Megapoxy®

The Natural Stone Products Guide

The Megapoxy Difference

Megapoxy is proud to support the performance, safety and longevity of structures, products and equipment across the globe. We are high-strength epoxy adhesive specialists, crafting solutions to solve real industry challenges. We work with clients to achieve the perfect result, smoothly and efficiently.

We develop, produce and manufacture advanced formulas to bond, strengthen, repair, preserve and protect. Backed by the highest quality standards and certifications, our clients enjoy reliable supply, fast turnaround, expert advice and support worldwide. Trusted for 50 years, we constantly innovate for today and tomorrow.

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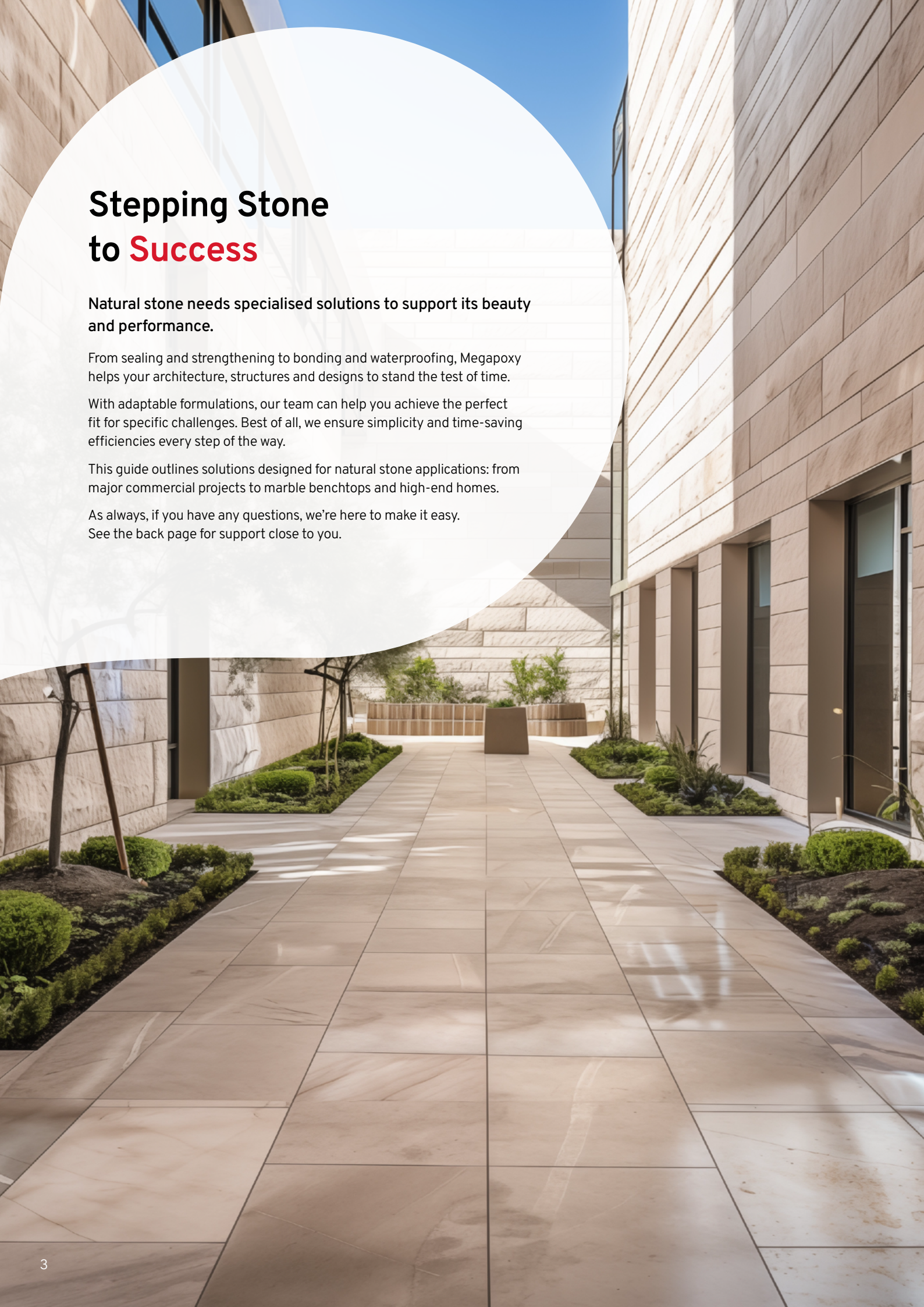


Stepping Stone to Success

Natural stone needs specialised solutions to support its beauty and performance.

From sealing and strengthening to bonding and waterproofing, Megapoxy helps your architecture, structures and designs to stand the test of time.

