

# POLISHED CONCRETE

## Points of Discussion

- What is Polished Concrete?
- Polished Concrete v/s other flooring solutions
- Benefits of polished concrete
- Recommendations
- Method Statement
- Final Results

## What is Polished Concrete?

‘Polished Concrete’ the word self explains that the ready-mix of cement, concrete & aggregate, which was just poured to your floor as an underlayment, with certain State-of-the-art process, makes it a glossy & shining surface.

Polishing concrete is a classy way of making your industrial floors look Fancy & Adorable.

This picture very well explains you the final finish.



POLISHED CONCRETE

Polished concrete system replaces most of the COST-AFFECTING choices to a very COST-EFFECTIVE choice.

Before Polishing the Concrete



Coin reflection Test.

After Polishing the Concrete



*Photo Courtesy: Project in Steel Factory, DIC*

## Polished Concrete v/s other flooring solutions

Description	Polished Concrete	Floor Coatings, such as Epoxy, Polyurethane	Marbles / Ceramic Tiles	Wooden Floor
Abrasion resistant	✓	✓	X	X
Wear Resistant	✓	X	✓	X
Temperature resistant	✓	Epoxy coat can withstand room temperatures, however, PU coat goes a little more beyond than that of an Epoxy.	✓	✓
Anti-slip / Slip Resistant	✓	If anti-slip aggregate is applied	X	✓
Anti-skid	✓	If anti-slip aggregate is applied	X	✓
Water / chemical / oil resistance	✓	✓	X	X
Foot Traffic	✓	✓	✓	✓
Medium to heavy Traffic	✓	✓	X	X
Extreme Heavy Traffic	✓	X	X	X
Maintenance required	Whenever the glossiness is faded*	Every 2 years or on wearing	Every 6 months to 1 year for polishing	On wearing
Maximum Warranty	15 years	5 Years (depending upon manufacturer & floor)	Limited to maintenance	On wearing
Lifespan	Till the slab is not replaced, could be 50 to 100 years or more	2 – 5 years	Limited to breaking or maintenance	2 – 10 years or more
Cost	Cost effective	Medium to High cost	Costly	Medium to High cost

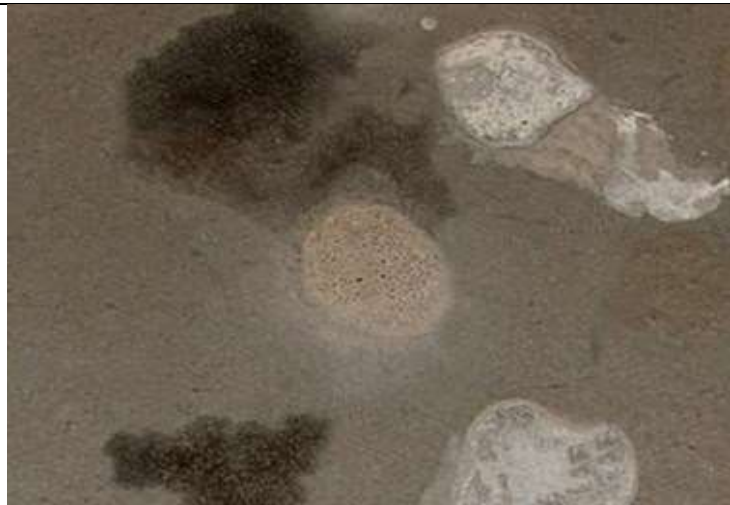
*The above chart is an approximate comparison. Please be aware that the above figures change in different geography & Nature of application.*

## **Benefits of polished concrete include:**

**Elimination of dusting.** In ordinary unpolished concrete, tiny particles of dust are pushed to the surface through an upward force. This is more commonly known as concrete dusting. Dusting forces epoxies off of the surface of concrete floors, and can make maintenance a costly priority.



**Transformation of porous concrete into a dense surface** that inhibits water, oil and other contaminants from penetrating the surface.





**NOOR AL KHALDIAH**  
TECHNICAL CONTRACTING L.L.C

**Increased strength**, for old, deteriorating, weak concrete finishes, with more abrasion resistance (ASTM C779) and an increase in impact resistance (ASTM C805-97), as well. There are dozens of ways for concrete floors to break as they age: rain damage, surface stress, delamination, improper curing, curled cold joints, joint shoulder failure...the list goes on. Our System actually removes the top part of the surface of the old concrete floor (including any patchy, partial, or whole coatings), and hardens the exposed surface beneath. Old, deteriorating, or weak concrete is strengthened, and its impact and abrasion resistance is increased.







**NOOR AL KHALDIAH**  
TECHNICAL CONTRACTING L.L.C

**Increased ambient lighting**

which will naturally enhance the beauty of your floor and reduce the cost of lighting. It is reported that if you turn off every third light in the area of polished concrete, you can save in energy costs too.



