#### Concrete Colour Palette 2014





CONCRETE

Better Colours, Outstanding Results

## **PROTECT AND ENHANCE YOUR INVESTMENT**

For long-term appearance retention, all decorative concrete surfaces should be treated with a CCS sealer product.



#### The Effect of Sealers on Coloured Concrete

The image above illustrates the effect of Penetrating and Film Forming sealers on the surface appearance of coloured concrete substrates.

#### A Curing Compound Made for Coloured Concrete

CCS Slab Clad R is formulated for use on coloured concrete and meets Australian Standard AS 3799.

It includes a special resin that is less prone to creating blemishing during the curing period. It is also designed to break down quickly under UV light, making it easier for after-trades to remove the remnants prior to sealing the concrete.



#### For Interior & Exterior Applications



#### **Penetrating Sealers**

Penetrating sealers infiltrate the concrete surface, forming a protective layer and making the internal concrete capillaries water and stain repellent.

They provide a clear, natural, 'raw' look for horizontal and vertical concrete, masonry and natural stone surfaces.

PENETRATING SEALERS	LOW VOC	GLOSS LEVEL	OIL RESISTANCE	GRAFFITI RESISTANT
CCS Streetscape	$\checkmark$	Natural	**	
CCS Stain Block		Natural	***	
$\star$ = Fair $\star\star$	= Good	***	= Excellent	







#### Film Forming Sealers

Film Forming sealers form a continuous layer over the top of the concrete surface, providing a rich 'wet' look while shielding the concrete from the ingress of dirt, moss and contaminants.

FILM FORMING SEALERS	LOW VOC	GLOSS LEVEL	OIL RESISTANCE	GRAFFITI RESISTANT
CCS Alfresco Seal WB	$\checkmark$	Satin	***	
CCS Decrathane (extremely durable)	$\checkmark$	Satin or Gloss	***	
CCS Armourthane (extremely durable)		Semi-Gloss	***	$\checkmark$
CCS Hi-Build Enduro		Gloss	**	

\star = Fair  $\star\star$  = Good ★★★ = Excellent



## GENERATING GREAT PROJECT-OUTCOMES

In partnership with the 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.

Please contact the CCS team if you require advice on any aspect of creating highly appealing decorative concrete.



#### **High Strength Pigments Made to Endure**

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

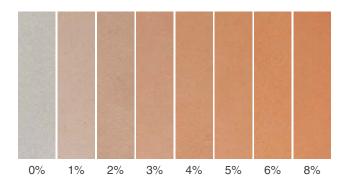
CCS pigments consist of blends of synthetic iron oxides, titanium dioxides, chrome oxides and cobalt aluminium with maximum resistance to UV light and the aggressive alkaline conditions in concrete.



## Handpicked Pigment Dose Rates to Provide Variety in Colour and Hue

The CCS Colour Palette provides a variety of colours and hues to suit the nuances of every project. Due to the grey colour of cement, lower dose rates are utilised to achieve an 'earthy' tone, while higher dose rates are incorporated to generate a rich colour result.

As a guide, concrete colour saturation is achieved where the weight of pigment (as a ratio of cement and fly ash), reaches 8%.



This chart illustrates the differences in colour that result from using the same pigment at different dose rates

#### Access Special Colours with CCS

The CCS colour lab specialises in developing custom concrete colours for architectural requirements. Simply forward us a sample of your desired colour outcome (such as a paint swatch, tile or paver), and our fully certified NATA laboratory will match it for you.

Due to production limitations, please note that there is a minimum order requirement of 500kg of pigment (suitable for approximately 400m<sup>2</sup> of concrete).



A sample draw from the extensive library of custom colours at the CCS Laboratory

## Specify CCS High Performance Blacks for Long-term Colour Intensity



Cool Blue-Black Tones

Warm Brown-Black Tones

CCS high performance blacks are available in both blueblack and brown-black tones, that are made from high tint strength, large particle, iron oxide pigments.

Due to their particle size, iron oxide black pigments become fixed within the concrete capillaries to provide ongoing colour intensity. CCS do not use fine particle carbon pigments that are known to leach from concrete over time (leaving a faded appearance).

Particle Size Comparison								
Large Particle Iron Oxide B	lack			K				
Fine Particle Carbon	0	50	100	150	200	250	300	A nanometer is equal to one millionth of a
nanometer nm		++++++		₩₩	╢╢	++++++	++-	millimetre

# **RICH PIGMENT**



#### Suggested Specification

Grey concrete is to be integrally coloured with Concrete Colour Systems < <u>insert colour name</u> > at the dose rate of \_\_\_\_\_% (refer to swatch) per cementitious content. 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 Degreaser. Rinse, allow to dry and then coat with CCS \_\_\_\_\_\_ penetrating or

CCS \_\_\_\_\_\_ film forming Sealer (refer to guidelines on opposite page to choose the appropriate sealer). All CCS sealers should be applied in accordance with the Technical Data Sheets, available at www.concretecoloursystems.com.au.

