sandy finish.



HONED CONCRETE

The surface layer is removed with a grinding machine – typically in one to two passes, to provide a sandpaper type texture and appearance.



POLISHED CONCRETE

The concrete surface is subject to multiple passes with a polishing machine that results in an extremely smooth, glossy and reflective surface. Due to the smooth finish, it is only suited to inside applications.



SAW CUTS OR GROOVED LINES

Create geometric patterns with grooved joint lines in wet concrete, or by cutting the surface with a concrete saw once it has cured.



ARTISTIC CREATIONS

Objects such as plants can be placed in wet concrete and removed once it has cured, to leave beautiful base relief imprints.



BROOM FINISHES

Broom finishes create a textured, linear appearance for areas requiring additional surface texture.

Specify your preferred level of aggregate exposure

Colour dominated with partial Aggregate Exposure

CCS Reveal SB 1 enables the Concrete Placer to manipulate the surface finish so that the top 0.5mm to 1mm of the surface is removed to expose parts of the aggregates that lie beneath the surface of the concrete.



CCS Reveal SB1 for fine exposure depth of 0.5 to 1.0mm

Aggregate dominated with Colour forming the background

CCS Reveal 3-5 enables the Concrete Placer to manipulate the surface finish so that the top 3 to 5mm of the concrete surface is removed. With this technique the colour of the aggregates becomes the most noticeable aspect of the final appearance and the CCS Pigment provides the background colour effect.



CCS Reveal 3-5 for medium depths of aggregate exposure from 3 to 5mm.

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