

SHIMICRETE POLYCEMENT

Description

SHIMICRETE is designed to be used in conjunction with Epoxy or Polyurethane as filler and reinforcement materials. As a component of PU Cement or EPOCEMENT, Polycement can crosslink to form the strongest floor covering of over 100 MPa. The formation of structural resin pad offers high performance structural properties engineered for exposure to strong acids and solvents in harsh environments. The product is generally used in conjunction with selected quartz aggregates to form either a trowelled mortar or slurry type topping. It is the ideal binder for the quick repair of damaged concrete surfaces.

Features

- High Compressive Strength
- Ideal for structural concrete and load-bearing applications
- Reacts with Epoxy and Polyurethane to set rock-hard
- Can be used in any two-pack resin system
- Good Durability
- Ideal Powder Consistency

Usage

- Structural and precast concrete
- Grouts & mortars for screeding
- Grouting holding down bolts into concrete
- Resurfacing worn and damaged concrete slabs
- Re-leveling concrete floors to obtain falls to drains
- Patching holes and cavities in walls, drains & floors
- Bonding new to old concrete toppings
- Laying anti-slip toppings in factories, warehouses & service areas
- As an underlay for heavy duty epoxy coatings
- Priming concrete surfaces
- As an expansion joint repair mortar

Applications

Coving, Patch and Repair, Gap Fill and SlipRes Flooring System

Preparations

Clean and dry surface. Ensure surface to be coated is free of all dirt, grease, oil, paint, curing agents and other contaminants. Removal of Oil Contamination by degreaser and alkaline cleaning pressure wash.

Acid-wash to enhanced surface porosity and etch the surface

The concrete substrate must be firm, clean and dry with a compressive strength of 25 MPa and a minimum surface tensile strength of 1.5 MPa.

New concrete must be allowed to cure for a minimum of 28 days.

Remove all surface laitance, contaminants, existing coatings, curing compounds and any weak and loose materials.

The extent of surface preparation required is dependant upon but not limited to the thickness of the coating system to be applied.

Ensure moisture free surface. Allow to completely dry, run Dry Test. Place a piece of plastic over a small area, tape the edges and leave for 1 hour. Remove plastic, if there is no moisture on either surface, concrete is sufficiently dry.

Ideally, always consider surface grinding and removal of loose materials. Grinding is always advisable prior to application of all Shimicoat Epoxy products, to maximize adhesion.

Prepare the concrete surface by Abrasive Grit Blasting, Shot Blasting, Scarifying, Ultra High Pressure Water Jetting or Scabbling to provide the appropriate surface profile for optimum mechanical keying. For further information, please refer to SHIMICOAT Instruction for "Surface Preparations"

Specifications

Appearance:	Granular Off-White Cementitious silica sand
Specific gravity (Relative density):	2.1

Direction

Mixing

In a clean container, mix the Epoxy or Polyurethane liquid components (Resin & Hardener) together using a helical mixer at a speed of 750 rpm until the mix becomes homogenous (1–2 minutes).

Add SHIMICRETE to the correctly mix ratios resin A/B and mix steadily and uniformly.

Move the mixer around from side to side and top to bottom and scrape the sides of the mixing vessel to ensure thorough mixing.

Mix for a minimum of 2min to ensure uniform blend.

APPLICATION

SHIMICRETE can be used in many floor applications:

GROUTING:

Add SHIMICRETE/Resin mix onto the floor and screed using flat or notched squeegee or your desirable teeth gouge rake to level the surface.

Use spike rollers to assist with leveling of the mortar.

Quartz aggregate is added on top of the resin/mortar to enhance slip resistant rating of the finish surface.

Additional coarse quartz may be added for large gaps capable of absorbing the thicker, higher viscosity mix.

CONCRETE RESURFACING:

Damaged concrete with or without exposed aggregate can be resurfaced by application of SHIMICRETE Resin across the entire surface with a flat trowel. This application is often referred to as an epoxy "scratch coat" and is a common technique used prior to the application of an epoxy paint coat.

CONCRETE RE-LEVELLING: When floors need to be re-levelled to provide adequate fluid flow to drains a considerable depth of epoxy mortar needs to be used. For this purpose a dry mix of aggregate at a ratio of approximately 8-10 parts quartz to 1 part resin/hardener combination containing a coarse 2-3mm pebble is recommended. Prime the surface first before installation of the sub-fill mix and allow to cure. Once cured, a heavy seal coat of HYCHEM GP needs to be applied prior to again topping this time with a chemically resistant system such as the HYCHEM E300 Epoxy Mortar.