# **BLENDS FOR FULL DEPTH COLOUR**

CCS SUNDANCE	6%	CCS PEBBLE	3%	CCS BRAZIL NUT	3%	CCS CITRUS CREAM	3%
CCS GYPSY	8%	CCS POMPEI ASH	3%	CCS BILBY	3%	CCS ECHIDNA	3%
CCS CARAMEL	4%	CCS DROVER'S DUST	3%	CCS FLAMINGO	3%	CCS IGUANA	3%
CCS KALAHARI	3%	CCS LIZARD SKIN	6%	CCS MULBERRY	4%	CCS RHINO	3%
CCS PRAIRIE	3%	CCS WALNUT	6%	CCS GRAPE	6%	CCS CACTUS	6%

# ED CONCRETE

CCS TERRACOTTA	6%	CCS BEE'S WAX	3%	CCS ARTICHOKE	3%	CCS CORK	3%
CCS RUBY	6%	CCS LEMON GRASS	6%	CCS MOSS GREEN	6%	CCS MOCHACCINO	3%
CCS CLAY COURT	3%	CCS CANVAS	3%	CCS TROPICANA	3%	CCS KALGOORLIE	3%
CCS REDWOOD	6%	CCS PISTACHIO	3%	CCS KAKADU	6%	CCS LIMESTONE	3%
CCS CHOCOLATE	6%	CCS GOLDEN BRONZE	4%	CCS JUNGLE	6%	CCS CORN	6%

# **GREY CEMENT COLOURS**



#### **Off-White Cement Colours**

The above swatch colours are produced using CCS pigments mixed with off-white cement.

Please note that due to space limitations at concrete plants, 'off-white' concrete is only available from a small number of concrete plant sites.

#### Choose From Old & New CCS Colours

Please note that colours appearing in previous CCS colour cards remain available for specification, although not necessarily incorporated in this 2014 colour palette update.

#### The Importance of Dose Rates

The dose rate percentage (%) listed under each colour swatch is the recipe that is used to accurately produce CCS colours. This percentage represents the ratio of CCS powder pigment to the total weight of cement, fly ash and other cementitious content per cubic metre of concrete.

#### Double the Dose Rate if Using CCS Liquid Pigments

1kg of CCS powder pigment produces the same colour result as 2kg of CCS liquid pigment.

If your concrete plant uses CCS liquid pigments, ensure that the dose rate (%) is double that which appears beneath the colour swatches in this colour card, in order to achieve the correct colour result.



## The Contributing Colour Effect of Aggregates on Honed and Exposed Finishes

The top layer of coloured concrete is removed when exposed aggregate or honed concrete finishes are created. Due to the contributing colour effect of the exposed aggregates and sands, the overall coloured appearance will differ to the equivalent swatch.





TROWELLED FINISH

EXPOSED AGGREGATE

Note that although the above two samples were made with the identical pigment, the effect of exposing the aggregates generates a differing overall colour effect

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

## A GUIDE TO FINISHES THAT CAN ADD CHARACTER **TO COLOURED CONCRETE**



Rock Salt A pitted or 'volcanic stone' look is created with CCS imprint mats or 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 desians.



Coving Trowel The use of a coving trowel to finish concrete creates a timeless surface for areas requiring additional texture



Machine Trowel A smooth, 'polished' appearance. Please note that this technique may create slight variations in colour and will not show aggregate



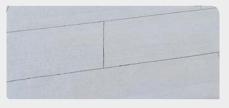
Sand Blasting Ideal for embedding symbols, logos or unique patterns, this method removes the top layer of the cured concrete to reveal a sandy finish.



Honed Concrete Removes the surface layer by grinding, revealing a smooth, high end, polished concrete finish.



Polished Concrete The concrete surface is mechanically honed and then polished using fine abrasives. The surface result is extremely glossy and reflective.



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 n wet concrete and removed once it has cured, to leave beautiful base relief imprints.



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

#### Specify your preferred level of aggregate 'exposure'

By applying one of the three types of CCS Surface Deactivator immediately after troweling wet concrete, you can achieve a predictable and repeatable level of aggregate 'exposure'.

A minimal 'sandpaper' type finish can be achieved with CCS Surface Deactivator 0.2mm, while greater aggregate exposure can be achieved with Surface Deactivator 0.5mm or Surface Deactivator 1mm.



CCS Surface Deactivator 0.2mm finish



CCS Surface Deactivator 0.5mm finish



CCS Surface Deactivator 1mm finish

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