



Polished Concrete Finishing Products

Maximising long term architectural appeal

EpiMax 2125

EpiMax 2135/EpiShine

EpiMax 2150

EpiMax 2175

EpiMax 3500

EpiMax 777UHD

EpiMax 900

EpiMax 950

EpiMax 999WB





What needs to be considered for products used in polished concrete?

- **Proven performance**

High end polished concrete finishes can be a time-consuming process. Any products used in the overall process must have a proven track record. They should take advantage of new developments, but they must be tested in the real world before distribution into the wider market.

- **Consistent results**

Consistency is the holy grail of application work. All slabs will vary, but some products just work better, whether they be concrete coatings or densifiers.

Concrete is 85% sand and aggregate, and the balance, 15% percent, is portland cement. During curing of the concrete, it has been estimated that only 20% of the portland cement is converted to calcium hydroxide.

So, in a fully hydrated slab only 3% of the slab is available to convert into calcium silicate hydrate through the use of any silicate densifier.

And yet, just 3% of the slab contents, with the correct densifier and application technique, can improve the abrasion resistance by up to 40%.

- **Provide the target architectural appeal**

ST115 is a new standard for the concrete polishing industry that has been adopted by the Concrete Sawing and Drilling Association (CSDA). The standard explains in detail how to measure the texture of a concrete surface by using a texture meter.

The standard assigns a numerical texture-grading code to the finish so the design community and end users alike can begin to have a more structured conversation about the quality and sustainability of a polished concrete surface. It can also be used to determine if steps in the polishing process were skipped or avoided.

- **Sustainability - whole of life**

Sustainability is related to the quality of life in a community - whether the economic, social and environmental systems that make up the community are providing a healthy, productive, meaningful life for all community residents, present and future.

With regard to protection systems, sustainability should consider the "whole product life cycle". This includes production, application, service life and disposal.

Volatile Organic Content (VOC) is an important measure of a protection system's environmental impact.

Our products meet or exceed the requirements of IEQ.13.1, Green Star Office Interiors, Indoor Environment Quality. We are a member of the Green Building Council of Australia.

- **Design life - budget compliance**

The first important question to ask when selecting a new protection system is - What is the required design life - 2, 5, 10 or 20 years? And, is frequent or regular maintenance feasible?



EpiMax





Polished concrete flooring is a generic term covering a variety of decorative concrete flooring options that often leaves the concrete surface exposed as the final floor finish.

Polished concrete is available in a wide range of colours and finishes and is energy efficient.

Suitably protected, it is low maintenance and dust free.

It has become very popular in the commercial and residential setting.

EpiMax has built its reputation on a construction engineering foundation. Our experience has been forged on an impressive variety of civil, environmental, industrial, mining, defence and general services construction.

This success has been proven through partnerships with forward-thinking architects, consultants, engineers, application contractors, project managers and materials testing agencies. We believe in teamwork, respect and integrity.

Our primary focus is

- Floor Protection Systems
- Wall and Ceiling Protection Systems
- Industrial Concrete Protection Systems
- Green Certified Protection Systems
- Water and Wastewater Processing Protection Systems
- Foundation Protection Systems
- Extreme CAT (Corrosion, Abrasion and Thermal) Protection Systems

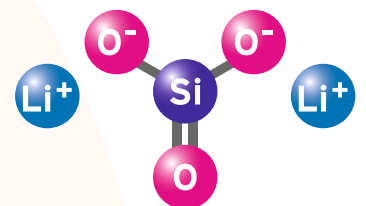
How do silicate concrete hardeners differ?

Lithium silicate chemical hardeners for polished concrete work are becoming more popular than sodium or potassium silicates.

Why is this?

Background chemistry

The function of the sodium, potassium, or lithium part of the silicate's function only is to *stabilise and solubilise the silicate* so it can remain in solution until it penetrates the concrete and then can react with the abundant calcium hydroxide found in the concrete pores and canals.



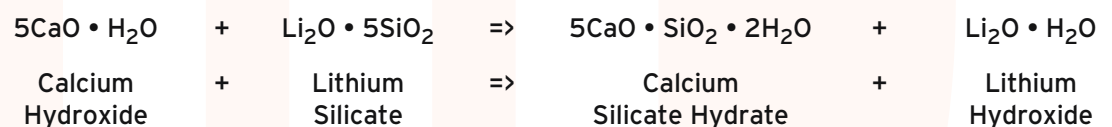
Advantages of lithium silicates

Lithium ions on a weight basis can *stabilise more silicate ions* than sodium or potassium ones.

Lithium silicates generally have a *lower viscosity than* sodium or potassium at equal solids.

So, lithium silicate can *penetrate* more effectively

What is the lithium silicate chemical reaction?



Applications

Residential:

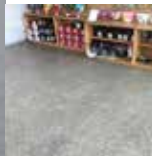
- High-end polished concrete
- Garages, sheds
- Driveways and stonework

Retail:

- High-end polished concrete
- General shop fit out flooring
- Restaurant dining areas
- Factory outlet stores
- Wholesale warehouses
- Stock rooms
- Plant rooms
- Commercial kitchens
- Showrooms

Commercial and Industrial:

- Medium level polished concrete
- Plant rooms
- Showrooms
- Stock rooms



EpiMax 2125

An economical sodium based penetrating surface hardener for industrial polished concrete work.