ANTI-SLIP TOPPING:

A fluid mix of resin & aggregate is spread over the surface and then broadcast with an appropriate anti-slip aggregate to produce the desired surface profile. After cure, excess dry aggregate is removed and the surface is sealed with HYCHEM E300SL containing a suitable pigment additive. When the topping has cured, locate all expansion joints, saw cut as necessary and fill with a suitable joint sealant such as HYFLEX NS. In reference to anti-slip aggregates, be aware that quartz will crush under heavy traffic and consideration should always be given to using either bauxite or aluminium oxide aggregates as substitutes. Both these products will increase the life span, durability and performance of your anti-slip surface finish.

Clean Up

CLEAN UP: Xylene can be used for cleaning tools and equipment before the mixed compound begins to hardened.

Shelf Life and Storage

• Shelf Life:

The shelf life of PU CEMENT is over 24 months, provided it's stored away from sunlight in its original, unopened packaging. In general, the products shall be stored out of direct sunlight and heat at all times.

stored under shelter in a cool dry place at 25° C in original un-opened container

Slip Resistant Floor "MAGNETITE"

An Installation Guide

Following is a step by step guide to install Slip Resistant Epoxy Floor Finishing System using Shimicoat Products and Materials over concrete surface floor.

Products and Materials

- Epoxy Repair Kit
- Basecoat Epoxy "Premium Tinted Epoxy in your choice of colour"
- Magnetite 600 Micron
- Ultra Clear Epoxy Topcoat (Indoor), UV Resistant Topcoat (Outdoor)
- Diluent / Thinner

Tools:

- Electric mixer or stick for missing resin
- Brush and Rollers
- Extendable Handle / Pole
- Buckets
- Vacuum or blower to clean up the surface
- Spike shoes

Installation:

Surface Preparations:

1. Prepare the floor by concrete grinding and removal of surface materials.
2. Use Epoxy Repair kit as required to fill any cracks, holes or damages on the surface.
3. Ensure the surface is perfectly clean and free of oil and grease. If grinder is unavailable, acid wash and make sure you wash, rinse and flush with detergent to neutralize the surface and remove all acid residue.
4. Vacuum and/or blow out to remove dust from the surface.
5. Tape all around the walls and cover all surfaces that you wish NOT to be epoxy coated.

NOTE: For further information on surface preparation, please refer to our brochure, website or contact Shimicoat technical representative.

Basecoat Application and Sand Broadcast:

1. Mix basecoat epoxy in small portion that you can manage to apply. Premium Tinted Epoxy has a maximum of 40min Pot Life, plan to complete your application within 30minuts allowing a few minutes for unexpected situations.
2. Ideally, we recommend mix 3Lt of Part A and 1Lt of Part B (4Lt blend) for one or two people working on a small 30-60sqm floor.
3. Apply the basecoat epoxy to corners, edges first then the main floor.

4. While still wet, broadcast Magnetite 600 micron evenly to point of rejection, full Broadcast. DO NOT apply Partial Broadcast, as it may look patchy.
5. Remember wet-edge allowance, always leave a wet skirting (20-30cm) to be sanded with the next area of coating. Avoid coating over sands.
6. Let it cure. 2-3 hours for Fast Floor, 8-12 hours for normal curing epoxy.

NOTE: Add Epoxy Diluent or Xylene up to 10% to thin the product, only if required for example in cold days.

Topcoat Application:

1. Test to ensure fully cured by twisting your thumb over the sand surface. It should feel solid and dry with strong bonding of sand to epoxy surface.
2. Test for dryness by twist and turning your thumb over the surface and ensure sands are attached and boned.
3. Use a coarse broom and dustpan to collect and recover excess sand.
4. Use a garden blower or vacuum to compile excessive sands and recover unbound sands from the surface as much as you can.
5. Clean the surface and blow out any loose sands from floor.
6. Mix the second batch of Premium Tinted Epoxy in your choice of colour in accordance to label instruction and pour onto the surface. If outdoor and under direct sunlight, you may consider using Polyurethane which is UV stable and Non-Yellowing.

NOTE: Now you are on the clock, DO NOT waste time, initiate application. You must be prepared for application. One person applies the corners and edges using baby-roller or a brush and another person apply to the main floor. If you are slow, pour the resin on the floor, to slow down the curing process. Apply and roll evenly.

