



## Defining polished concrete...

As the polished concrete industry grows, it becomes increasingly critical that standards for polished concrete are formed, and that providers of the craft are trained and knowledgeable.

A Certified IPCI Craftsman has successfully completed the intensive IPCI training, involving a combination of classroom instruction and hands-on experience. IPCI is a *technique driven* institute that instructs based on methods that will produce the highest quality polished floor.



*"From concept to performance  
-bridging the gap."*

# What is *polished* concrete?

Concrete slabs have an inherent natural beauty, but until recently, residential and retail facilities preferred floor coverings, such as vinyl composite tile, decorative tile or terrazzo, to make up for the perceived lack luster of concrete's natural state. However, the benefits of natural concrete, such as cost savings and high-traffic durability, have long been a familiar solution for industrial sites.

The polished concrete industry is rapidly becoming very popular to all industries, as it provides durability and aesthetic value. Both topical and mechanical polishing can result in a glassy appearance, however, are derived from very different techniques. Differences in these processes greatly affect cost as well as finish and surface longevity.

**polished con-crete (noun):** Polished concrete is a process which *enhances the natural beauty* of existing concrete by hardening and polishing the concrete to create a glassy finish. There are two primary methods to creating this shine: Topical or Mechanical.

## THE POLISHED CONCRETE SPECTRUM

Topical and Mechanical: Comparing your Options



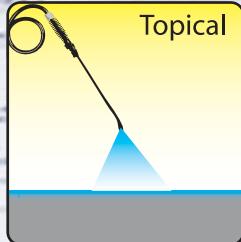
	Cost	Longevity (years)	Benefits Comparison						Sheen Level			Aggregate Exposure			
			New Construction	Rehab Construction	Reduces Tire Wear	Improves FF #s	Slip Resistant	LEEDs Points	Matte Finish	Low Sheen	High Sheen	Glossy Shine	Cream Finish	Small Aggregate	Large Aggregates
Topical			<b>Level 1: Scrub and Seal</b>	\$	1y	x				x			x		
			<b>Level 2: Scrub, Buff, and Seal</b>	\$	1-2y	x					x		x		
			<b>Level 3: 4-Step Resin</b>	\$\$	2-3y	x	x			1pt	x	x	x	x	
Mechanical			<b>Level 1: 100 grit</b>	\$\$\$	3-5y	x	x	x	x	2pts	x		x	x	x
			<b>Level 2: 400 grit</b>	\$\$\$	3-5y	x	x	x	x	2pts		x		x	x
			<b>Level 3: 800 grit</b>	\$\$	3-5y	x	x	x	x	2pts		x		x	x
			<b>Level 4: 1500/3000</b>	\$\$ - \$\$\$	3-5y	x	x	x	x	2pts		x	x	x	x



Before Polishing



After Mechanically Grinding and Polishing



### Topical

A topical application of densifiers and sealers are applied to the surface of the concrete. Once they soak in, they will react with the concrete, creating a hardened, less porous surface.

### Benefits:

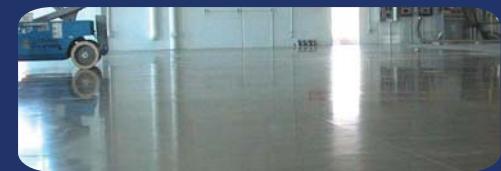
- Cost: \$ to \$\$
- Repolish Costs: \$ to \$\$
- Lasts 1 to 2 years
- Matte to High Sheen
- Good for new construction
- Easier to clean than unfinished concrete
- Reduces dusting
- Due to high wear rates, reapplication may be desired annually
- Natural inconsistency in sheen due to properties of the concrete
- Some applications may be LEEDs friendly (*if no noticeable VOCs are used-1pt*)



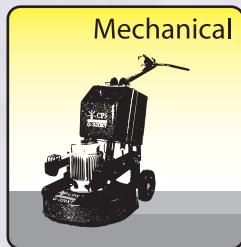
Level 1: Matte Finish: Scrub and Seal



Level 2: Low Sheen: Scrub, Seal and Buff



Level 3: High Sheen: 4-Step Resin Polish



### Mechanical

A mechanical grinding & polishing process that utilizes industrial diamonds & impregnating hardeners and sealers to level, densify, polish & finally seal the floor from within the interior of the floor surface.

*Wet Polish:* Extends the life of diamond tooling by using water to cool, however, creates a slurry which must be disposed of.

*Dry Polish:* A popular polishing method as it does not create a slurry, and contains 99.6% of airborne dust.

