



ABN 73 606 379 944  
13 Duke Street, Paralowie, SA 5108  
Mob: 0438 100 750

## **ConcVert History and Procedure**

ConcVert Pty Ltd is a company that has been established since September 2012. ConcVert was formed in partnership with a very reputable concrete polishing company based in Adelaide. This was done in partnership and not opposition to the previous employer which is a reflection of the integrity and honesty that ConcVert strives to deliver to the customer. Continuous quality improvement is at the forefront of the company's ethos so naturally, the delivery of a quality product is essential to our endeavours. Our attention to detail sets us apart from other companies.

Polished concrete is now a very established flooring option throughout the world. Polished concrete's global status speaks of how popular this type of flooring has become in recent times. It is a low maintenance, high performance flooring option that can be applied to residential or commercial applications alike. Polished concrete can be applied to existing concrete flooring as well as new concrete flooring developments.

ConcVert has partnered with a select group of suppliers to develop a polishing system and a product finish that is hard to be rivalled because of its aesthetic qualities.

ConcVert offers a range of exposure levels of concrete:

- Salt & Pepper
- Minimal Exposure of Aggregate
- Medium Exposure of Aggregate
- 3/4 Exposure of Aggregate
- Full Exposure of Aggregate

As well as finishes:

- Satin

- High Gloss
- Squinty Floor

ConcVert predominantly specialises in high grade mechanically polished concrete but we also offer a number of options to suit the client's need and budget including epoxy topical finishes, acrylic sealers, polyurethane sealers and the like.

All finishes can be applied to internal living, alfresco living, and show room displays. Even driveways and garages can be 'ConcVerted'.

Polished concrete can be applied to ultra-modern as well as more historical settings.

## **Optimal Results**

Most existing concrete surfaces are able to be polished by ConcVert, however, best results are usually achieved when concrete strength is rated at 32 mpa (megapascals).

A megapascal is a pressure measurement unit which is derived from measuring pressure and stress in a substance. A concrete floor with a higher pressure and stress rating will naturally be denser in composition which will ultimately result in a better polished concrete finish. Concrete strengths rated as low as 20mpa can be polished by ConcVert personnel through the application of chemical 'densifiers' which increase the surface tension of a concrete floor, but better results will always be achieved with higher strength concretes. Anything below 20mpa does not have enough surface tension to be polished. Surface tensions rated at 40mpa are harder to initially cut but give outstanding polishing results.

Salt & Pepper finishes cannot usually be achieved with concrete substrates that rate below 32mpa because as the strength of the concrete drops, the density of the concrete is not present to produce a consistent 'fine' result.

New concrete pours are recommended to be left for a minimum of seven days before grinding and should be sealed with an Australian Standard rated curing membrane. Curing is the process in which the concrete is protected from loss of moisture and kept within a reasonable temperature range. The result of this process is increased strength and decreased permeability. Curing is also a key player in mitigating cracks in the concrete, which severely impacts durability.

## **Process of Mechanical Polishing**

Polishing concrete is essentially the same as sanding wood. A coarse grit of diamond is used initially to achieve the exposure level of aggregate the client desires. Subsequently finer and finer grit sizes of diamonds are applied to achieve the polished result of the clients choosing.

Simplistically Conconvert's process is as such:

- 30 grit metal bond diamond to achieve level of aggregate exposure
- 50 grit metal bond diamond to remove 30 grit scratches
- 120 grit metal bond diamond is used to apply acrylic polymer grout as well as remove 50 grit scratches.
- Chemical densifying hardener is applied
- 50 grit resin is used to remove 120 grit metal bond scratches.

Subsequent polishing:

- 100 grit resin
- 200 grit resin
- 400 grit resin (Satin floors are sealed at this grade)
- 800 grit resin
- 1500 grit resin
- 3000 grit resin

Optional:

- 5000 grit resin
- 10000 grit resin

Application of Lithofin solvent based impregnating sealer.

## **Advantages of Polished Concrete**

Polished concrete's biggest appeal is its aesthetically pleasing presentation in many settings. This type of flooring option has the advantage of creating an ultra-modern look or a more colonial/rustic look depending on the décor surrounding it. Polished concrete not only has an impact visually, but is a very easy floor to clean because of its smooth and seamless composition. It is easy to vacuum or sweep with a broom.

