

NCC's Resin Flooring Site –

www.resinflooringsite.co.uk

Epoxy Resin Flooring Materials

Epoxy resin flooring is probably the best known and most commonly used type of resin flooring throughout industry facilities and in commercial premises in the UK. However it must be understood that there are actually many different types of epoxy resin based flooring systems with greatly different application characteristics and performance properties. These include, water dispersed epoxy resin floor systems, solvent containing epoxy resin floor systems and solvent free epoxy resin floor systems. As always with resin flooring material technologies, these different types of epoxy resin flooring materials all have their own characteristic advantages, disadvantages, limitations and benefits as resin floors, which we have tried to summarise below and in the following pages to assist you.

The nature and chemistry of most epoxy resin flooring products generally, makes them amongst the easiest and reliable resin flooring materials to mix and apply on site, where they will provide a durable industrial flooring system that can last for many years. The mixing ratio of the base epoxy resin parts to the hardener components, is usually formulated to be around 4 : 1, which makes the materials relatively easy to control and ensure thorough and homogenous mixing – This is unlike some other synthetic resins that have much more difficult mix ratios of up to around 20 : 1 and which therefore makes complete and thorough mixing much more critical, and thereby increasing the risk of problems on site.

Today the UK resin flooring industry widely accepts that epoxy resin based flooring systems are the safe and reliable option, for all but the most critical and onerous installation and performance requirements i.e. their hardness means they are not sufficiently crack-bridging for exposed car park decks for example, plus they are not ideal for installation over existing wet concrete floors in the food and beverage industries.

However they are the ideal solution for the majority of situations, where the extremely 'sticky' nature of the freshly mixed epoxy flooring materials also helps to ensure a good and strong bond to the concrete substrate. The hardened 'pull-off' strength being higher than the cohesive strength of concrete, i.e. meaning it is only removed by a break in the concrete itself, the potential for delamination is minimised and the concrete is reliably protected against impact, wear and abrasion or ingress and attack from water and many other aggressive chemical liquids

Finally another general advantage is obtained through the tight cross-linking nature of the epoxy resin and hardener reaction, which can be visualised as being like a 'clamping' effect which closes the hardened surface of the floor. This means that once they have fully hardened or cured, the epoxy resin flooring materials are extremely watertight and many will have excellent resistance to immersion and a wide range of oil and chemical spillages, or aggressive industrial cleaning products – such as strong industrial disinfectants and detergents.

The resin flooring specialists at NCC's Resin Flooring Site can advise you on the most suitable resin flooring type and the best specific resin flooring product(s) for your specific project needs. **Please call any of our offices for specific assistance from our experts.**

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In the following sections and pages we have also provided more specific information on the particular advantages and disadvantages of each of the different types of epoxy resin flooring.