

SUB-BASE REQUIREMENTS

1. Synthetic resin overlays are not installed to upgrade sub-standard bases, but rather to enhance and protect the virtues of well designed ones.
2. The thickness and cost of resin mortar flooring is such that it is not practical to use the flooring system to correct the levels of a substrate that is out of tolerance. For this reason, the substrate must be laid to the same tolerances as required for the finished resin mortar flooring.
3. It is important that the new or existing concrete floor complies with the following details:
 - 3.1 The minimum quality to be Grade II as per SABS 1200 G specification. This is a maximum permissible deviation from flatness of 5mm under a 3m straight edge supported at both ends on blocks of equal thickness. Abrupt departures from a plane flat surface such as ridges, grooves, steps are not acceptable.
 - 3.2 It must withstand the dynamic and static loads to which it will be subjected.
 - 3.3 A suitable water tight membrane must be installed to contain rising water. Where no water tight membrane is present a surface applied one must be installed (Vukacem) before the application of any resin flooring.
 - 3.4 All necessary joints, crack induced saw cuts, edge / border strips or profiles are to be provided in the base.
 - 3.5 All slopes, hips, valleys are to be included in the base construction and to ensure free run off of liquids a minimum slope of 1:80 should be specified to produce a free draining floor, however a coarse textured surface may require a higher slope of 1:60 to allow free drainage.
 - 3.6 The base is to be a minimum of 28 days old. After curing the residual moisture content in the base shall not exceed 4% when measured on an acceptable electronic moisture metre. However certain synthetic flooring systems are tolerant of significant moisture levels in the concrete base.
 - 3.7 The minimum strength requirements to be:
 - 3.7.1. Compressive 25N/mm²
 - 3.7.2. Tensile 1.5N/mm².
 - 3.8 Granolithic screeds are to be well bonded, with a minimum thickness of 40mm.
 - 3.9 The base is to be finished level and smooth with a single pass steel trowel finish, powerfloated but not polished.
 - 3.10 Floor hardener finishings, cement powder finishings, curing membranes, silicones, oils or any other visible or non visible contaminants that may adversely affect the system must not be present in or on the base.
 - 3.11 Vertical concrete surfaces to be lined must be true to line and level, clean and dry, free of loose matter, oil, grease and dust as well as laitance. Finish to be free of blow holes and shutter ridges. Surface texture equivalent to a good wood float finish. **No concrete additives or curing agents are to be used.**
4. Plastered surfaces to comply with the following;
 - 4.1 All plaster shall comply with the requirements of SABS 523 and section 14 of OW 371.
 - 4.2 The contractor/client representative shall inspect the plaster surfaces and establish which wall plastering must be repaired. Reasons for replacing existing plastering will include, but not be limited to the following:
 - (a) Excessive plaster cracking
 - (b) Loose (delaminated) and spalling plaster
 - (c) Dusting
 - (d) Scaling and flaking
 - (e) Defective plaster mix.
 - 4.3 The surface of internal plaster shall be steel trowelled to a smooth, even and true finish. External plaster shall be finished to a true and even surface with a wood float. All plaster surfaces shall be free from blemishes, cracks, blisters or other defects. Plaster shall turn into reveals and soffits of openings, and all angles shall be true and straight with salient angles slightly rounded. Only minor imperfections in this finish can be tolerated. Coved skirtings are to be formed at the base if required.
 - 4.4 Plastering of a surface shall be executed in one operation, as no joint marks will be allowed. Plaster on walls shall not be less than 12 mm or more than 20 mm thick and plaster on concrete shall be not less than 10 mm or more than 15 mm thick, except where specifically specified otherwise.
 - 4.5 Only approved ready-mixed or pre-mixed bagged plaster mortar with 5 MPa compressive strength or approved equivalent may be used for plastering and to have no application of Gypsum finishes such as Hardwall, Glasstone, Rhinolite or any kind of plaster primers or any other coating. The Contractor must submit the design mix with the volume of water that will be added to the mortar mix to the Engineer/Department's representative for approval.