Polished concrete won't cause allergy sufferers any reaction as it cannot harbor excessive dust or VOC's (Volatile Organic Compounds). Indoor air quality is noticeably improved when compared with a similar room with older carpets.

It is a great flooring option for the summer months as concrete takes time to absorb heat which keeps the floor cooler for longer. If the architectural design of the house is adequately planned, heating and cooling properties of any concrete substrate can have minimal effect on internal temperatures during the winter months. In floor heating can also be installed with new concrete pours which keeps the concrete at very pleasant ambient temperatures during the winter months.

Polished concrete is a very durable product providing it is maintained well which results in low long term maintenance costs.

Polished concrete is largely scratch resistant when using impregnating sealers.

Polished concrete is fire resistant.

Polished concrete is water resistant.

Polished concrete is highly reflective.

## **Disadvantages of Polished Concrete**

Polished concrete's biggest disadvantage is its propensity toward permanent staining if not maintained properly and diligently. ConcVert personnel have done much empirical research over a period of years and have found that there is no sealer for polished concrete that is 100% stain resistant. On a global basis, nothing exists that will completely protect a polished concrete floor. This is also true of marble and ceramic products. The biggest destroyers of polished concrete products are acidic substances such as:

- Food colouring
- Lemon Juice
- Vinegar
- Tomato Sauce
- Wine
- Bleach
- Toothpaste
- Cooking or engine oil

- Petrol
- Vomit
- Damp organic material that can leech
- Coffee

ConcVert promotes the Lithofin Stain Stop and Stain Stop Plus impregnating sealers as they have been observed to have the best durability results of anything on the market across the world to date. These products offer the most stain resistance but ConcVert recommends if any spills of the above substances occur on a polished concrete surface, they are to be wiped up immediately. If they are left on the substrate for a prolonged period of time, deep etching and discolouration will almost always occur and is usually permanent. Floor restoration is possible should staining occur, but it will involve the regrinding and repolishing of the floor.

Polished concrete can be a cold substrate adding to discomfort during winter if heating and insulation of the setting is poor.

Cracks can possibly occur in any concrete substrate over time through soil movement as concrete is a natural product. This is obviously outside of the control of any polishing endeavour.

Cracks and chips can be patched, but are always evident to the eye.

Concrete is a natural product so inconsistencies and aberrations will always be in the concrete mix. No concrete mix is ever perfect in consistency and these inconsistencies will always be exacerbated by a highly polished finish. Some people love it, some people hate it.

## **ConcVert Polished Concrete Maintenance**

### **Lithofin MN-Easy Care**

Lithofin® MN EASY CARE is a PH-neutral, acid-free, daily use cleaner and conditioner. This product is a high-yielding cleaning and maintenance concentrate, which contains active maintenance components and mildly alkaline cleaning agents based on natural soaps. Properties highly effective agents take up the dirt and so it can easily be removed by wiping. The remaining extremely thin care film is free of wax and does not build any layers. With continued use, the surface's appearance will improve in colour and structure. Lithofin MN Easy-Care leaves a pleasant odour.

#### Directions for Use:

Lithofin MN Easy-Care is always added to lukewarm water. One squirt (approx. 20ml) per 10 litres of water. In case of absorbent, dirty surfaces use a bit more. Stir the solution vigorously until mixed well, creating bubbles. Using a clean mop, get the mop wet with the solution leaving plenty of the solution on the mop. Mop the floor evenly and let the solution air dry. Be sure to keep the ratio of MN EASY CARE and water as consistent as possible. After wiping, allow the residues to dry on the surface, do not rinse with clear water. Use either a floor mop, cloth or cleaning machine for wiping. The best streak-free results are achieved by wiping off dry residue with a dry microfiber mop.

#### Coverage:

Lithofin MN Easy-Care is a high-yielding concentrate and very economical. On large areas which are machine cleaned daily approx. 3 litres per 100m<sup>2</sup> will be needed per month.

#### Advice:

In areas subject to heavy wear and tear and on very dirty surfaces, it may be necessary to occasionally use Lithofin MN Power-Clean.

### **Lithofin MN Power Clean**

Lithofin MN Power-Clean is free of hydrocarbons, low in odour and economical in use. It is a mildly alkaline cleaner, which contains a balanced mixture of cleaning components which guarantee optimal performance. Properties Lithofin MN Power-Clean quickly and effortlessly removes grease and oil, all kinds of general and ingrained dirt as well as floor polish residues, old acrylic emulsions, care products, etc.