With adaptable formulations, our team can help you achieve the perfect fit for specific challenges. Best of all, we ensure simplicity and time-saving efficiencies every step of the way.

This guide outlines solutions designed for natural stone applications: from major commercial projects to marble benchtops and high-end homes.

As always, if you have any questions, we're here to make it easy.
See the back page for support close to you.

Surface Preparation

Surfaces to be bonded must be clean and structurally sound. At the bonding spots, lightly scabble the stone to ensure strong substrate.

If wall materials are weak – such as old and weathered stone, multicavity bricks or pre-cast concrete hollow blocks – the use of pins or anchors with Megapoxy is essential.

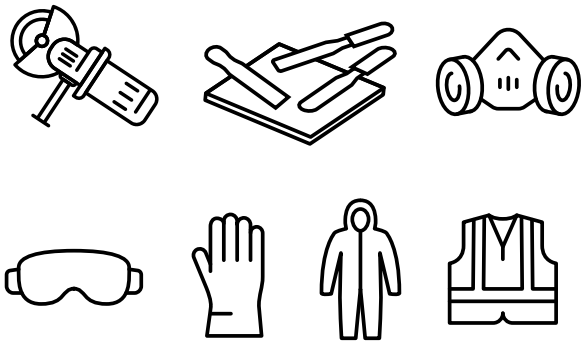
Marble and granite panel surfaces must be clean and dry. Lightly abrade the areas to be spot bonded with an angle grinder (disc grinder). If pins are required, drill holes into the stone without using impactor settings, to avoid fracturing the panel. Blow out the drilled holes with clean air to ensure they are free of dust.

Marble and granite panel surfaces must be clean and dry.

Lightly abrade the areas to be spot bonded with an angle grinder.

What You Will Need

- Grinder with diamond grinding wheel and crack chasing blade.
- Efficient mixing paddle.
- Spatulas and flat, hard mixing board.
- Megapoxy Thinners.
- Disposable rag.
- Personal protective equipment (including appropriate clothing, gloves and eyewear).



The Right Products for the Job

Here is a snapshot of our ideal products for working with stone, marble and more.

Explore megapoxy.com for more information and how-to videos.

Scan the QR code to link to our Technical Data Sheets.

Megapoxy PM

Epoxy Paste Adhesive

- Suits vertical, inclined or overhead work.
- Easy 1:1 mix ratio.
- High chemical resistance.
- Cures in adverse conditions.
- Bonds with most construction materials.
- Elasticity for temperature variations and seismic movement.
- Two-part solution.
- Available as twin self-mixing cartridges.

Megapoxy PF

Rapid-set Epoxy Paste Adhesive.

- Fast cure: Sets in 3–5 minutes.
- Ideal for on-the-spot critical repairs and fixings.
- Non-sag for vertical, inclined or overhead work.
- Smooth, workable, easy 1:1 mix ratio.
- High-strength bonds and chemical resistance.

Megapoxy 69

High Strength Epoxy Adhesive Gel

- Premium bond strength and durability.
- Ideal for vertical, angled and overhead work.
- Exceptional, sustained impact resistance.
- Withstands harshest conditions.
- Easily coloured with Megapoxy pigments.
- Two-part solution.

Megabond

High Strength Epoxy Adhesive

- Ideal for bonding stone and tile to all masonry surfaces.
- Suitable for both interior and exterior applications.
- Easy to mix and spreads readily with a notched trowel.
- Will not stain light-coloured marbles.
- Easily coloured with Megapoxy pigment pastes.
- High shock and chemical resistance.

The Right Products for the Job (continued)

Megapoxy 63

High Strength Epoxy Adhesive Gel

- Bonds and fills with premium strength and durability.
- Ideal for vertical, angled and overhead applications.
- Thin glue line for mitering and intricate work.
- Impact and weather resistant.
- Easy to mix, trowel and colour with pigment.
- Won't stain light-coloured marbles.
- Two-part system.

Megapoxy H

Low Viscosity Hydrophilic Epoxy Resin

- Ideal for civil engineering and stone applications
- High-strength bonding, anchoring & sealing.
- Very Low-VOC.
- Safe for potable water applications.
- Mix with aggregate to create mortar systems.
- Two-part solution.

Megapoxy HX

Extra Low Viscosity Liquid

- Ideal for penetration and sealing sensitive stone.
- Excellent wetting out of substrates.
- Superior resistance to yellowing.
- Flows deep into cracks.
- Reinforces slabs for safer handling.
- Fortifies stone surfaces for better polishing.
- Ideal with automated dispensing systems.

