SHIMICOAT Load Bearing Epoxy – Epoxy Mortar Pad
LOAD BEARING – Two-Component Structural Epoxy Pad
LOAD BEARING is a high-performance, solventless, two-component epoxy adhesive that cures at room temperature to form a tough, infusible compound with excellent mechanical strength and long-lasting adhesion.

Key Characteristics:

- Strong Bonding Performance – Adheres reliably to properly prepared metal, wood, concrete, and ceramic substrates
- High Mechanical Strength – Withstands mechanical stress and impact in demanding environments
- Thixotropic Consistency – Ideal for vertical or overhead applications, allowing precise placement without sagging
- Multi-Material Compatibility – Suitable for bonding dissimilar materials
- Room Temperature Cure – No need for special curing equipment or elevated temperatures

Recommended Applications:

- Bedding of ceramic wear tiles and steel wear plates to metal surfaces
- Grouting of reinforcement bars (rebar) into concrete or masonry
- Gap filling, stopping, and sealing in structural repairs or industrial assembly
- Vertical and overhead adhesive repairs where flow control is critical

A solvent-free, advanced composite system engineered for multipurpose, high-strength casting and grouting applications. This infusible polymer offers:

- Exceptional mechanical strength under both compression and tension
- Outstanding chemical and corrosion resistance
- Thermal stability for reliable use in both hot and cold climates
- Versatility in application on steel, wood, and concrete surfaces

Ideal for demanding industrial environments requiring durability, resistance to harsh conditions, and long-term structural integrity.

Applications

This high-performance composite system is suitable for a wide range of industrial, civil, and structural uses, including:

Civil Works & Infrastructure

- Foundation bedding
- Slipway foundations
- Road and bridge grouting
- Bedding for rails

Industrial & Structural Repair

- Crusher backing and equipment grouting
- Floor re-levelling
- Concrete repair and crack injection
- Wet-to-dry concrete bonding

Precision Applications

- High-strength adhesive and casting
- Mould making
- Chemical anchoring
- Precision engineering grouting

Key Features

- **High Mechanical Strength** – Designed to withstand heavy structural loads in both compression and tension
- **Exceptional Adhesion** – Bonds strongly to steel, concrete, wood, and other substrates
- **Wide Chemical Resistance** – Durable in harsh chemical and corrosive environments
- **Fast Curing Time** – Achieves functional cure in as little as 6 hours
- **Zero VOC, Solvent-Free** – Environmentally friendly and safe for enclosed spaces
- **Cold Weather Application** – Cures reliably even in low-temperature or adverse conditions
- **Underwater Capable** – Suitable for wet, submerged, or tidal zone applications

Dry Time at 25°C

Pot Life:	45 minutes at 25°C
Tack Free:	2-3 hours
Thin Film Set:	8 Hours (Min, depending on temperature and humidity)
Deep Cast Set:	24 Hours (Min, depending on temperature and humidity)
Dry Cured:	12-16 hours – Foot Traffic (depending on temperature and humidity)
Fully Cured:	7 days (Vehicle Traffic)
Re-Coat:	Over night

Clean Up

EpoThin - Thinner & Diluent (Blend of Solvents).

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".

Installation Guidelines

Mixing Instructions

- Use a slow-speed mechanical mixer for optimal blending.
- Add Component B into Component A, not the reverse.
- Mix until the blend is uniform in colour and consistency, avoiding air entrapment.

Application

- Immediately pour or apply the mixed product to the target area.
- For underwater or submerged applications, the resin will naturally displace water from the cavity during application.

Bulk Filling for Large Cavities

- For deep pours or large voids Magmapoxy can be bulk-filled with 600µ silica sand, up to triple parts by weight.
- This reduces resin volume, lowers exothermic reaction in hot climates, and minimizes post-cure shrinkage.
- The kit is designed to allow easy addition—simply top up the mixed resin container with silica sand at the recommended rate.
- Aggregate-filled product retains high strength and pourability.

Features

Load Bearing Epoxy – Epoxy Mortar Glue
High-Performance Epoxy Mortar System
Load Bearing Epoxy is a premium-grade repair solution engineered for civil construction applications. It comprises 100% solid clear epoxy resin reinforced with Super Ceramic Filler materials, delivering unmatched durability and surface hardness. This kit is specifically designed for installers and contractors seeking a fast, strong, and long-lasting repair system prior to protective coating application.
Key Features:

- **Advanced Super Ceramic Filler Technology**
  Delivers exceptional reinforcement and surface integrity.
- **Superior Epoxy Structure** Ensures maximum bonding and mechanical strength.
- **User-Friendly Formulation** Lightweight, easy to mix, and simple to apply.
- **High Compressive Strength** Withstands significant structural loads.
- **Thermal Stability** Maintains performance across a wide temperature range.
- **Longevity** Engineered for service life exceeding 20 years.
- **Ideal Rheology** – Suitable for both horizontal and vertical applications without sagging.
- **Enhanced Fire Resistance** – Improved fire rating for safety-critical environments.
- **Modern and Hygienic Finish**
  Functional and economical solution for civil, commercial, and industrial use.
- **Chemical and Traffic Resistance**
  Withstands harsh chemicals, heavy pedestrian use, and vehicular traffic.
- **DIY Friendly** – Easy to use for both professionals and trained individuals.