7. The pot life of Premium Tinted Epoxy is 45min, plan your work to be completed well within 45min.
8. Ideally, mix 4Lt at a time.
9. When, you are happy with the topcoat, take the masking tapes off the walls as it will be too hard to take off once cured.
10. Clear the floor, wipe and clean all your tools.
11. Let it cure over-night (16 hours). The floor is cured after 16 hours, trafficable and you can use the floor, however, NO driving or stretching furniture over the floor for one week. Treat it with care, especially during the first few days of curing process.
12. It takes seven days till the Epoxy reaches its optimal hardness and strength. Epoxy gets harder and harder everyday of its life.

For further advise, please refer to our brochure, website or contact technical team at Shimicoat.

Why is Slip Resistant Flooring important for Homes

Although many homeowners prefer installing finely polished shiny tile floors, hardwood floors or gorgeous looking granite, these materials always come with the risk of causing potentially dangerous slips and trips. We all know that smooth floors are easier to slip on, particularly when water is spilled. The condition can worsen, particularly when children and seniors are involved. This emphasizes the need to consider a slip resistant floor that can replace hazardous flooring and increase traction, especially for certain areas exposed to rain or high traffic such as entries, balconies, steps, etc.

Most homes feature hard flooring that includes vinyl, linoleum, ceramic smooth tile, smooth stone, concrete and others in some part of the home interior like the bathroom, laundry, kitchen and even garage. These areas are more prone to slips and trips as the chances of water spillage are higher.

What to do:

When it comes to young children and an aging population, it is especially important to create an accident-free home. One of the first areas that can be addressed is by eliminating any types of slip inducing flooring and replacing them with a safer option.

One option to consider is SHIMICOAT range of decorative polyaspartic and epoxy coatings. SHIMICOAT provides a unique and decorative alternative to tile and other flooring. With added benefits of Xtra Grip SlipRes, these "Rolled" floor coatings can be applied over old and new concrete and other substrates, providing the home owner with a choice of beautiful colours and a finish that is both slip-resistant, durable, modern, hygiene and functional.

Benefits:

- SHIMICOAT floor coating materials can be applied on concrete and other hard surfaces enhancing the look and feel of the floor.
- Xtra Grip SlipRes can be added to eliminate the risk of slip in any wet area.
- SHIMICOAT floor coating solutions work effectively in all conditions such as greasy, wet or dry floors with the addition of Xtra Grip SlipRes.
- Our products are easy and fast to apply - even in a day (depending on the size of the area). There is no need to wait long for the floor to dry, one day application, one day curing. Rapid fast "Return to Normal".

Anti-slip treatment can be effective for five years and over, reapplication is easy and economical.

The slip resistance test classification and the mean angle of inclination:

SHIMICOAT implement Australian Standard for characterization of surface materials and determination of friction factors under wet and dry conditions.

This Standard is also intended for evaluating surface applications and treatments including products such as sealers, polishes and etchants which may modify the surface characteristics of pedestrian surfaces.

The method for the measurement of wet slip resistance being used for external and internal pedestrian surfaces and those pedestrian surfaces that have a reasonably foreseeable risk of the presence of wet substances such as water, grease and oil. For further information please contact our technical team at SHIMICOAT Pty Ltd.

Pack Sizes

Pack Size
15Kg

WARNING

- Keep out of reach of children
- Read Safety Material Data Sheet (MSDS) of the product prior to use.

Storage

The products shall be stored out of direct sunlight and heat at all times. The shelf life of the product is 24 months.

Get in Touch

For more information on SHIMICOAT's industrial solutions, contact your local SHIMICOAT representative today.

DISCLAIMER

Material Safety Data Sheet, Technical and Environmental Data Sheet can be provided upon request. The information provided in this document is guidance only and considering the uses of this product are beyond the seller's control, the product is sold without guarantees or warranties. Warranties and guarantees shall be governed by SHIMICOAT Standard Terms of Sale. The purchaser shall make its own tests to determine the suitability for their specific application, and Shimicoat Pty Ltd is taking no responsibility for misuse of the product. The purchaser assumes all risk of use and handling of this product. This product will be happily replaced or credited back if defective. Beyond this, Shimicoat Pty Ltd is not liable for any damages caused by this product or its use.

This information and all further technical advice are based on our present knowledge and experience. The customer is not released from the obligation to conduct careful inspection and testing of supplied goods.