

The Advantages of AcryliCon Systems over other Resin Systems

Cure Time

AcryliCon is fully cured in 2 hours and can be put into full industrial use thereafter. Other reactive resin systems set in 3-12 hours but full cure can vary between 3 and 14 days due to their temperature sensitivity. AcryliCon is unaffected by temperatures and a controlled cure is achieved in temperatures as low as minus 20 deg C (minimum 30 deg C with special additives).

Chemical Stability

AcryliCon Resins are fully inert and stable after 2 hours and there is no “gassing off”. These resins are used extensively by the medical profession in dentistry, bone and hip replacement and are more recently used in the production of contact lenses.

Bond Strength

Ultimately it is the strength of the bond line that produces successful floors. It is the ability of the bond line to transmit loadings and thermal changes without reducing its “grip” that creates the longevity of the systems.

The special primers of AcryliCon are designed to achieve deep penetration in to the substrate and with subsequent chemical bonding of the body and sealer layers ensures that AcryliCon is permanently “welded” to the base. Removal of the system (even only 2 hours after installation) by mechanical means will remove split aggregate from the concrete – exhibiting the extent of the bond.

Other Resin Systems rely to a great extent on a mechanical key as the primers do not generally achieve great penetration into the slab due to their high viscosity.

Chemical Bonding

AcryliCon is a Thermo-Plastic resin, which means that each layer chemically fuses to the previous layer (no matter how old). This ensures that the total system including the primer coat is truly monolithic.

It is not possible to separate the individual layers that make up the system.

Other reactive resins are Thermo-setting Plastics and rely upon a mechanical key between layers.

Chemical Resistance

With full resistance to lactic acid and most other organic acids and alkalis, AcryliCon produces excellent results in most Food Production environments. AcryliCon is also totally UV stable and will not degrade in colour, integrally or aesthetically over a period of time – unlike almost all other Resin Flooring Systems.

Mechanical Strengths

Compressive, abrasion, impact and flexural strengths are generally far superior to other Resin Systems and do not degrade as the effects of water, cleaning chemicals and the working environment take effect. As an example, the Acrylicon Décor System laid at 4mm has a compressive strength of 98N/mm.sq. and an internal tensile strength of 30N/mm.sq. These two factors are vital to the bond line and are attained within 2 hours.

This makes Acrylicon Resins **unique** in their chemical construction over all other Resin Systems, including those from the same chemical family (MMA's).

Hygiene

Acrylicon is a resin rich system with no "fine" fillers laid at 2:1 aggregate to resin, as opposed to most Resin Systems which have a ratio of 6:1 or more.

This ensures a totally sealed and hygienic system with no pores or air holes in which bacteria can proliferate.

Acrylicon has full EEC and FDA approvals for use in food processing plants throughout Europe and the USA.

Joints

Existing expansion joints need to be carried through the Acrylicon finish as with all other coating systems. However construction joints, day joints and crack induction joints which are in the structural substrate can be overlaid without the need to reflect them through in the finish. This is due to the use of a special flexible resin used to seal these joints before proceeding with the floor coating. Obviously the early "plastic shrinkage" of the concrete needs to have occurred prior to the overlay (generally 28 days).

Because of the unique chemical bonding ability of Acrylicon all joints and filling treatments become "welded" together, producing a truly seamless floor.

To appreciate this advantage it is necessary to inspect installations of Acrylicon in area of over 1000m.sq. without joints and after many years of showing no transmitted cracking.

Longevity

It is the combination of all the above properties that gives the Acrylicon Systems an unrivalled longevity, unsurpassed by any other system on the world market.

Our reference list will generally not include installations less than 5 years old and if requested we can show installations over 30 years old to support our statements. In the UK our oldest installation is over 20 years old (Middlesbrough Riverside Football Stadium, installed 1995) although in Europe we have many installations over 30 years old across many different industries.

Constructional Advantages

The rapid cure time enables site installation to be programmed very effectively.

Fast track programmes can be easily accommodated.

Installation from preparation to completed system is carried out in one operation with the final system open to full traffic just 2 hours after completion. Daily installation rates of up to 200m.sq. per day can usually be achieved with a 3 man team.

The completion of small high profile areas that release other trades quickly is neither difficult nor expensive.

There is no need to build in “cure time” windows between preparation and completion which with the other Resin Systems can be as much as 24 hours between each operation (most systems comprise of 3 or 4 layers or operations).

Summarising we can prove that our Acrylicon Flooring Systems have a whole life cost much lower than other systems on the market, and combined with ease of maintenance and full EEC and FDA approvals make them the ideal choice for Food production, Retail, Construction, Engineering and many more industries.

Please feel free to explore any of the issues discussed above with us –

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