

6. Repairing Surface Damage, Cracks and Joints before Floor Painting

Prior to applying any type of floor paint, it is always necessary to first repair any visible surface damage or void in the surface, or they will be reflected through and become even more visible in the new painted floor finish.

The nature (moving or non-moving) and the cause of any cracks in the floor must also be determined and then they can be treated appropriately to ensure there is no future cracking.

6. i. The Repair of Concrete Defects and Damage Prior to Floor Painting

Surface damage on concrete and screed floors can be due to many different reasons including defects in the original concreting work, i.e. honeycombing and voids, unsuitable aggregates such as 'mudstone', inadequate finishing or poor curing, etc. Or post-construction damage can be caused by impact, wear, abrasion or chemical exposure and attack during service.

The first requirement is always to establish the cause and extent of the damage to assess if it is likely to reoccur, then to mechanically break out and remove any unsound or weak concrete.

The best method of repair will depend on the size and depth of repair required, -the future performance and exposure envisaged, plus the time available, and the ambient conditions at the time the repair has to be made. Basically good repairs can be made with cement based mortars or fast curing epoxy resin based mortars if time is critical. Larger, thicker areas are usually repaired with concrete providing there is sufficient time for it to harden and cure to the acceptable moisture content for the floor paint system selected.

If time is short then rapid hardening cement based products, or again epoxy resin mortars can be used. These are both much more expensive solutions but the floor painting can normally go ahead the next day, whilst almost all cement based repair mortars will require at least 7 days or more before they can be over-coated with a floor paint.

This is because of a combination of technical reasons – the time required for the material to harden, the time for the mortar to reach an acceptably low moisture content and the time required for the mortars surface alkalinity to be neutralised by natural atmospheric carbonation.

Buy Floor Paint stock and supply a full range of floor repair products from concrete additives to improve strength, accelerate hardening and reduce the initial water content, prebatched cement and rapid hardening cement based repair mortars, plus a full range of epoxy resin based repair mortars. Therefore whatever damage you have on your floor we can provide detailed recommendation and instructions together with the materials.

For advice and assistance in any aspect of floor repairs, please call any of our offices and one of our flooring specialists will be pleased to help solve your problem. This is because due to the wide extent of different floor repair solutions and techniques required; these products are not available in our online shop.

6. ii. Crack Repairs in Concrete Floors Prior to Floor Painting

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Cracks in concrete floors can be caused by a large number of reasons including initial or long-term concrete shrinkage, building movement or settlement, machine vibration or excessive loading, plus inadequate or incorrect joint design or slab construction. To successfully repair and seal cracks in concrete floors it is always important to understand the exact reason for the crack and if any further movement will occur. This can obviously be a technical issue and so a qualified structural engineer should normally be involved to determine this for any significant cracks or important projects. In new construction projects, it is especially important to do this as early as possible to determine the correct remedial action and the responsibility of course!

Buy Floor Paint can advise you on how best to do this for your project, please call any of our offices and one of our flooring specialists will be pleased to assist you.

• **Treating Moving Cracks in Concrete Floors Prior to Floor Painting**

If cracks are still likely to be subject to future movement then they should normally be treated as joints. This means that they should be cut square, brought through the floor finish and after the floor painting is complete, they should be sealed with an appropriate floor joint sealant such as Sikaflex PRO 3WP – See the [Joints and Joint Edge \(Arris\) Repairs](#) section below.

• **Treating Non-Moving Cracks in Concrete Floors Prior to Floor Painting**

In situations where it is the structural engineers' assessment that a crack is no longer moving, then it can be repaired and sealed prior to applying the selected resin floor paint. The best procedure and materials for doing this obviously depends on the width, depth and length of the crack. It is likely that the surface will need opening by cutting it out to remove any loose or weakened material. Then it can either be filled and surface sealed with a fine epoxy mortar such as Sikadur 31 pressed into the crack, alternatively where advised by the engineer for structural reasons, cracks can be structurally bonded by low or high pressure injection with an epoxy resin injection product such as Sikadur 52.

All of these repair and injection materials, method statements and detailed specifications are available from NCC Buy Floor Paint.

For detailed advice on your specific project please call any of our offices and one of our flooring specialists will be pleased to assist you.

6. iii. Joint and Joint Edge (Arris) Repairs Prior to Floor Painting

Movement joints in new concrete floor slabs should normally be sealed with the appropriate elastic floor joint sealant, with the correct joint movement capability and other performance requirements after the floor finish has been applied.

Existing movement joints in existing concrete floor slabs can be painted up to, or over-coated; dependent on the nature of the existing floor joint sealant, i.e. bitumen sealants can not be painted with resin floor paints.

If joint arrises are broken or the existing sealant has deteriorated or failed completely, then the joints should be cut out and repaired, then resealed after applying the selected floor paint. High strength epoxy resin mortars are the best materials for joint arris repairs, because of the high loads that can be imposed on these edges. The best type of replacement joint sealant is dependent on the type of failed joint sealant, i.e. different sealant types can be incompatible and not bond with the previous sealant residues

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on the joint sides, which is a particular problem with old bituminous or silicone sealants.

Buy Floor Paint supply a full range of epoxy resin mortars to repair joint arrises, and a full range of floor joint sealants based on all available material types, including the very useful Sikaflex PRO 3WF – a high performance, easily applied, chemically resistant, elastic, single pack, polyurethane resin based floor joint sealant, which is ideal for solving a great many floor jointing problems.

For specific advice on treating the floor joints in your specific project, please call any of our offices and one of our flooring specialists will be pleased to assist you. Photographs can often help us to quickly identify the correct procedure and products to use to and so these can be sent to technical@nccinaction.co.uk, together with a brief summary of the situation and your future requirements for the area.