

## ZERO EXPOSURE CONCRETE FLOORING GUIDELINES FOR NEW SLABS

These guidelines must be followed to ensure we can deliver our clients their flooring system choice and provide a warranty. Unlike exposed polished concrete floors, no cutting tools or grouting process are used in the zero-exposure process therefore we cannot correct or fix imperfections that occur at the time of slab installation.

### INSTALLATION OF THE CONCRETE

Ultimately we are seeking a **completely flat** concrete finish with no air pockets or surface imperfections with as much cream as possible at the top. The following points will assist towards the achievement of these key points:

1. Concrete should be poured at 32mpa.
2. The use of retarders or curing agents should be avoided due to chemicals used in the polishing process. The only pre-approved additives are: "Sika Film" (curing agent) and "Eclipse" in appropriate ratios (shrinkage reducer). Any others used may void warranty unless approved prior to pour.
3. When pouring inside brick work the use of neoprene foam to raise the height of the actual slab by approximately 2 - 5mm above the brickwork avoids damage and allows for simpler troweling and grinding.
4. Tolerances for finished surfaces shall not exceed
  - For any 1 metre length: + / - 1mm (not more than 1mm below a 1000mm straightedge)
5. Any exposed edges should be finished with an edging trowel (push in not down) ensuring above tolerances are maintained, edge shrinkage is usually apparent.
6. Any edges to brick or c section should be finished proud of edge, the setting of melamine with silicon will assist practically with C section.
7. Trowelling too early will cause undulations which will defect the floor. In some instances, this can cause significant grinding work or inability to polish the floor. This will incur a cost to rectify or complete an alternate finish.
8. Trowelling the surface using hand trowel on smaller/drainage areas or mechanical (helicopter) trowel on all other areas will reduce the size of air pockets and ensure a flat finish. A second helicopter troweling to achieve burnished finish will also disperse additional air pockets and seal off the top of the slab. This will also help with moisture retention and therefore slow the initial curing and reduce surface cracking. Additional panning of the surface will eliminate as many surface imperfections as possible, increase surface flatness and the amount of cream at the slab surface required for zero exposure floor work. For large slab areas it may be beneficial to consider having more than one operator completing these steps. The use of a laser level is highly recommended.
9. Shower recesses and waste water drains only require a minimal fall of no more than 10mm over 1m. A sacrificial drain should be installed at the final finished height and concrete must be worked and finished evenly and tight around drain to the desired finish.
10. Waste water pipes must be left protruding from the slab as we cut them off level with the slab during the polishing process. **If pipes are not to be cut off they must be marked clearly.**
11. Floor heating and other wires protruding from the concrete must have conduit to protect them from being cut off **and be clearly marked.** Hydronic floor heating requires a layer of mesh secured soundly over the hydronic system and concrete needs to be finished 30mm above that. After we grind the hydronic system will be the required depth of 25mm.
12. Any brick acid washing must be completed prior to our start.

### Please provide us prior to start:

- The batch report (which includes all mix details such as additives, oxides, aggregates, MPA, etc.),
- Concrete supplier (name and contact details)
- Concrete installer (name and contact details)

This enables us to have the right products on hand and communicate with others involved in the flooring product in a timely and efficient manner when required.

### GENERAL INFORMATION FOR SLABS

1. Whatever finish is left by the concreter is what we polish. Plucks, dips or visual defects which will not be contacted by our tools will not be polished therefore resulting in dull patches.
2. CONCRETE WILL CRACK – To reduce the amount of cracking the following options are available:
  - Addition of extra steel – standard mesh as per BCA may be enhanced with heavier and additional steel
  - Pouring at 32 mpa.
  - Sound base for slab whether suspended or not (additional supports, compact fill) – correct site preparation and cooler weather will help reduce cracking.
  - Key areas include internal corners and along beams and piers (strip piers will dry at different rates to the remainder of the slab and will cause shrinkage cracking)
  - Timing, (Early morning pours preferable due to reduced work time with MPA) also taking weather forecasts into consideration should be of high importance when pouring for polished concrete.
3. The addition of oxides will change the concrete colour and appearance of the floor. We recommend our clients speak to their concreter/concrete supplier about the aggregate, cement, sand or oxides available to tailor a mix to achieve the desired flooring colour. Any changes from a standard mix may incur additional cost.

\* Zero exposure polishing or coating systems are completed as a single stage and therefore done after building has commenced. Please see process information on the flooring system chosen for more details.

\*\* Grouting systems are not practical with zero exposure concrete floors. Any surface imperfections such as unevenness, cracks, pitting, discolouration, whip marks and air holes **will be visible after polishing or coating**.

**SPECIAL NOTE:** While you are free to choose your own concrete supplier please be aware that our work is very reliant on the content within mixes being used. Regrettably for this reason all our warranties and quality assurance are void if using Baxters concrete or Mawsons concrete and/or any non-approved curing agent or additive in the concrete mix.

### DISCLAIMER

We would like to believe that the above results are achievable by all experienced concreters however as Spec Floors cannot guarantee someone else's work please be aware once the concrete is installed - if there are surface defects it may not be possible to rectify them and/or achieve the exact look you are aiming for in your system of choice.

Generally if defects occur for any reason from the pour to remove them we must use cutting tools. This results in exposure of the aggregate (at least in some areas). Having exposure requires several changes to our installation processes and additional steps, such as grouting and further refining may be required. This also affects our scheduling, time required on the job and therefore cost. It is also for this reason it is recommended that our clients select an aggregate with similar or complementary colours to the cement mix so that any exposure will not detract from the desired look.

If the appearance of zero exposure concrete is of highest importance to the client and surface imperfections are too great it may be possible to correct the surface using additional topping products. The cost and time schedules involved in correcting the slab in this way can only be confirmed after assessment of the slab.

For the reasons above we recommend notifying us as soon as the slab is laid so we may assess it for suitability of zero exposure flooring.