Megapoxy for Marble, Granite and Sandstone Fixing

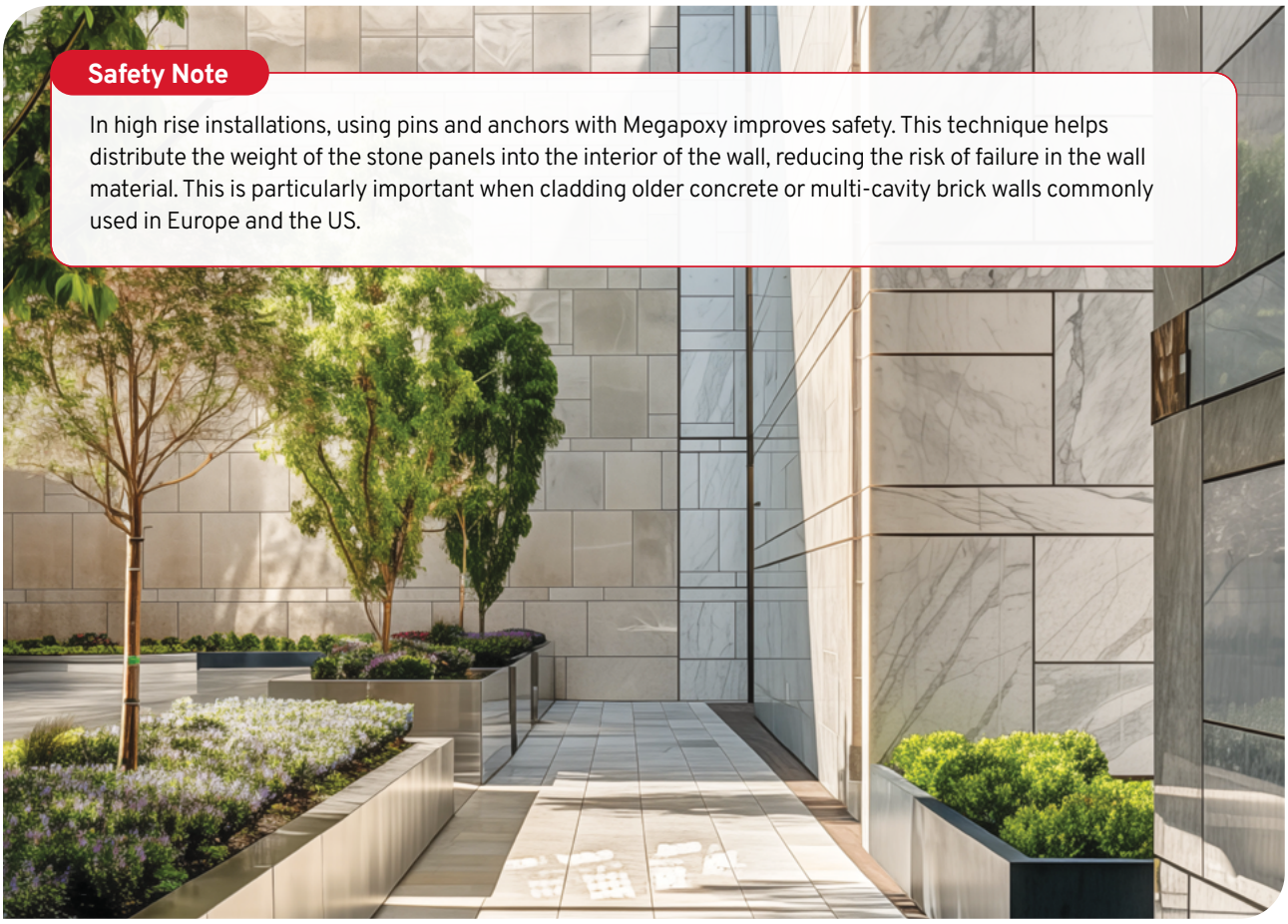
Clean, elegant lines of modern buildings reflect technical advances in stone cladding.

Modern stone-cutting and polishing techniques, combined with the reliability and strength of Megapoxy structural adhesives, have helped bring many impressive and enduring architectural designs to life.

Megapoxy structural adhesives are two-part, high-strength epoxy adhesives that exceed international standards. They are manufactured under a BSI-certified ISO 9001:2018 quality management system.

Why use Megapoxy for stone cladding?

