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Surface Coatings: Part 2 – Resins and other coatings >>

In my last article, we started to look at floor surfaces and the need for special coatings and treatments. To remind you, there are two basic types - dry shake toppings that are incorporated into the surface of fresh concrete and resin or cement bound layers that are applied to a hardened concrete surface. In this edition, we will consider these over layers, which for shorthand are referred to as resin screeds and pump screeds – cement based products are usually pumped.

Before discussing these materials, I need to remind readers that the vast majority of warehouse floors are constructed from fairly "ordinary" concrete with no additional treatments. Provided that the concrete is laid and finished by skilled operatives the finished result is highly durable, reasonable to look at, and with care and minimal basic maintenance it will last for many years.

It follows that you should only be considering the extra expenditure on overlaying new floors if there is that extra special requirement. Their use is also very relevant on worn or damaged floors which can be upgraded to provide a new lease of life.

So how do we choose between resins and cement based products? This can be difficult, because comparable data is not easy to find. However, as a guide, I suggest the following.

New floors

There are few requirements for pump screeds on new floors, with one obvious exception that being the use of a pump screed to add particular features such as a terrazzo finish. These are increasingly being seen in supermarkets and other retail facilities. Pump screeds are much better than resin screeds for providing attractive, very hard wearing surfaces. Pump screeds behave very much like the concrete underneath, they expand and contract like the concrete and create very few maintenance problems and can last for the lifetime of the floor.

Resin screeds come into their own in the likes of the food processing industry where very high standards of cleanliness are required. This requires that floors have to be cleaned vigorously at regular intervals. Floors tend to be slippery from spillages and from washing and so aggregates are often incorporated into the resin screeds to improve slip resistance. Resins work well because they are relatively impenetrable and so are not easily contaminated; this makes them also useful in garages and workshops where oils and other spillages can be easily cleared away or where acidic chemicals may come into contact with the floor.

Where a high intensity of colour is required on a floor, then a resin screed or other floor covering is the only choice. However, resin screeds do not have the abrasion resistance of pump screeds or of the original concrete.

Existing floors

Where there is a requirement to change the appearance of an existing floor for aesthetic reasons or if a change of use is planned then the same considerations as for new floors should apply.

For old floors which are worn or damaged and there is a requirement to bring the surface back to an "as new concrete" condition, then pump screeds are the correct solution.

Applying screeds

Although material qualities are important, most overlays fail because of poor preparation of the underlying floor. Overlays will not adhere to smooth dense surfaces or to contaminated or unstable surfaces, so beware of the cheap quick fix. There are contractors out there who are probably also in the "skim your drive with tarmac" market - the weeds soon come back through!

Next Edition: Safety of floors - Slip resistance and cleaning

Face Consultants
Contact: Tony Hulett
Tel: 07989 708514
W: www.face-consultants.com