#### Field of Use:

Thoroughly cleaning used or exceptionally dirty surfaces.

#### Directions for Use

Apply and evenly distribute Lithofin MN Power-Clean diluted up to 1:10 and wipe the surface. In case of stubborn dirt deposits, apply undiluted or diluted up to 1:5 with a brush and distribute. Allow the product to work for approx. 15 minutes; brush occasionally. Do not allow to dry, add water if necessary. Brush again before wiping up. On large areas, use a squeegee to remove the product. Wash the surface thoroughly with clean water. If the result is not satisfying, repeat the process allowing the product to work longer and brushing more vigorously. Please Note: avoid splashes on sensitive areas such as metal or wood, painted or varnished surfaces, wall paper, etc. Always test the product in an inconspicuous area prior to use. Coverage: as supplied: approx. 10m<sup>2</sup> depending on dirt diluted: up to 30m<sup>2</sup>.

ConcVert recommends the every-day cleaning of your polished concrete floor should be done with Lithofin MN Easy Care as this product is engineered by the manufacturers to compliment and maintain the Lithofin Stain Stop Sealer that has been applied to the floor. The Mn Easy Care has

components of sealer in the cleaning solution that actually adds to the sealer that is already applied to the floor ensuring extended sealer life of the floor.

In the case of stains, spills or the like where a more abrasive cleaner is required, it is recommended to use Lithofin MN Power Clean. It is not recommended to use this product as a regular cleaner on polished concrete surfaces as it can affect the sheen of the polished concrete floor over time. If the sheen is affected, re-application of the Lithofin Stain Stop sealers is recommended to bring back consistency off sheen to the floor.

In the absence of these products being available, ph neutral cleaners are recommended for the cleaning of polished concrete floors as acidic cleaners will quickly destroy a polished concrete surface.

#### Optimal Cleaning and Maintenance of Polished Concrete Floors:

- Dust mop the floor daily with a microfiber pad to keep dirt particles off the floor. Soils act as an abrasive and can ruin the clarity and shine of polished concrete. In domestic settings, weekly dust mopping is usually sufficient.
- If wet mopping the floor, always use clean water and clean mops. If available, a floor buffer with a non-abrasive pad gives the best possible removal of dirt from the polished concrete substrate.
- When wet mopping, use a PH neutral floor cleaner formulated to suspend the dirt particles so they can be more easily removed. Using water only leaves much of the dirt on the floor, where it will eventually abrade and discolor the surface.
- Try to clean spills and stains from the floor as quickly as possible so they don't absorb into the surface.
- Give the cleaner enough time to start breaking down the grime, such grease and other contaminants, and then suspend the particles. If you apply a cleaning agent and then immediately vacuum it or mop it from the surface, the cleaner will not have sufficient time to work.
- In Lithofin MN Easy Care is not being used, make sure the cleaning solution does not dry on the surface. This can be accomplished by cleaning small areas and making sure the entire process is complete before moving on to other areas.

ConcVert has observed through collective experience that well polished and Lithofin sealed floors will easily last between 5-10 years providing the maintenance advice is followed as outlined here.

Should you wish to keep the 'brand new' look of polished concrete, ConcVert recommends a professional clean and re-seal every 1-2 years. Providing the maintenance scheme is followed and spills are kept to a minimum, re-sealing the floor every so often will give a polished concrete floor a prolonged life expectancy before re-grinding and re-polishing becomes a necessity.

## **Customer Expectations**

While ConcVert offers a very high standard of workmanship, ConcVert cannot offer a 'perfect' polished concrete floor depending on what that means in any given customer's mind. Cracking can occur which is out of the concrete polisher's control. Cracks can be filled but not necessarily hidden. All minor defects in polished concrete can show up in natural light reflections on the floor. While the floor may be finished to the highest standard possible, pits and cracks that have been flushed with grouts can still appear 'unfinished' or 'inconsistent' with the rest of the floor when observed in natural light reflectivity. Polished concrete never comes out as perfect as a marble or granite bench top, but even polished bench tops have inconsistencies if observed in the right light.

As eluded to above, the longevity of a polished concrete floor depends on the time and care taken to maintain it. A general rule of thumb is that if one treats their polished concrete floor the same as they would a carpeted floor, they will have a long, happy, fulfilled and cost effective relationship with their polished concrete floor.