- Bonds marble, granite and natural stone to concrete, timber, steel, ceramic and other materials.
- Suitable for bonding large panels on both interior and exterior surfaces.
- Non-slump formula allows panels to be installed accurately on out-of-plumb walls, without the need for rendering or plastering.
- Elasticity to absorb seismic activity and vibrations in elevators and lift lobbies.
- Accommodates thermal expansion and contraction, and wind loading.
- Spot-fixing technique creates a ventilated cavity between the panel and wall, improving thermal, acoustic and damp insulation while supporting open-joint cladding.
- Non-sag properties allow installation of panels at varying distances from the wall, and ensure secure attachment to vertical or inclined surfaces as required by design.
- Ideal for stone prefabrication and artisan work.
- Does not stain, burn or dehydrate delicate marble.
- Strengthens and improves durability of weaker stone by sealing fine cracks and faults.
- Secures very heavy panels in high-rise installations when used with stainless steel wire ties or anchors.
- Eliminates the need to handle heavy bags of sand and cement, or use bolts.
- Unlike latex cement mortars, Megapoxy prevents debonding failures – allowing stonemasons to work two to three times faster.
- Supports creative and complex designs, and challenging installations.

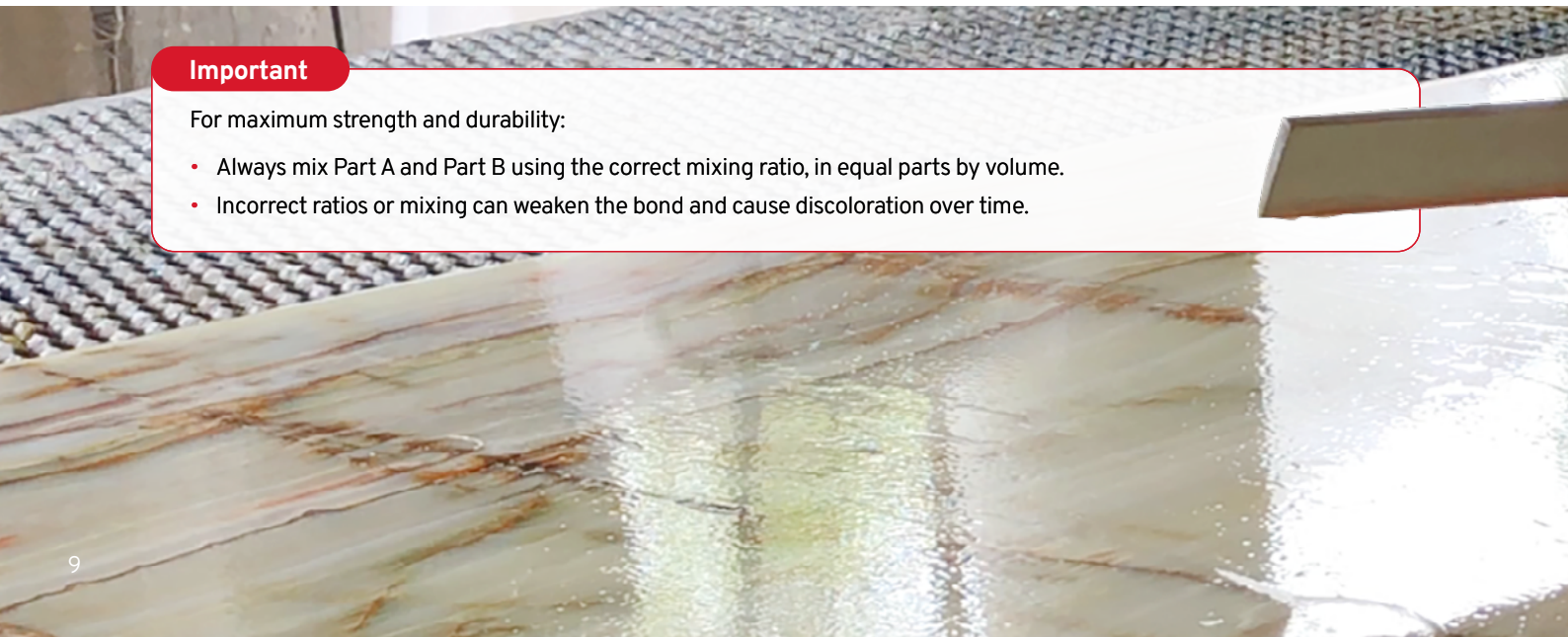


Safety Note

In high rise installations, using pins and anchors with Megapoxy improves safety. This technique helps distribute the weight of the stone panels into the interior of the wall, reducing the risk of failure in the wall material. This is particularly important when cladding older concrete or multi-cavity brick walls commonly used in Europe and the US.

