

1. Floor Cleaning & Surface Preparation for Painting – An Overview

Generally floor cleaning and surface preparation, prior to applying any floor paint, is a matter of **Common Sense** – provided that you understand the nature of the floor painting materials, the concrete floor or cement screed substrate and its existing surface condition, together with your new painted floor's future- in terms of it's performance and durability requirements.

So - “Do I need to prepare the floor before applying Floor Paint?” - This is actually almost exactly the same question as “Should I rub down and prepare my enamelled steel radiators, my wooden doors or window frames (etc.) before I paint them”– Except that you do not normally also walk or drive over these surfaces, and so their paint bonding and performance requirements are always much less than those of a floor!

– And yet no one with any common sense would even consider not cleaning and preparing all of these other surfaces before painting them! – Additionally as an example - Newly plastered or rendered walls do not normally need any extra cleaning or surface preparation, other than full drying out and cleaning and dust or dirt from the surface, before painting them, usually with water based emulsion paints. – This is because these wall surface are porous and at least some of the paint penetrates into the wall, provided they have been given time to dry out sufficiently (if it doesn't you will see the paint peel off your plaster – a dead giveaway to plaster that has been painted to soon and before it had dried out sufficiently – So now you know – Surface preparation is basically common sense!. - Plus most importantly - **We do not even walk, or drive cars and forklifts on these surfaces!**

Floor surface preparation requirements can therefore be considered in such a logical way as well: For concrete floors and cement screeds – If you are going to expose your painted floor to frequent foot traffic, and / or any kind of wheeled vehicle traffic, then it makes sense to carry out some form of surface cleaning and preparation to ensure that your new floor paint will adequately penetrate and / or bond (stick) to the sound concrete and not just to a layer of dirt or dust on its surface.

So the floor cleaning and surface preparation should be carried out – according to the floors existing condition, the specific future floors exposure and the type of floor paint you are going to use? Even a simple water based epoxy resin floor paint is £65 – 70 for 5 litres, so the absolute minimum to consider giving yourself a chance of success, is to make sure the concrete or cement screed floor area is clean and dry plus to brush the surface thoroughly with a stiff bristle or wire brush, to ensure you remove any visible dirt or dust and any loose particles. Finally always vacuum the surfaces thoroughly immediately before applying the floor paint.

For the application of floor paint in more demanding areas or for high performance where the floor will be subject to frequent traffic, fork lift trucking, possible chemical spillages and where long term durability is required, it is logical that a full evaluation of the best and most suitable cleaning and / or additional surface preparation requirements is made - **Common sense**.

This is the same for any floor paint that you want to last in these situations, including our water based epoxy resin floor paints and the highest performance solvent free epoxy resin based floor paints, which cost up to £150 for 5 litres, so it makes sense to do or get the job done '**Right First Time**'.

We have Summarized a few Simple 'Rules' For Floor Cleaning & Surface Preparation for Painting as follows:

- Floor paint should only be applied to dry concrete or cement screed surfaces.
- Any dirt, dust or other loose / friable materials must be removed.
- Any surface contaminants such as oils, grease and any other past spillages or old floor polish residues etc. must be removed.
- On new fully hardened concrete and cement screed surfaces any curing agent residues or any cement laitance must be removed (see **New Concrete and Cement Screed Floors** below).
- The concrete or cement screed substrates must be sufficiently thick, sound and strong enough to meet your service requirements. As an example - industrial floors in factories, warehouses and commercial facilities are recommended to have a compressive strength of at least 25Mpa and a pull off strength of at least 1.5Mpa – This is not normally a problem for new floors – (See New Concrete and Screed Floors section below). But existing floor strength should always be checked – See 'Floor Substrate Testing' below.
- Any existing de-bonded, loose or flaking floor paints must be removed (some firmly adhering, sound existing floor paints can be overcoated, but only with an appropriate type of floor paint product – So this depends on the type of existing materials and your future floor paint performance requirements.

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- o Existing sound and fully bonded acrylic / urethane alkyd type single pack paints should only be over-coated with a similar material - Or probably it would be better to remove it and do the job properly with a more durable water based epoxy floor paint for example – It is nearly always much cheaper in the long run!
- o Existing sound and fully bonded moisture cured polyurethane resin floor paints can be over-coated with epoxy -resin based paints provided the surface is uniformly finely abraded to provide a key (i.e. with suitable abrasive pads etc.)
- o Existing sound and fully bonded solvent based epoxy resin or solvent free epoxy resin, floor paints can be over-coated with any epoxy resin based floor paints, provided the surface is uniformly finely abraded to provide a key (i.e. with suitable abrasive pads etc.)
- o Existing sound and fully bonded water based epoxy floor paints can be directly over-coated with any water based epoxy floor paints, the surface only needs to be thoroughly cleaned, and there is no need to additionally abrade the surface of these materials.

- By following these relatively simple rules above for floor cleaning and surface preparation on concrete floors and cement floor, you will be assured of a successful floor painting job.

More information and details on exactly how to do this assessment and preparation are given in each of the sections below – But if you have any concerns or additional questions, please do not hesitate to call any of our offices and one of our floor painting specialists will be happy to assist you with your specific project requirements.