

Concrete Finishing Instructions

1. 20-25 MPa Concrete to be placed as per *NZS3109 Section 7*. Rapid stick vibrate to try and eliminate air bubbles.
2. Do not drag or over vibrate as heavier aggregate will sink lower and more cream will rise to the surface.
3. Concrete to be finished as per *NZS3114 Class U3*. **Taking care that the slab is as flat as possible**, in order to achieve a consistent aggregate finish, any depressions in the slab must be filled with the concrete mix, not just the slurry (cream). N.B. our planetary grinders run 3 discs on a flat axis, high points will receive more grinding (show more aggregate) while low points may be missed all together (left bald – no aggregate).
4. Care must be taken **not to let screeds or other tools settle in the mix** during the concrete pour as these lines will appear once the top surface has been ground, (also watch for foot prints and clay on boots or any other foreign objects like polystyrene), any holes created by boots etc must be filled with concrete (not slurry). Any “seeding” of the surface should be done now. Additives can be things like chunks of glass, special aggregate, etc. Make sure they are well coated with concrete before inserting in the surface, and pushed about 1mm below the surface
5. After the concrete has been screeded and bull floated, use a stick trowel to remove bull float lines, then the floor will require a power float finish, normally a couple of passes is sufficient (do not over power float -burnish).
6. The power float is to minimise the air holes in the surface of the slab, making it less porous.

Grinding/Polishing procedure



Diamond Polished Concrete. Science and commonsense = better floors

Stage 1. 7-10 days after concrete is poured.

Depending on the MPa rating and drying conditions the concrete should be hard enough for the first grind. This is before any building takes place. If the finish requires decorative cuts, these can be cut now and filled using a non-shrink polymer grout. The slab should now be covered with 250 Micron Polythene (black plastic) for protection against staining during the building process.

Stage 2. This takes place after the framing is complete, the roof is on and the external cladding and joinery is in place, but, before walls are lined. The floor is fine ground to 80 grit. A slurry coat is applied if there is excessive aeration in the concrete. This is allowed to dry overnight, the slurry is ground off with 120 grit diamonds.

Grind and seal option. If the floor is to be finished with a topical sealer, 1 coat is now applied (if the concrete is dry enough). The floor is then covered again with 250 micron polythene.

DPC - Diamond Polished option. The floor is diamond polished to 100 grit (resin). The floor is densified with Creteshield DN. The floor is then diamond polished through the grades to the desired finish. DPC-400 (matt), DPC-800 (semi gloss), DPC-1500 (semi high gloss) or DPC-3000 (high gloss). The floor is now treated with Creteshield SR, a surface stain resistor. At this point it is important for the slab to be covered, to protect against damage in the final stages of construction.

Stage 3. After walls are painted and fit out is completed.

Grind and Seal option - The floor is lightly sanded, cleaned and the final coat of sealer is applied.

DPC option – The floor is cleaned and buffed.

*This is only a guideline based on our own experiences, actual procedures may be adjusted to suit circumstances.