- Quick return to service
- Maintenance-free
- Externally durable
- Water vapour permeable
- Improves chemical and abrasion resistance
- Suppresses concrete dust

EpiMax 2135/EpiShine

A lithium hybrid densifier designed for commercial polished concrete work. Also available with Shine finish.

- Contains lithium silicate
- Easier finishing process
- Externally durable
- Improves chemical and abrasion resistance
- Suppresses concrete dust
- Also available with in-built Shine finish - EpiShine

EpiMax 2150

A blend of silicate (densify) and silicate polymers (protect) which increases slab surface density and abrasion resistance and also reduces the absorption of liquids on the slab surface.

- Single pack - water based
- Quick return to service
- Reduces absorption of liquids
- Maintenance free
- Water vapour permeable
- Low VOC - meets "Green Star Building" code

EpiMax 2175

A pure lithium densifier designed for high end commercial and residential polished concrete work. Minimises finishing process, since flushing and rinsing not required

- Hardens and densifies concrete
- Curing aid for concrete
- No flushing or rinsing required
- Does not yellow or discolour
- Hardens the surface against damage
- Easy penetration for ease of application

EpiMax 3500

A formulated grout and bonding agent designed to re-surface polished concrete slabs when pinholes and divots are present.

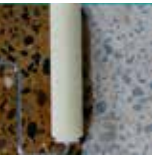
- Single pack
- Low viscosity
- Good adhesion
- Performance acrylic chemistry
- Low VOC
- Compatible with EpiMax densifier and sealer range



EpiMax 777UHD

A high performance, gloss, two-pack solventless polyurethane sealer that provides a durable gloss finish to coated and uncoated concrete.

- Thin film chemistry - 150 microns
- Hazmat free chemistry
- Fast hardening
- UV stabilised - Gloss or Matt
- Excellent scuff resistance
- Re-coatable



EpiMax 900

A single pack hard, stain resistant, non-yellowing, cross-linking protective sealer for concrete floor surfaces which offers excellent adhesion and finish retention.

- Clear, non-yellowing
- Infinite work time
- Gloss or Satin finish
- Rapid set to touch
- Good stain resistance
- Externally durable



EpiMax 950

EpiMax 950 is a low viscosity system that penetrates concrete or masonry surfaces to provide long term weatherproofing protection.

- Water based, odourless application
- Does not change surface texture
- Protects against mould & stains
- Rapid set to touch
- Will not change slip resistance of surface
- Externally durable



EpiMax 999WB

The maintenance-free solution for general concrete protection, demonstrating excellent adhesion and general durability.

- Water based - odourless
- Fast installation - guarantees sealed concrete surface
- Mechanically durable, high surface integrity and non-dusting
- Good general chemical resistance
- Minimal tyre squeal - non-marking
- Environmentally sustainable - maintenance free

Application

Safety precautions

Read Material Safety Data Sheet before commencing any application. Keep away from children.

Avoid contact with skin and avoid breathing/vapour.

Always provide adequate personal protection (gloves & goggles etc) during use.

Always provide adequate ventilation, especially in confined spaces. If poisoning occurs, call Doctor or Poisons Information Centre. Phone 13 11 26.

If swallowed, DO NOT induce vomiting. Give plenty of water or milk. If skin contact occurs, quickly remove contaminated clothing and wash affected areas thoroughly with soap and water.

Typical polishing steps for concrete

Remove any existing coatings.

Grind with 30- or 40-grit metal-bonded diamond, then 80-grit metal-bonded diamond and up to 150-grit.

Apply the selected chemical densifier.

Polish with 100- or 200-grit resin-bond diamond, then 400-grit resin-bond diamond and progressively up to 3000-grit resin-bond as required.

General surface preparation for sealers

Concrete should be at least 28 days old.

Ensure sub-floor is clean, dry and free of additives, curing agents, oils, etc. Prepare the sub-floor by professional diamond grinding to expose firmly adhered aggregate.

Surface profile should exceed CSP 3. Scrub with clean water and then vacuum. Allow surfaces to dry. Always confirm preparation adequacy.

Mixing procedure for two-pack sealers

Keep product cool before use.

Review the area in advance so that a fixed volume of mixed material can be applied over a fixed area to ensure correct application rate.

Select a slow speed (400 rpm) mechanical mixer and ensure thorough mixing. Then add components. Mix until uniform. Apply by short nap roller.

Discard unused material when the work time is exceeded. Work time may be difficult to visually determine, so always keep track of actual time.

Always protect from rain for 24 hours after application. Avoid application when relative humidity is >80% and temperature is <12°C.

Equipment list

- Gloves, goggles & personal protection
- Measuring container
- Mixing containers
- Power mixer
- Roller, applicator bar, squeegee



Environmentally sustainable



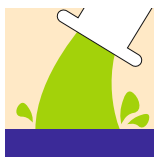
Resistance to abrasion and impact



Durable



High adhesion



Resistance to chemicals



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