**Higher levels of co-efficient of friction than any coating on the market.**

Wet or dry, our polished concrete floor surfaces meet, and most often exceed, OSHA and ADA standards for slip resistance. Kept clean and clear of debris, polished concrete floors tend to be less slippery than waxed surfaces.



**Elimination of tire marks** from fork trucks, vehicles and industrial type hoppers and parts baskets. When a forklift burns out on a coated floor, the friction caused between its tire and the surface leaves a mark. This doesn't occur on a polished concrete floor as there are no resins to burn on the surface.





**NOOR AL KHALDIAH**  
TECHNICAL CONTRACTING L.L.C

**Decrease in overall fork truck tire wear and tear** (due to the smoothness of the floor and the leveled “curling” joints). In heavy industrial facilities, rough and uneven surfaces cause tires to wear out rather quickly. Most concrete floors have small "curling" joints, from where the concrete bows upward on the edges during concrete curing. Polishing Concrete on these areas will level the joints and make the entire surface smooth, making tires last much longer.



**Decrease in floor maintenance and less drag on cleaning equipment;** making brushes, pads and mops last longer. Most floor systems, even ordinary concrete floors, require aggressive scrubbing in order to maintain a clean environment and nice appearance. Oil, paint, and other staining spills can leave lasting impressions on most surfaces. A Natural Polished Concrete Floor System doesn't require this intense scrubbing -- the surface is so tightly compacted that it actually repels oils and other substances. This makes cleaning much easier and a maintenance schedule less demanding than with other floors.





**NOOR AL KHALDIAH**  
TECHNICAL CONTRACTING L.L.C

**Polished areas 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, many companies like food manufacturing corporations, pharmaceutical manufacturers and other medical supply corporations have made the strict condition standards that their floors require polished concrete. In many cases we install the polished concrete floor system while the plant is in full production.



**Cost-Effective.** Polished concrete is one of the most economical, cost effective flooring alternatives out there. The reduced costs associated with saved energy, reduced tire wear, maintenance reduction, and especially the long-lasting durability shows that polished concrete is a budget sensible, as well as beautiful, flooring system.







**NOOR AL KHALDIAH**  
TECHNICAL CONTRACTING L.L.C

**No More Stripping and Waxing.**

With a polished concrete floor system there is no need to wax or strip the floor. All of your allocated maintenance labor and material costs for stripping and waxing can now be eliminated and added to your bottom line.



**Beauty.** Polished concrete floors are second to none in durability and appearance. It is often mistaken for marble due to its smooth sleek surface. Its aesthetic value makes polished concrete a viable option for most facilities, whether it is an industrial manufacturing plant, government office building, or high-end grocer.



**Longest-Lasting Floor Solution**

**Available.** There is simply no comparison to other floor systems when it comes to the life of a polished concrete floor. Even the most durable carpet, linoleum or VCT floors will require replacement at some time, whether it is ten or even twenty years later. Polished concrete floors will be there as long as the slab exists, whether that be forty, fifty, or one hundred years later. With proper maintenance and an occasional re-polish, polished concrete floors provide savings short and long term.



**Sustainable.** Polished concrete is intrinsically green because it dematerializes a project, reducing the need to bring in additional coverings or coatings that end up in land-fills upon their eventual replacement.



## Recommendations

Polished concrete can make any floor beautiful, however, we still list out few of our recommendations.

1. Coffee Shops
  2. Industrial Units
  3. Retail Showrooms
  4. FNB processing factories
  5. Paper & Paper products factories
  6. Banquets
  7. Labs
- & more.....

## Method Statement

### **Preparation before Concrete polish**

- To check with the contractor for the concrete screed and its complete technical specifications.
- Checking the hardness of the floor
- Checking for the gaps if concrete screed was poured in tile format & look for chemical to fill the gaps.
- Get suppliers ready for chemicals such as sealant / grout

### **Polishing Concrete**

- Rough grinding with floor grinder Q9 and metal pads 3T-3 HF(30#60#80#150#)
- Rough grinding with floor grinder Q9 and resin pads 4FSZ (50#100#200#)
- Cleaning floor --delete dust and dirt (clear up a little not too wet)
- Harden the floor---Dr. Crete Densifier ( Use spray-gun if available)
- Reaction between floor and densifier in 2hours - 24hours (24 hours will be better)
- Fine polishing with floor-grinder Q9 and resin pads 4FSZ (400#800#1500#)
- Fine polishing with floor grinder Q9 and resin pads 4FSZ (3000#) after 20minutes
- Buffing with Polishing machine 175AE or 78k



## Final Results

