

# Magnetite

## High Density Filler

### Description

SHIMICOAT offers crystalline forms of high-density Magnetite with specific gravity of over 4.2 allowing the product to sink and displace water with resin bound compound. The product is dry, hard, chemically inert and ideal for many epoxy coating applications.

Magnetite is used for a wide range of epoxy and polyurethane applications to make epoxy mortar for coving, patch and repair as well as back fill and gap fill.

The packing density of magnetite ( $\text{Fe}_3\text{O}_4$ ) is related to its high density. While the specific gravity of magnetite is over 5 (5.17-5.18), its bulk density in powder form can range from 2.4 to 4.89 g/cm<sup>3</sup>. This high density makes it useful as an Epoxy filler for displacement applications such as underwater.

### Features

Magnetite can be used with any of SHIMICOAT Epoxy or Sealer products and offer the following features:

- High density and ideally
- 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

**Epoxy Paste:** Add a full bag of 20Kg into 1.5Lt of Clear Epoxy or 2Lt of Premium Tinted Epoxy  
**SlipRes Broadcast:** 4Kg/sqm – each bag (20Kg) covers 5sqm (Full Broadcast to point of rejection)

### 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

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.

For further information, please refer to SHIMICOAT Instruction for "Surface Preparations"

### Specifications

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

# Magnetite / High Density Filler

Product Datasheet – V01 / 2025

## Direction

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 mixing 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 30minutes 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.

# Magnetite / High Density Filler

Product Datasheet – V01 / 2025

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.

# Magnetite / High Density Filler

Product Datasheet – V01 / 2025



## 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

20Kg

### 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.

### Combating Corrosion in Harsh Environments with SHIMICOAT

Marine and Offshore harsh environments are inherently corrosive. Continuous exposure to wet, harsh atmospheres—especially in splash zones and underwater areas, combined with erosive forces from waves and floating debris, accelerates the degradation of equipment and structural components. If left untreated, corrosion can lead to severe structural damage, leaks, ruptures, costly downtime, and significant environmental risks.

### SHIMICOAT In-Situ Protection & Repair Systems

SHIMICOAT offers innovative in-situ solutions specifically designed for many industrial and commercial surfaces. These systems require minimal surface preparation and are engineered to perform in some of the most challenging marine environments.

In addition to our comprehensive product range, SHIMICOAT provides surface-tolerant technologies that are highly effective even on wet, oily, or sweating substrates. These products are engineered for exceptional adhesion to steel, regardless of immersion conditions.

### Why Choose SHIMICOAT?

- Cures to Perfection
- No hot work required
- Minimal surface preparation
- Strong adhesion to steel / METAL
- Long-lasting, permanent protection
- Proven performance globally

SHIMICOAT's surface-tolerant repair systems reduce maintenance costs and extend the life of your assets—above water, in splash zones, and underwater.

### 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.*