

Recommendations For Concrete To Be Polished

Preferred Mix Design Specs

- 3500 - 5000 psi mix after 28 days. We recommend 4,000 psi for best results.
- Low water: .45 water/cement ratio.
- Slump: 5" ± 1/2". Minimize driver added water to maintain a 5" slump at point of discharge without compromising a .45 water content ratio.
- No air entraining.
- No calcium chloride.
- Other Admixtures - OK, in moderation.
- Pozzolans - not recommended, but no more than 15% cement replacement.
- Aggregate size, shape, and coloration need to be considered, as aggregate may become visible during polishing.

Preferred Flatwork Finishing Specs

- Preferred Floor Flatness (FF) of 50.
- Preferred Floor Levelness (FL) of 35.
- Alternative to FF/FL is the strike-off method:
 - 0" - 1/8" is favorable
 - 1/8" - 1/4" is wavy/unfavorable
- Laser screed to ensure flatness.
- Bull-float smooth, at 90 degrees to the screed pull direction, vibrate, consolidate, and level to specified elevation, pan-finish floor from edge to edge, with no rough areas.
- Mechanically trowel with minimum 3 passes. Do not allow trowel to run dry, or burn.
- In areas that receive hand troweling, make sure the concrete has been well consolidated and troweled as tight as possible.
- Lightweight Concrete: Not allowed if aggregate exposure is required.
- Concrete Curing: minimum 8 days water cured or dissipating, water based curing compound applied.

Curing

- Water mist-cure for 8 days, if possible.
- If a curing agent has to be used, ensure it is water based and UV dissipative.
- Polishing can begin after 28 days.

Other Considerations

- Appearance of expansion joints, at perimeter masonry walls, for example, needs to be considered.
- Control joints, if desired, placement, width, and depth need to be considered. Without control joints random cracks may occur.
- A floor with high or low spots will result in waves in the polished floor and/or varying degrees of aggregate exposure.
- The general contractor must supply access to adequate electrical power: 220v single and three phase, and 20 amp 110v.
- All trades need to be reminded that the concrete will be used as the finished floor and should be treated accordingly. No pipe cutting.
- Floor drains must be placed 3-4mm below finished floor. Brass or stainless in-floor drains may be polished along with the concrete. Plated floor drains must be covered with masonite or removed.
- Polishing the concrete prior to partition placement is preferable, and, if possible, will result in considerable savings.
- Polished floor must be protected with Ramboard, or equivalent, seams taped, not to the floor.