### Sheen Level/Finish Options

- Level 1: Matte Finish: Grind and polish to a 100 grit
- Level 2: Low Sheen: Grind and polish to a 400 grit
- Level 3: High Sheen: Grind and polish to a 800 grit
- Level 4: Glossy Shine: Grind and polish to a 3000 grit

### Benefits:

- Cost: \$ to \$\$\$
- Repolish Costs: \$ to \$\$
- Lasts 3 to 5 years in high abuse (industrial/warehouse) applications
- Lasts 5 to 7 years in mild to moderate use (residential and retail) applications
- Ideal for new or rehab construction
- Improves FF Numbers
- Matte to Glossy Shine
- Consistent, Uniform, Monolithic shine
- Dry system can be completed without plant shut downs
- Food/ASTM cleanliness
- Quick turn time for foot traffic
- LEEDS friendly (2pts possible for no VOCs and reuse of slab)



Level 1: Matte Finish: 100 grit



Level 2: Low Sheen: 400 grit



Level 3: High Sheen: 800 grit



Level 4: Gloss Shine: 3000 grit

# Decorative *options*

Polished concrete is extremely versatile, and allows for abundant options including colorants, saw cuts, engraving, even stenciled art, to create an aesthetically appealing floor that is also durable.

At nearly a fraction of the cost of marble or terrazzo, a polished concrete floor is a viable alternative that can create your clients vision without breaking the budget.

## Saw Cuts



## Engraving/Stenciling



## Aggregate Levels



Cream

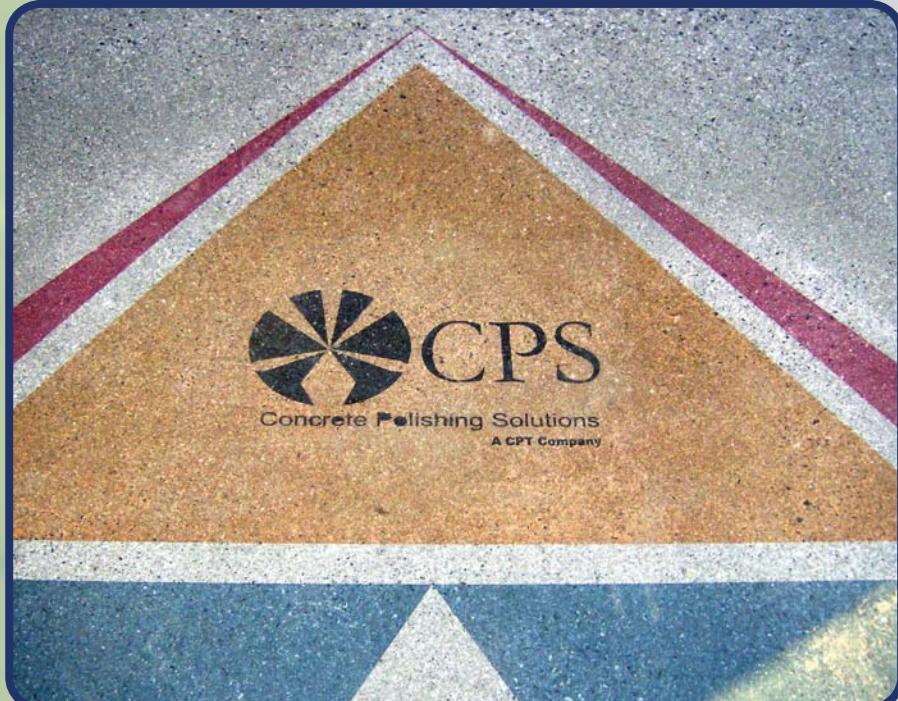
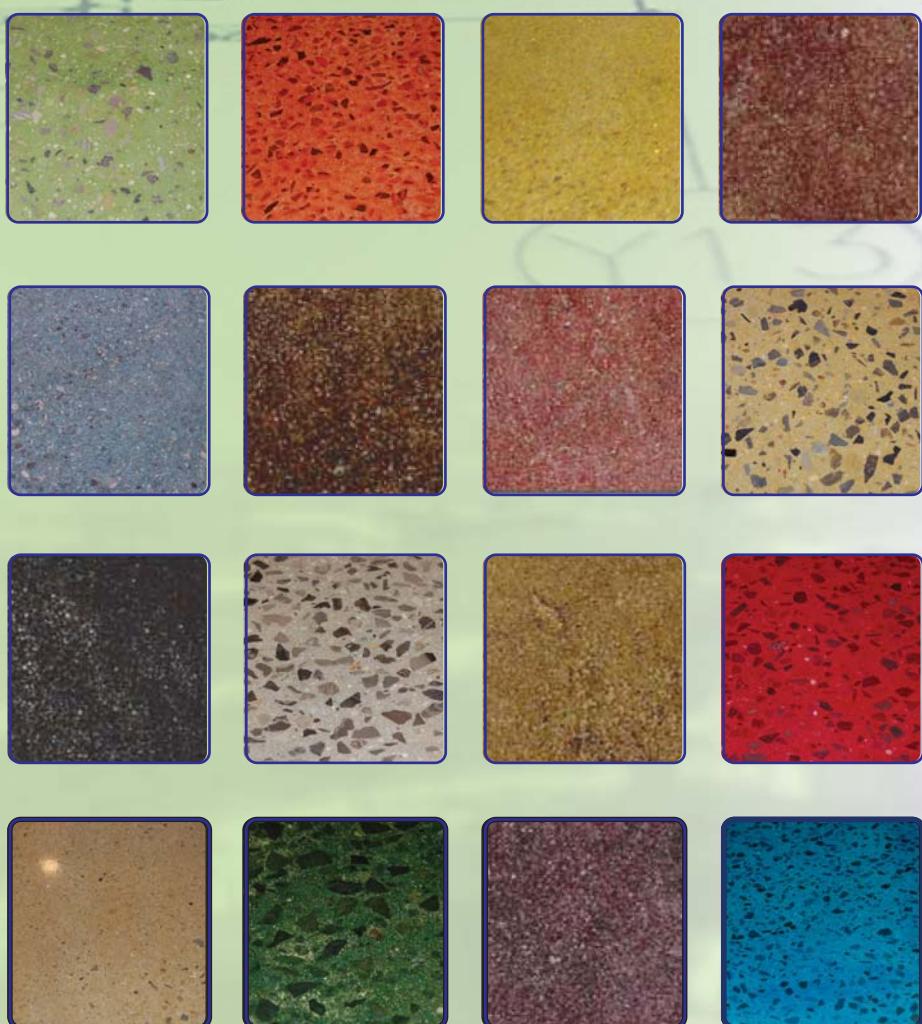


