

Vuba Floor Preparation Data Sheet



Introduction

As with all types of surface applied materials, long term performance and ease of installation can only be achieved as a result of good substrate preparation and adequate site conditions. This data sheet cannot cover every aspect of substrate preparation for resin based coatings & screeds, but will serve to establish most of the basic principles. If followed correctly, this data sheet will help to ensure optimum appearance and performance from the selected Vuba product.

New Concrete Bases and Screeds Strength

Vuba products are very much dependent upon the strength of the underlying substrate which should be at least 22.5N/mm² and generally above 25N/mm² for medium duty and above 30N/mm² for heavy duty use. Where concrete crush strength data is not available, approximate values can be obtained using a rebound hammer or BRE screed tester.

Sand/Cement

Sand/Cement underlayments and screeds are intrinsically weak and may require the application of Vuba-EpiPrime to seal the surface and improve strength. Where possible Sand/Cement screeds should be enhanced using our Vuba-Screed Adpol, a polymer gauging liquid added during the mixing process to improve the physical properties of screeds.

New Slabs and Screeds

New slabs and fine concrete screeds should be installed upon an effective damp proof membrane and in accordance with BS 8204: Part 1 and should not contain any form of water repellent admixture.

Moisture

The residual moisture content of newly laid substrates should not exceed 75% RH (Relative Humidity). On installations where there is not sufficient time to allow the base concrete to achieve this figure, our surface damp proof membrane, Vuba-Prime Hydraguard should be applied prior to the coating. Hydracoat Original and Vuba-Coat Epihårdz are both capable of application onto new slabs and fine concrete screeds with a moisture content of up to 85% RH as a result of its water dispersed composition.

Magnesium Oxychloride Screeds

Magnesium Oxychloride (such as Gyvlon) floors should not be over coated since they are hygroscopic and will, under damp conditions, cause bond failure.

Existing Substrates

Suitable Surfaces

Although principally designed for concrete, Vuba products will strongly bond to a variety of differing surfaces:

Granolithic
Stone
Terrazzo
Brick
Timber/MDF
Quarry Tiles

Existing Floor Coatings

Existing floor coatings may be considered suitable, provided that they are two component systems and are sound and adhering well. Suitability should be established through adhesion trials and where any doubt exists, the coating should be removed back to the base concrete.

Damp Proof Membrane

An effective DPM should be incorporated within the base content to prevent vapour pressure disrupting the bond. Where the DPM has been breached, or in slabs applied direct to ground, Vuba-Prime Hydraguard may be used.

Hydrostatic Pressure

Where any floor surface is subject to hydrostatic pressure, effective tanking and drainage measures have to be taken prior to the installation of a resin-based coating.

Contaminants

The long-term performance of any proposed Vuba product is entirely dependent upon achieving a good bond to the substrate. Generally, wood and metallic surfaces present few problems, since their composition is consistent and therefore predictable. Concrete, however, can vary enormously in type, quality, erosion and level of contamination.

Identifying Contaminants

It is important to determine the presence and nature of any contaminant. They can take the form of materials and by-products used in the chemical, food and manufacturing industries, poorly adhering paints, curing membranes, sealers, surface hardeners, concrete laitance, carbonation products and efflorescence from the concrete itself. Many forms of contamination may be readily apparent through visual inspection and could present themselves as a slight gloss, colouring, whitening or darkening to the surfaces, but some curing membranes such as hardeners and salts such as sodium chloride may not be easily detected.

Penetrated Oil and Grease

Often, surface treatments, such as shot blasting or scabbling, are an effective means of removal. Vuba-Etchanator is an acid etch primer which is also an effective alternative to mechanical abrasion. However, deeply penetrated oils and grease may require intensive steam cleaning and use of an emulsifying degreasant, such as Vuba-Degreanator, beforehand. More than

one treatment may be necessary, and the surface should be thoroughly rinsed with clean water and allowed to dry. Where contamination cannot be effectively removed, there may be a primer that is suitable to apply before subsequent coating installation. Vuba-Prime Oilguard is an oil tolerant primer which may often be the appropriate solution. The final recourse is to break out the existing floor and to re-instate a new concrete screed to take the resin-based coating.

Surface Preparation

Surface laitance and any poorly adhering coatings, including seals and curing membranes, should be removed mechanically, leaving an open textured surface with the aggregate exposed. We offer a Floor Preparation Kit for hire, or alternatively Vuba-Etchanator acid etch primer may be sufficient depending upon the level of contamination. To prevent the surface preparation from showing through to a great degree in the final coating light preparation should be employed. For larger areas of preparation shot blasting tends to be the most cost effective and efficient. Little noise and dust is generated from professional shot blasting machines.

Concrete Repair

Having prepared the surface and vacuumed any dust or debris, the base slab should be examined for cracks, hollowness and weakness. All suspected areas should be broken out to a sound edge and re-instated using the relevant product from our Vuba-Repair Range. Substrates such as stone, terrazzo and brick should be treated as for concrete, leaving the resultant surface dry, textured and free from dust and contamination.

Metal

Metals should be chemically degreased and enclosed shot blasted to SA 2 ½ section 4.2 BS. 7079. Vulnerable ferrous metals should be over-coated immediately, to prevent flash rusting from occurring.

Wood

Timber floors should be securely fixed and not subjected to any loads which may give excessive flexing. Since wood is dimensionally unstable, care must be taken to ensure that it is protected from water ingress. Block and compressed particleboards are more tolerant to moisture, but where any doubt exists, marine ply should be specified. Surfaces should be sanded and vacuumed in order to expose clean wood and remove any manufacturer's treatments. All fixings should be countersunk and if necessary, filled and sanded to remove depressions.