

Appendix : Floor Preparation Procedure.

The following information should be read in conjunction with a Brewers Protective Coatings Specification. If anything is unclear please seek clarification immediately.

There are three methods used to prepare a concrete floor prior to painting with a Protective Coatings system. These three methods are:-

- Vacuum Blast Cleaning.
- Mechanical Preparation.
- Chemical Preparation.

Prior to the use of any of the above methods the floor must first be clean and free of oil and grease. This should be achieved by using a suitable Industrial Degreaser in conjunction with cleaning machinery. This procedure may need to be repeated; until the substrate is completely clean and free of all contamination.

To use any of the preparation methods without first thoroughly cleaning the floor will prove to be ineffective. With Chemical Preparation oil and grease will prevent the chemicals from reaching the surface of the concrete and with Vacuum Blasting and Mechanical Preparation, the oil and grease can be driven into the substrate.

Vacuum Blast Cleaning.

Without question this is the best and generally the most cost effective method of floor preparation. Vacuum Blast Cleaning will remove all old coatings leaving a perfectly clean and sound substrate ready for new applications. Care must be taken to ensure that machines are properly adjusted and that a correct grade of abrasive is used to prevent 'overblasting' which can under extreme conditions expose the aggregates in the floor. Skilled operators should be employed with knowledge of the procedures to be employed and who will operate the machine in such a way that they will remove only old and defective coatings plus approximately the top 5mm of screed. A test area should always be tried first to ensure that the machine is correctly set up.

Mechanical Preparation.

In this category such methods as Grinding, Mechanical Wire Brushing, Planing and Scabbling are employed.

Basically all of these methods are designed to do the same thing; to remove loose and defective coatings and to provide a key for new coatings. As with Vacuum Blast Cleaning care has to be taken not to remove too much of the top surface of the floor. This is doubly important with Planing and Scabbling.

With Scabbling in particular it is very easy to start exposing the aggregates in the floor and it is essential that the machine is properly adjusted to ensure that the flail or rotating cogs are set at the correct height and that the machine is operated at such a speed that the floor surface is not being ripped up. It is recommended that a test area is carried out first to ensure that the above adjustments are correct.

With Vacuum Blast Cleaning, Scabbling and Planing it is very important that tests on the strength of the concrete should be carried out on various areas of the floor. If areas of soft concrete are discovered these should be marked out prior to commencing the operation. Particular care should then be taken in these areas and the operator should be prepared to re-adjust his machine if necessary.

Unlike working on steel where definitive grades of preparation are specified under the terms of BS 7079, there are no such grades for working on concrete. As a general guide, the surface roughness one would aim to achieve is comparable with the texture of rough glasspaper.

Chemical Preparation.

Acid Etching is a common method of preparation for use on bare concrete. It will draw out and remove laitence thus stabilising the surface and will also key a hard, smooth power floated floor by giving a rough, grainy texture to the surface. The acid etch should be swabbed onto the floor and allowed to remain for at least 10 minutes before being washed off with fresh water and all residue removed by wet vacuum cleaning. It is very important that the acid is not allowed to dry on the surface as if it penetrates the substrate and dries, it is very difficult to remove all traces. This can result in adhesion problems and acid attack to the subsequently applied coating.

The acid etching procedure may need to be repeated until the floor is free of laitence and the rough, grainy surface has been achieved.

Acid etching is effective only on small areas. Anything over 300 square metres should be prepared by Vacuum Blast Cleaning.

- A quotation for Vacuum Blast Cleaning or Mechanically Preparing a floor can be obtained from P.P.C. U.K. Ltd on 01522 794448.