Megapoxy for Marble, Granite and Sandstone Fixing (continued)

	Megapoxy PM	Megapoxy PF	Megapoxy 69
SPECIFICATIONS			
Consistency	Non-slump paste	Non-slump paste	Non-slump gel
Colour	White	White	Translucent amber
Ratio Mix (A:B)	1:1 (volume)	1:1 (volume)	1:1 (volume)
Pot Life (at 25ºC)	45 minutes	3 minutes	45 minutes
Minimum Cure (at 25ºC)	24 hours	1 hour	24 hours
Full Cure (at 25ºC)	48 hours	6 hours	48 hours
Minimum Application Temperature	10°C	10°C	10°C
TYPICAL CURED PROPERTIES			
Tensile Shear Strength	13 MPa	8 MPa	> 20 MPa
Elastic Deformation (at 20 MPa shear stress)	2.5%	2.5%	2.5%
Tensile Bond Strength	20 MPa	10 MPa	30 MPa
Compressive Strength	70 MPa	70 MPa	70 MPa
Flexural Strength	38 MPa	46 MPa	15 MPa
Coefficient of Lineal Expansion	70.4 x 10^{-6} (mm/mm/°C)	57.9 x 10^{-6} (mm/mm/°C)	102 x 10^{-6} (mm/mm/°C)



Important

For maximum strength and durability:

- Always mix Part A and Part B using the correct mixing ratio, in equal parts by volume.
- Incorrect ratios or mixing can weaken the bond and cause discoloration over time.

Megabond	Megapoxy 63	Megapoxy H	Megapoxy HX
Spreadable Paste	Non-Slump Gel	Liquid	Thin Liquid
White	White	Clear	Clear
1:1 (volume)	2:1 (volume)	3:1 (volume)	3:1 (volume)
45 minutes	30 minutes	45 minutes	60 minutes
24 hours	24 hour	24 hours	24 hours
48 hours	48 hours	48 hours	72 hours
10°C	10°C	10°C	10°C
18 MPa	2 MPa	13 MPa	10 MPa
2.5%	2.5%	2.5%	2.5%
10 MPa	5 MPa	20 MPa	20 MPa
60 MPa	120 MPa	100 MPa	95 MPA
40 MPa	85 MPa	40 MPa	35 MPA
60 x 10^{-6} (mm/mm/°C)	55.2 x 10^{-6} (mm/mm/°C)		

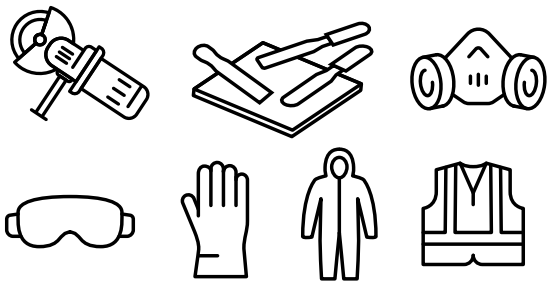
Megapoxy for Marble, Granite and Sandstone Fixing (continued)

Surface Preparation

All surfaces must be structurally sound and dry before application. Remove previous coatings, adhesives, efflorescence or laitance by chipping, abrasive blast cleaning, high pressure water washing, mechanical scrubbing or another effective method. Ensure all surfaces are free from dirt, grease, oil and other contaminants.

What You Will Need

- Grinder with diamond grinding wheel and crack chasing blade.
- Efficient mixing paddle.
- Spatulas and flat, hard mixing board.
- Personal protective equipment (appropriate clothing, gloves and eyewear).



Safety

While unmixed Part A and Part are very low in toxicity, follow proper hygiene practices. Frequently wash exposed skin that comes in contact with unmixed ingredients. If machining Megapoxy, avoid breathing dust.

Note

Cured Megapoxy is non-toxic. For further details refer to the relevant product Safety Data Sheets at megapoxy.com or scan QR code here.

Product Handling

- Megapoxy is available in 4L and 20L re-sealable kits.
- Clean uncured Megapoxy with an absorbent material such as paper towels and rags.
- Any residual product can be removed with Megapoxy thinners or warm soapy water.
- Cured Megapoxy can only be removed mechanically.

Application

The quantity of Megapoxy required to fix panels depends on panel size and weight.

Without pins or ties, at least 10% of the panel surface area should be bonded.