Small Agg

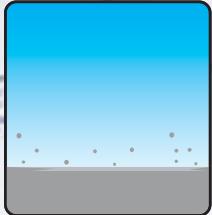


Large Agg

## Color Choices

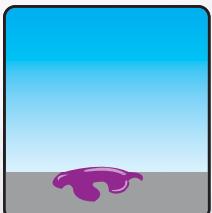


# Why *utilize* polished concrete?



## Elimination of Dusting from Efflorescence

In ordinary unpolished concrete, tiny particles of dust are pushed to the surface through an upward force called hydrostatic pressure, resulting in efflorescence. Efflorescence leads to dusting, which forces epoxies off of the surface of concrete floors, and can make maintenance a costly priority.



## Stain-Resistant

By densifying and sealing the surface, polished concrete transforms a porous concrete floor into a tightened floor that is 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 lighting in facilities. Increased ambient lighting will reduce the energy bill as well as look beautiful.



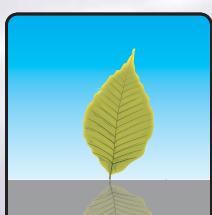
## Increased Slip Resistance

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 when compared to ordinary concrete. Polished concrete often exceeds OSHA standards for floors. (ASTM C 1028)



## Cost-Effective

Polished concrete will reduce energy and maintenance costs significantly through reflectivity and ambient lighting, reduction in upkeep (such as waxing), and reduced tire wear.

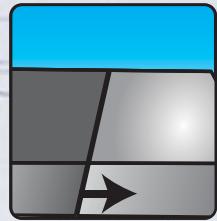


## LEEDs Friendly

Polished concrete not only utilizes existing concrete surfaces, eliminating additional materials such as coverings/coatings and moving towards sustainable building, it typically contains no noticeable VOC's, making it friendly for any USBG LEEDS project.

### **Improved condition for old floors. (Mechanical Polish Only)**

As concrete ages, surface stress, delamination, curled cold joints, and other problems can arise. Mechanically grinding the floor will remove the top surface of the old concrete and polishing will then strengthen it, increasing it's impact and abrasion resistance.



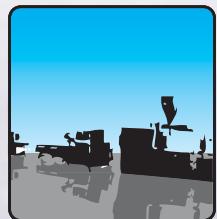
### **Reduced Tire Wear (Mechanical Polish Only)**

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)**

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.



### **Less Maintenance.**

Most floor systems, including tile and linoleum, require aggressive scrubbing to maintain a clean environment and nice appearance. Polished concrete surfaces are tightly compacted, which reduces staining, and eliminates the need for waxing or stripping.



# Why IPCI *certified* polishers?

As the polished concrete industry grows, it becomes increasingly critical that standards for polished concrete are formed, and that providers of the craft are trained and knowledgeable.

A Certified IPCI Craftsman has successfully completed the intensive IPCI training, involving a combination of classroom instruction and hands-on experience. IPCI Certification covers everything from the scope of polished concrete, application methods for topical or mechanical polishing, joint filling and patching systems, decorative techniques, even troubleshooting tips for difficult floors.

Unlike some training programs which may be geared toward application of one specific product, IPCI is a *technique* driven institute that instructs based on methods that will produce the highest quality polished floor, regardless of which product brand is used.

Additionally, IPCI stands behind its contractors. We build a relationship with our members, and we want to ensure each polishing provider is performing to the highest quality standards to consistently produce results that exceed their customer's expectations.



Contact your local certified  
craftman for more information:



*certified*  
look for the IPCI Seal  
[www.IPCIconline.org](http://www.IPCIconline.org)