Available in Small, Medium, and Large kits, SHIMICOAT Load Bearing Epoxy is your go-to solution for surface restoration, crack repair, and substrate preparation in demanding environments.

Specifications

Physical & Chemical properties of Load Bearing Epoxy:

Pot Life @25°C	45min
Colour of Blend	Resin is Ultra Clear and transparent Blended with Super Ceramic is Light Grey (Super Ceramic Colour)
Consistency and Flow	Addition of Super Ceramic improves consistency "Easy to apply paste"
Touch Dry	*4 Hours*
Initial Cure Time	*8-20hours (depending on temperature)*
Ultimate Cure Time (Days)	7 Days
MPa of Epoxy Mortar	>50
Maximum Temperature Exposure (°C)	140

Specific resistance properties of Crack Seal

Media	Reagent	Rating
Acids	Hydrochloric Acid	B
	Sulphuric Acid	C
	Acetic Acid	B
	Nitric Acid (10% max)	C
	Phosphoric Acid (25% max)	B
Alkalis	Sodium Hydroxide	B
	Ammonium Hydroxide	A
	Potassium Hydroxide	B
	Sodium Hypochlorite (Bleach)	A
Solvents	Xylene	A
	Methyl Ethyl Ketone (MEK)	C
	Diesel	A
	Ethanol	A
	Acetone	B
	Kerosene	A
	Petrol	A
	Wine & Beer	A

Code	Resistance	Description
A	Excellent	Suitable for Long term immersion
B	Good	Suitable for Short-term immersion (Max 3 days)
C	Caution	Very short contact time is OK, spill and splash
D	Danger	Not Recommended
Indicative reference only. Tested in laboratory conditions at 25°C.		

Resistance properties of Load Bearing Epoxy

Heat Resistant	140°C	**Alkalis**	Resist Short term immersion in all alkalis.
Weather Proofing	All Epoxy Coatings may yellow with time. Weatherproof top coat may be used if required.	**Salts & Brines**	Resist continuous or long-term immersion in all Salts & Brine systems.
Solvents	Resistant to most hydrocarbon solvents and alcohols.	**Water**	Excellent resist to continuous or long term immersion in fresh & Salt Water.
Acids	Resist splash and spills in all acids.	**Abrasion**	Excellent when fully cured (7 Days)

Direction

Mix Twice as much as resin quantity used (200% by volume)
For example, if using Ultra Clear Epoxy, add 1.0Lt of Part B (Curing Agent) into 2.0Lt of Part A (Resin), mix for 2-3minutes and add 6.0Lt (2.4Kg) of Super Ceramic Filler. If necessary, add EpoSeal Diluent at a rate of up to 5% to smoothen the paste.

Mixing:

Mix thoroughly for a minimum 3 minutes manual or with mechanical mixer at low speed (750rmp Max) to ensure uniformity of the product.

Putty Consistency – Guideline

Consistency	Fix Quantities CANNOT be changed		Adjust As Required	Application
Consistency	Part A	Part B	Part C	Application
Thin Slurry *Syrup*	4 Parts / 80gr	1 Part / 20gr	20% / 20gr	Hairline Repairs
Thick Slurry *Honey*	4 Parts / 80gr	1 Part / 20gr	50% / 50gr	Small Cracks
Thick Slurry *Tomato Sauce*	4 Parts / 80gr	1 Part / 20gr	75% / 75gr	Large Surface Fill
Thick Slurry *Mayonnaise*	4 Parts / 80gr	1 Part / 20gr	100% / 100gr	Fill & Repair Larger Cracks
Thick Slurry *Mash Potato*	4 Parts / 80gr	1 Part / 20gr	150% / 150gr	
Thick Slurry *Peanut Butter*	4 Parts / 80gr	1 Part / 20gr	200% / 200gr	

Helpful Hints:

- Ensure surface to be coated is dry. Moisture can cause blooming and delamination.
- Pot life is approximately 45 minutes, work within 30min to ensure ideal rheological properties and easy flow application.
- Use steady long strokes and avoid overworking the roller or pushing your roller too quickly as this may trap air bubbles in the coating.
- Do not apply, if the rain is expected within 24 hours of application.
- Not recommended for use below 10°C or above 35°C.
- New concrete should be allowed to cure fully (at least 20days) before application.
- Keep the containers (Pail or Cans) sealed when not in use.
- Avoid application on hot surface.

Drying Times

SHIMICOAT Load Bearing Epoxy dries in 8-20 hours. High temperatures and windy conditions may speed up the curing time.
Keep foot traffic off for, at least 16 hours and vehicles for at least 7 days. Full hardness is achieved after 7 days.

Temp °C	Pot Life (min)	Surface Dry (Hours)	Initial Cure (Hours)	Recoat Time (Hours)	Fully Cured (Days)
10°C	45	12	24	24	7 Days
20°C	40	10	18	18	7 Days
30°C	35	8	16	16	7 Days

WARNING

- Heavy vehicles with hot tires may cause damage on driveway. Avoid driving over the newly repaired floors till completely cured (7 Days).
- Do not apply Load Bearing Epoxy, if the concrete has a patchy appearance as moisture may be present. Dry Test prior to application, commence application when fully dry and moisture free.

Storage

The products shall be stored out of direct sunlight and heat at all times. The shelf life of the product is 24 months, mix uniformly for 3 minutes prior to use.

DISCLAIMER