THE BENEFITS AND BEAUTY OF POLISHED CONCRETE
What is Polished Concrete?

Different Applications of Polished Concrete

Problems with Conventional Flooring

Benefits of Polished Concrete - A Summary

Floor System Options
WHAT IS POLISHED CONCRETE?

Polished concrete is a process which enhances the natural beauty of existing concrete by hardening and polishing the concrete. There are two primary methods to creating this shine: Topical or Mechanical. The aesthetic value of these two processes are not equal, and it is important that customers understand this.

• A **Topical Polish** is an inexpensive process that will give the surface of the concrete a smooth, sealed appearance. The concrete will retain its course texture, and any inconsistencies in the surface will remain visible.

• A **Mechanical Polish** will grind and seal the surface of the concrete, giving the appearance of a rich stone-like finish with a deep sheen luster. The surface will be flattened, and ground smooth to remove any course texture or ridges.
MECHANICAL POLISHING

• A mechanical grinding and polishing process that utilizes industrial diamond tools and penetrating chemical hardeners to level, densify, polish & seal the concrete floor surface.

• Mechanical polishing offers clients a deep, rich luster finish, a flattened surface, and a glossy appearance.
Summary of Benefits-Mechanical Polishing

- Competitive first cost
- Low annual maintenance cost
- Low life cycle cost
- Ideal for new construction or restoration projects
- Little down time during installation
- High traction
- Environmentally friendly
- Longevity
- Colored concrete options
- LEED (Leadership in Energy and Environmental Design) Green Building Rating System points toward certification
COMMON PROBLEMS WITH CONVENTIONAL FLOORING SYSTEMS

• Dusting/Efflorescence

• Hydrostatic Pressure

• Spills and Stains
COMMON PROBLEMS WITH CONVENTIONAL FLOORING SYSTEMS

• Coating Failures

• Vinyl Composition Tile Failure

• Down Time During Installation
COMMON PROBLEMS WITH CONVENTIONAL FLOORING SYSTEMS

• Constant Abrasions

• Delamination/Spalling

• Coefficient of Friction
COMMON PROBLEMS WITH CONVENTIONAL FLOORING SYSTEMS

• High Maintenance

• Recurring Expenses
BENEFITS OF POLISHED CONCRETE
BENEFITS OF POLISHED CONCRETE

Elimination of Dusting from Efflorescence
In ordinary unpolished concrete, tiny particles of dust are pushed to the surface through an upward force called efflorescence. Dusting forces epoxies off of the surface of concrete floors, and can make maintenance a costly priority.

Stain-Resistant
By densifying the surface, polished concrete transforms a porous concrete floor into a tightened surface dense enough to repel water, oil, and other contaminants, preventing them from penetrating the surface.

Improved Reflectivity and Ambient Lighting.
The reflective properties of a polished concrete floor increases the light levels in your facility, which can lead to reduced energy bills through lower lighting levels and reduced HVAC loads.
BENEFITS OF POLISHED CONCRETE

Increased Slip Resistance
Polished concrete, though quite shiny, does not create a slippery floor. In fact, the benefits of mechanically grinding and flattening the floor will increase the coefficient of friction more than ordinary concrete. Polished Concrete often exceeds OSHA standards for floors. (ASTM C 1028)

Less Maintenance.
Most floor systems, including tile and linoleum, require aggressive scrubbing to maintain a clean environment. Polished concrete surfaces are tightly compacted, reducing stains, and do not require waxing or stripping to maintain the sheen.

Cost-Effective
Polished concrete will reduce energy and maintenance costs significantly through improved reflectivity, reduction in upkeep (such as waxing), and reduced tire wear.
LEED (Leadership in Energy and Environmental Design)
Polished concrete not only utilizes existing concrete surfaces, eliminating additional materials such as coverings/coatings and moving towards sustainable building, it also contains no noticeable VOC’s, making it a candidate for points in the LEED Green Building Rating System certification process.

Improved condition for old floors. (Mechanical Polish Only)
As concrete ages, surface stress, delamination, curled cold joints, and other problems can arise, making for an unsightly floor. Mechanically grinding the floor will remove the top part of the surface of the old concrete floor and polishing will then harden it, strengthening old, deteriorating, weak concrete, as well as increasing it’s impact and abrasion resistance.

Reduced Tire Wear (Mechanical Polish Only)
The rough, uneven texture of natural concrete causes tires to abrade, adding to their wear. A polished concrete floor system will level the joints and make the entire surface smooth, preventing this abrasion.
No Production/Plant Shutdowns. (*Dry-Polish Mechanical Only*)

Dry-Mechanically polished concrete can be put into service immediately after the process is complete. Due to the cleanliness of the process and the lack of toxic or hazardous chemicals, floors can often be serviced while the plant is in full production.
FLOOR SYSTEM OPTIONS
OVERVIEW

• **Sheen Level**
  Matte Sheen
  Low Sheen
  High Sheen
  Glossy Shine

• **Aggregate Preference:** Cream (very little stone), Small (small stone), Large (aggressive grind down to large aggregate)

• **Color Choice:** There are hundreds of color choices on the market, and most flooring contractors can order specialty colors

• **Sealants**
• **Saw Cuts**
• **Borders**
MECHANICAL SHEEN OPTIONS:
MECHANICAL: MEDIUM SHEEN
800grit grind and polish
MECHANICAL: GLOSSY SHINE
3000grit grind and polish
DECORATIVE OPTIONS
DECORATIVE OPTIONS: AGGREGATE EXPOSURE

Cream Finish

Small Aggregate Finish (Salt and Pepper)

Large Aggregate Finish
DECORATIVE OPTIONS: COLORS
DECORATIVE OPTIONS: SAW CUTS
DECORATIVE OPTIONS: LOGOS
QUICK SPEC...

- Straight bag mix
- Max 15% Fly Ash
- Vibratory screed to drive air out
- No add mixtures other than standard water reducer
- No fibers
- No more than 3 passes with power trowel
- Poly blades work great (if possible)
- Avoid burn marks
- Floor flatness of 40 or more *avoid waves, high and low spots*
- Try to avoid curling/sloping along wall edges as this will create issues during install and hinder the look of the finished floor
- Cure and seal – Dissipating cure *avoid heavy application/more material than necessary and avoid puddles*
- Or wet cure *Ideal*
COORDINATING YOUR POLISHED CONCRETE PROJECT

• To offer clients the best pricing and end result, plan for the concrete polish to occur BEFORE the interior walls and fixtures are in place whenever possible.

• Consider edging options (border striping, hand tooling, covered cove, etc) to ensure work is sequenced properly.

• The final polish is dependent upon the flatwork that proceeds it. To prevent problems, work with the General Contractor to ensure your specification is closely followed.

• Choosing polished concrete as a finished floor can affect lighting due to increased light reflectivity.
LOCATING A QUALIFIED POLISHER

Things to consider:

- Years of specific *Concrete Polishing* industry experience
- Industry specific references
- Experience in both new construction & restoration work
- Craftsman certifications and qualifications
- Capability to handle project size & schedule
- Experience with decorative polishing *Color Designs, Decorative Saw Cutting, Logos, Etc.*
- Type of equipment and process utilized
- Polishing methods *especially important for ‘green’ projects!*
THANK YOU!