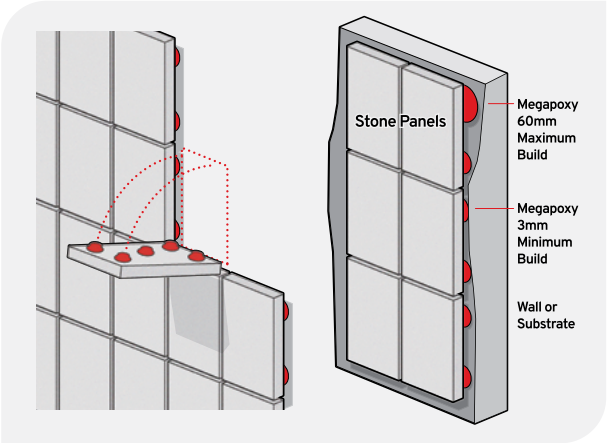
For example:

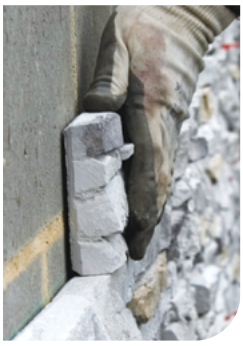
- Panel dimensions: 1m (L) × 0.5m (W) × 0.03m (thick)
- Panel weight: 40kg
- Gap between panel and wall: 10mm
- Panel surface area: 0.5m^2
- Bonded area (10%): 0.05m^2

Recommended application:	Five 100mm × 100mm Megapoxy spots, each 10mm thick.
Megapoxy required:	0.5L.
Position:	The spot applications should be placed at each corner and in the centre of the panel.

Performance

- In the example, the shear load on Megapoxy is 0.08MPa (at permanent stress levels well below 5MPa).
- Any deformation caused by surges in positive or negative loads, such as strong winds or other forces, will remain fully elastic, with no creep.
- Short-term stresses of up to 20MPa and over will not cause any creep or changes in strength of the assembly.
- This level of performance has been demonstrated in cyclone-prone regions including Hong Kong and North Queensland.





Weight Distribution and Anchor Strength

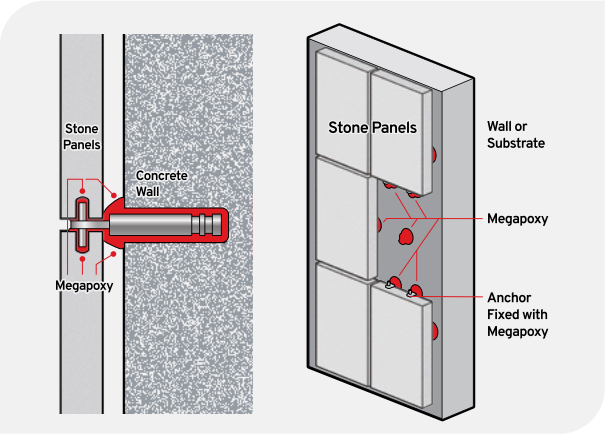
To ensure a safe, long-lasting installation, the panel's weight should be distributed across as much of the wall surface as possible. If there's any doubt about the wall's strength, use pins with Megapoxy.

Pull-out tests show that Megapoxy forms a bond stronger than the materials it is fixing:

- A 10mm stainless steel anchor embedded 50mm into 40MPa concrete with Megapoxy required 50kN of force to remove – the concrete failed, not the adhesive.
- A 3mm stainless steel pin embedded 3mm into granite with Megapoxy required 7kN of force – the granite failed, not the bond.

These results confirm that Megapoxy creates an exceptionally strong and reliable connection.

