



COLOUR INFORMATION

Understanding Colour Matching and Colour Limitations

At Render Systems Australia, we are frequently required to match the same colour in different products. For example, a customer may wish to use a mixed system of a lime wash, and acrylic wash over different adjoining substrates. Often a good commercial colour match is acceptable. However, in some cases, the customer expects a perfect match similar to that required in automotive touch-ups. We do our best, but for reasons detailed below, a 100% perfect match is not always possible.

The Physics of Colour

Very simply put, 'light' comes to us in a series of different wavelengths which our eyes interpret as different colours (remember the prism?). If an object looks white, it means all or most of the light rays striking the object are reflected back into our eyes. If it looks bright red, it means the surface of the object is absorbing all the wavelengths except the ones that correspond to red, which are reflected. So when we are matching a colour, we are actually mixing in pigments (colourants).

HERE'S WHERE THE HURDLES BEGIN.....

The pigments are not necessarily pure or chemically identical. They can appear as a perfect match under one light but not as perfect under another light. This phenomenon is known as metamerism and it can cause some seemingly exact coloured materials to vary slightly when compared in different lights. Like when you think you have two dark blue socks on when you are in the bedroom, but when you go outside, you notice you have one blue and one black one on!

With architectural coatings the difference is not that dramatic, but slight colour variations do often appear between indoors and outdoors.

Another hurdle is when colours vary from batch to batch and location to location (ie:- the same outlet on one side of town may be using older pigments than the same outlet on the other side of town).

Printed Colour Cards vs True Life Paints and Textured Coatings

Another hurdle when colour matching, is that many colour cards are produced with printing inks, which often use a different type of pigment and cannot be exactly matched with colourants used in paint.

Textured coatings also contain aggregate, which have their own colour characteristics and impart a greyish tone, which again cannot be reproduced with standard colourants.

In addition to this, the rough surface of textured coatings scatter light rays (colours) reflecting back to our eyes, giving a different appearance at different angles and when compared with the same colour in a smooth finish.. At best, a very close commercial match can be provided.

Render Systems Australia – A Division of River Sands Pty Ltd

683 Beenleigh-Redland Bay Rd, Carbrook, Qld 4130 PO Box 4127 Loganholme DC Qld 4129 Phone: 07 3287 6444 Fax: 07 3287 6445

Service Centres

Rocklea: Phone: (07) 3875 1557 Fax (07) 3875 1565 Geebung: Phone: 07 3865 6888 Fax: 07 3865 8777 Gold Coast: Phone: 07 5596 2399 Fax: 07 5596 2799

Sunshine Coast: Phone: (07) 5438 8900 Fax: (07) 5438 8899

ACN 009 919 215 ABN 41 009 919 215 www.renderystemsaustralia.com.au



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Matching Old Cured and Weathered Coloured Samples

The most challenging sample of all to colour match is when someone brings in a paint chip from an old building for matching. All of the above difficulties arise, as well as a subtle change in appearance caused by weathering and age.

Providing the Best Possible Match

On the bright side of all of this, we at Render Systems Australia are very experienced in colour matching and have the tools to provide you with the best possible colour match available. And if it is a straight paint to paint match (with no affects of weathering), then we can get it 100% correct.

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