



Resene Paints Limited

# Architects Memo

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## Painting Concrete Surfaces

The first question normally asked regarding the painting of concrete surface is "Why bother? Isn't concrete a permanent material?" One could answer this question purely on the grounds of the lack of aesthetic appeal of large, unrelieved expanses of grey concrete; but the concept of the permanence of concrete is worth considering. There can be no doubting the permanence of concrete as a structural material but its performance as a weathering surface leaves much to be desired.

Cement, the 'binder' of concrete, is based on calcium aluminosilicates which set on the addition of water. These chemicals, whilst extremely strong, are attacked by acids; even very dilute acids. The action of the acid is to slowly dissolve the cement binder, initially giving a slight etch to the surface. Continual attack erodes deeper into the cement binder leaving sand and fine aggregate particles substantially free on the surface. This roughened, porous surface will then readily hold dirt, stains and mould spores giving the characteristic 'unkempt' look of old concrete. All acids attack concrete and whilst attack is greater in industrial areas, even the purest rain-water is mildly acid. This occurs because rain will dissolve carbon dioxide from the atmosphere so forming dilute carbonic acid.

Modern water-based coatings, utilizing acid-alkali resistant pigments and binders, form an ideal coating for concrete surfaces. They prevent the acid-etching of the concrete surface and reduce surface spoiling by dirt, mould, etc. These coatings can either be clear or in a wide range of colours.

It has been said that the painting of a new concrete building represents the building in of a maintenance problem; in fact it represents control of maintenance. An uncoated, old concrete building requiring the aesthetic uplift of a paint coating would firstly require: (a) A fungicidal wash to kill all the mould within the concrete surface; (b) Waterblasting to remove all loose, sandy material; and (c) A penetrative sealer to reinforce the weakened substrate. Use of the correct coating initially would have obviated these expensive steps.

## NEXT MONTH

Painting of concrete surfaces—specialised products for specialised jobs. Resene Masonry Filler & Resitex Acrylic High Build Textured Wall Coating.

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