

NCC's Resin Flooring Site –

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Resin Flooring Materials: Alternative System Build-ups

There are basically three main ways of building-up a resin flooring system on site from its component resin floor products. The best build-up method for each project is determined by the substrate profile after surface preparation has been completed, the total resin floor system thickness required, the specific resin flooring materials selected and their consistency and flow properties, plus any solvent or water content of any of these components.

These resin flooring system build-ups can be summarized as follows below:

Multiple Roller Coat Resin Flooring System Build-up:

The resin flooring system is built up from a combination of layers of the same or compatible resin flooring products or components, that are generally roller or squeegee applied, as thick-layer or 'high build' coatings, which have a typical layer thickness of around 150 to 200 microns (dft) per coat. Then the freshly applied resin floor layers are broadcast with additional graded sands or aggregates, between coats and whilst they are still 'wet', to 'build-up' and create the additional system thickness and structure required. This resin flooring system build-up is normally used for resin floors with a total thickness of from 500 microns to from 2-3mm (Resin Floor Type Classifications 3,4 and 5); the broadcasting of suitable aggregates into the freshly applied resin flooring materials is also used to provide the required levels of slip or skid resistance.

Self-Smoothing Resin Flooring System Build-up:

The resin flooring material is trowel or squeegee blade applied, as a 'self-smoothing', 'self-smoothing' (the current 'trend' in their description), or 'self-levelling' resin flooring systems. All of which are basically the same thing, flowable blends of synthetic resin and fine inert fillers, pigments and sand or fine aggregates as the floor screed (these are also known as the Resin Floor Type Classifications 5 and 7).

Self-smoothing resin floors are usually applied in 1 – 3 layers, including resin priming where required on porous substrates, and at thicknesses of from 2-6 mm in total, according to the floor system specification and site conditions and requirements, onto the prepared concrete or cement screed substrate. The resin floor material is then 'spiked-rollered' whilst it is still 'wet', to remove any entrained air, then the surface can either be left smooth as an easy to clean, hygienic and Decontaminable floor finish. Alternatively, it can be broadcast with fine graded sand or synthetic aggregates, with or without an additional sealer coat of the resin flooring material, which is used to provide an increased level of slip or skid resistance, such as is frequently required in wet process areas for example.

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Trowel Applied Resin Flooring Screed System Build-up:

The highest mechanical and abrasion / thermal shock resistant resin flooring systems are produced with trowel applied resin floor systems that are usually based on solvent free resins and highly filled with selected and graded special sands or other aggregates to provide the high impact, wear and shock resistance demanded from the resin floor.

Therefore trowel applied resin flooring screed system build-ups are normally laid with traditional 'floor-screeding' techniques, or including machine mortar screeding and power-float finishing techniques, (these are also known as the Resin Floor Type Classification 8). The thickness of trowel applied resin flooring systems is normally recommended and specified to be from a minimum of 4mm and more frequently from 6 to 9mm in total, in order to get the maximum advantages and benefits from this type of resin floor system i.e. the increased mechanical impact, wear and thermal shock resistance etc. There may also then be an additional requirement for a final resin floor sealer coat of the same pigmented resin floor binder or another resin based floor sealing coating where total impermeability and high chemical resistance is also required from the resin floor system build-up. This additional sealer coating is applied on top of the trowelled / screeded material (this resin floor system build-up is then known as the Resin Floor System Type Classification 6).

For additional help and assistance in selecting the right type of resin flooring materials and the right resin floor system 'build- up' for your project, with specific advice and guidance on any aspect of your resin flooring requirements – no matter what sized area or your performance demands, then **please call any of our offices and one of our Resin Flooring specialists will be delighted to assist you.**