UNIVERSAL FLOORING
The Universe is at your feet.

Web: www.universalflooring.net.au
Email: Info@universalflooring.net.au
Contact: Benjamin: 0477553071
ABN: 65314989487

Guidelines for New Slabs

There are still a number of opinions regarding slab preparation and finishing. As such the following guidelines have been developed from the experience we at Universal Flooring have with concrete.

1. 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
Increasing the strength (mpa) of the concrete – This method will also enhance the shine for polished concrete and strengthens the colours of cement if added. It will also speed up the curing period. We recommend pouring at 32mpa.
Sound base for slab whether suspended or not (additional supports, compact fill) – correct site preparation and cooler weather will help reduce cracking.
Timing, (Early morning pours preferable due to reduced work time with MPA)
Job Planning taking weather forecasts into consideration
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)
2. Minimal or no use of retarders is required, in particular the paint on products which will cause additional removal costs.
3. 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.
4. 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 over the hydronic system and concrete needs to be 30ml above that. After we grind it will then give the required depth of 25mm for the Hydronics.
5. The addition of extra aggregate will change the appearance of the floor with a large variety of stone available. Examples of options include, but are not limited to: standard quarry mix, blue metal, Tarawingee stone and Myrtleford stone. You may choose from different grades or sizes of aggregate – 7mm, 10mm or 20mm.
6. As a guideline aggregate has an MPA of approximately 180. Standard concrete has an MPA of 25. Therefore, polished concrete with the addition of hardeners improves the cement MPA by 3 - 4 times to 75 – 100 MPA. The result is a much harder floor surface than standard concrete and a more decorative finish.

Installation of the concrete

Ultimately we are seeking a flat concrete finish with minimal air pockets and even distribution of aggregate. The following points will assist towards the achievement of these key points:

1. When pouring inside brick work the use of neoprene foam to raise the height of the actual slab by approximately 5mm above the brickwork avoids damage and allows for simpler troweling and grinding.
2. The slab, when being poured, should be done as per exposed aggregate – poured, vibrated and screeded as you go. This eliminates footprints in the finished concrete. Should you have to walk back through the wet cement footprints must be filled with concrete not slurry.
3. Troweling the surface using hand or mechanical (helicopter) trowel 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 down and therefore reduce surface cracking.
4. Floor drains need to be set up with absolute minimal fall and not deeply dished as per normal practices. (Approx. 10mm over 1m.)
5. If you decide to do casting or seeding of aggregate, stone or other objects (ie glass) into the top layer of concrete instead of including them in the whole concrete mix it needs to be done after the screed and before bull floating and troweling.