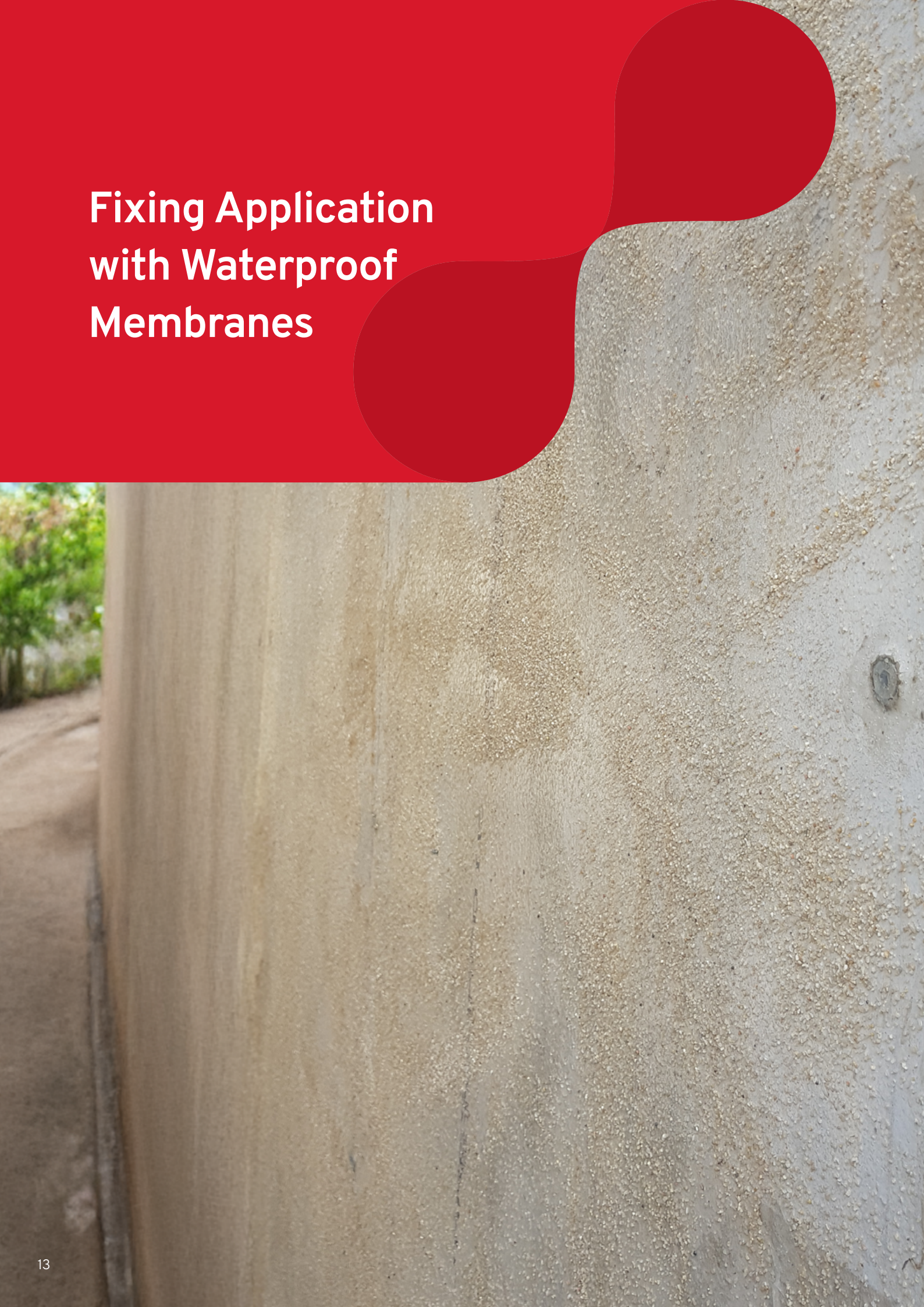
Once cured, Megapoxy becomes a stone-like, flexible, chemically inert, high-strength solid that does not change with ageing. It retains strength and elasticity over a range of temperatures – from over 90°C to as low as -30°C – without softening or embrittlement.



Clean-up and Finishing

- Uncured Megapoxy and tools can be cleaned with Megapoxy thinners.
- Cured Megapoxy can be mechanically removed with an angle grinder, sander or polisher for a smooth finish.

Fixing Application with Waterproof Membranes



The challenge of securely bonding natural stone to waterproofed vertical surfaces has long been an issue in construction.

Traditionally, the suppliers of waterproofing membranes have been reluctant to guarantee they can hold the weight of stone over time, often forcing stonemasons to use mechanical fixings. This means drilling holes, and potentially voiding warranties.

Megapoxy offers a comprehensive solution that combines a reliable waterproofing membrane with a compatible and strong stone adhesive. This solution should only be used on porous substrates such as concrete block, precast or in-situ cast concrete and cement-based fibre board.

Megapoxy H: The Waterproof Membrane.

Megapoxy H functions as both a primer and sealer, creating a waterproof layer that integrates into the substrate.
It is absorbed into porous materials, forming a secure and lasting barrier.

Application:

- Clean and prepare substrate surface (see guidelines on page 4).
- Waterproof all expansion and substrate joints in advance. Apply a bond-breaking seam over them using Megapoxy H and glass matting.
- **Apply one coat of Megapoxy H as a primer.**
- **Then apply two additional coats of Megapoxy H** as a sealer, to create a waterproof shield.
- With Megapoxy H used as primer and sealer, compatibility is assured and coats should be applied within the 6–12 hour chemical bonding window.
- If the next coat can't be applied within the bonding window, broadcast epoxy-quality sand (1-1.5mm, clean and dry) onto the freshly applied surface to create a rough texture. This ensures strong adhesion for the next layers: whether between primer and sealer, between sealer coats, or when applying the final adhesive layer for stone or tile installation.
- Once the third coat of Megapoxy H has been applied, you are ready to begin fixing the stone or tile cladding.

Note

While epoxy membranes are not seen as replacements for full waterproofing tanking systems, which are designed and guaranteed to allow for substrate movement and cracking, they have been accepted as an alternative when applied using the right waterproofing application practices.

Important

As delays between coats are common on site, it is crucial to always broadcast epoxy-grade sand if re-coating falls outside the bonding window. This ensures strong adhesion between layers.

