ARCHITECTS MEMO
by Colin Gooch, Resene Technical Director

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durability revisited

Warranties, as are being offered in the market, have raised their collective heads again with respect to how valuable they are as a document. I think that it is fair to say that the major manufacturers have got the hang of making paint, selecting resin binders that have good adhesion properties, long term flexibility and the ability to transmit water vapour. Even though they may not contain all of the 'bells and whistles' available to modern technology, when applied to a well prepared substrate, they should stick and failure by cracking, flaking or blistering should be a thing of the past.

A warranty that only warrants against cracking, flaking and blistering is akin to having life insurance cover which will only pay out if death is due to scrofula, scurvy or bubonic plague!

Realistically, for typical paint specifications, the area of concern is 'what time to first maintenance can be expected?' And general appearance is the major yardstick used with gloss and colour changes generally being the parameters of concern. However, people's tolerances to acceptable degrees of change vary widely.

In most cases, however, people will tolerate a degree of change which still maintains the original concept of what the finished building should look like. For colour, this generally means that some colour fading or darkening can be accepted whereas hue change wouldn't be.

If you will pardon the mention of brand names, the easiest paint to warrant is a product of ours called AquaShield - specifically when it is specified in white. It is based on a durable silicone resin and is as flat as a pancake - and so flat that it cannot lose any more gloss! Given that it is white, it cannot fade and its built in hydrophobicity prevents dirt and mould defacement, a '10 year to first maintenance' is a breeze and, if you twisted my arm, you could get more!

Colour guarantees are always more difficult. Pigments based on metal oxides are extremely durable, amongst other reasons, because they are already oxidised. Although they give a somewhat limited palette, Italy seems to manage quite nicely using titanium di-oxide, iron oxide yellow, red and black along with chrome green oxide for about 95% of exterior paint!

Organic pigments, which give us such a splendid array of bright, saturated colours are all prone (to a greater or lesser degree) to colour change induced by the energy of U.V. light (along with visible light in some cases) and affected by the presence of oxygen and water. I have also heard suggestions that increased levels of ozone, due to the plethora of electronic appliances, may affect interior paints. Colours using blends of organic pigments which have varying resistance to fading increase the risk of colour change.

The message here is that if colour requires warranty, in-depth discussion with your rep, before deciding on the precise colours to be used, will be beneficial.

Chalking, that is the presence of unbound pigment on the surface of the paint coating, while easy to remove and recoat, is a clear signal that the paint binder is eroding and that recoating may be necessary. Chalking can be delayed significantly by specifying a clear coat as the final coat of the system.

We pride ourselves on endeavouring to produce the finest paints that we can but, you know, sometimes things can just go wrong and a paint can fail prematurely. Ideally the paint film should form smoothly with all of its billions of different sub-micron and nano-particles coming together uniformly with the pigments being nicely spaced and protected from the elements with an absorbed protective layer of resin. In fact, in ideal film-forming conditions, film formation borders on chaos and, in non-ideal conditions, chaos can rule. Situations can occasionally occur where the pigment is not perfectly protected and channels can exist where water can enter the film and sit in tiny pockets where it can cause damage.

While these anomalies have always existed, it is my opinion that they have increased as paints have become subjected to an ever increasing range of compliance requirements. Some very complex chemistries have had to be employed to achieve compliance (especially in the VOC area).

Such 'no fault' situations can stretch and stress relationships and fine print on warranties is rarely helpful. We believe that the 'Resene Promise of Quality' is a simple English document which reflects our company's ethics and promises that we will do the right thing to resolve product faults experienced by our customers and clients should things go wrong.

Architect Memos

In Australia:
Call 1800 738 383
visit www.resene.com.au
or email us at advice@resene.com.au

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In New Zealand:
Call 0800 RESENE (737 363)
visit www.resene.co.nz
or email us at advice@resene.co.nz