Fixing Application with Waterproof Membranes

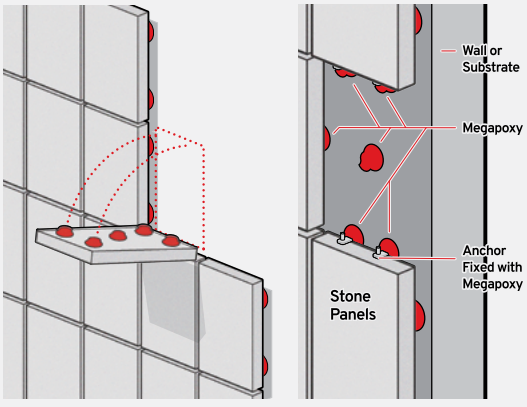
(continued)

The Adhesive Bond: Spot Fixing

Megapoxy PM and PF are recommended for anchoring natural stone to facades using the spot-fixing method. This method is suitable for fixing over Megapoxy H waterproof membranes or directly to prepared porous substrates.

- As a general baseline, apply at least one 20 × 75mm adhesive spot per m², regardless of stone size.
- For individual tiles, a typical layout is one spot in each corner and one in the centre, ensuring minimum 10% surface coverage.
- **Coverage guide: 1L per m² per 10mm cavity depth (eg 20m² at 10mm cavity = 20L).**
- The number and placement of adhesive spots may vary depending on the size, shape, and weight of each tile or panel.
- Adhesive thickness depends on the out-stand (the distance from the wall to the back of the stone), based on the architectural design.

This technique allows each panel to be individually supported and allows for easy stone removal if required and the addition of architectural mouldings. It also creates a ventilated cavity between the stone and the substrate, which helps moisture dry out and acts as a sound dampener.

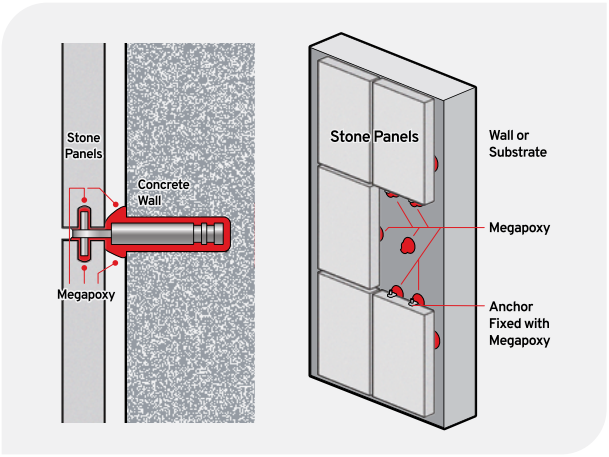


Note

Preparation is key to a successful job. If there is any doubt about cleanliness or weakness of the surface you're bonding to, we recommend grinding back both surfaces and ensuring they are clean and dust-free before applying adhesive.

The Adhesive Bond: Full-bed Application

If a full bed of adhesive is required, we recommend **Megapoxy Megabond** – applied using a notched trowel for even spread.



Considerations and Guidelines: Fixing Stone

- There is no fixed standard for height when using adhesive to fix stone.
- The decision to include mechanical fixings should be made by the installer in consultation with an engineer.
- The substrate must be designed to support the weight of the stone being bonded. For weak wall materials – such as old or weathered concrete, multi-cavity bricks, or pre-cast hollow-core concrete blocks – we recommend that an engineer be consulted.
- If required, lighter-weight mechanical fixings such as wire ties, L-pins or wind load anchors can be used in conjunction with Megapoxy due to its inherent strength.
- All mechanical fixings should be engineered to support the full weight of the stone panel being bonded. This ensures that in the event of a structural failure, the fixings can hold the stone in place even if the substrate fails.
- Drilling through the Megapoxy H membrane is permitted for fixings, provided the anchor is bonded in place with Megapoxy PM or PF. Any excess resin should be spread over the area, fully encapsulating the hole around the fixing. This process ensures the adhesive and membrane form a continuous bonded surface, maintaining the integrity of the waterproof layer.
- This system should always be installed by experienced tradespeople, following standard industry practices. Megapoxy products are fully guaranteed to meet their specified performance standards when supplied. However, Megapoxy and its representatives are not responsible for application or workmanship warranties.

Volumes and Coverage

Pack Sizes

- Megapoxy products are available in 4L and 20L resealable kits.

Waterproofing (Megapoxy H)

- **Estimated coverage:** 0.45L per m^2 at 1mm thickness
- **Recommended application:** 0.15mm per coat x 3 coats
- **Approximate coverage:** 44m^2 per 20L kit (3-coat system)

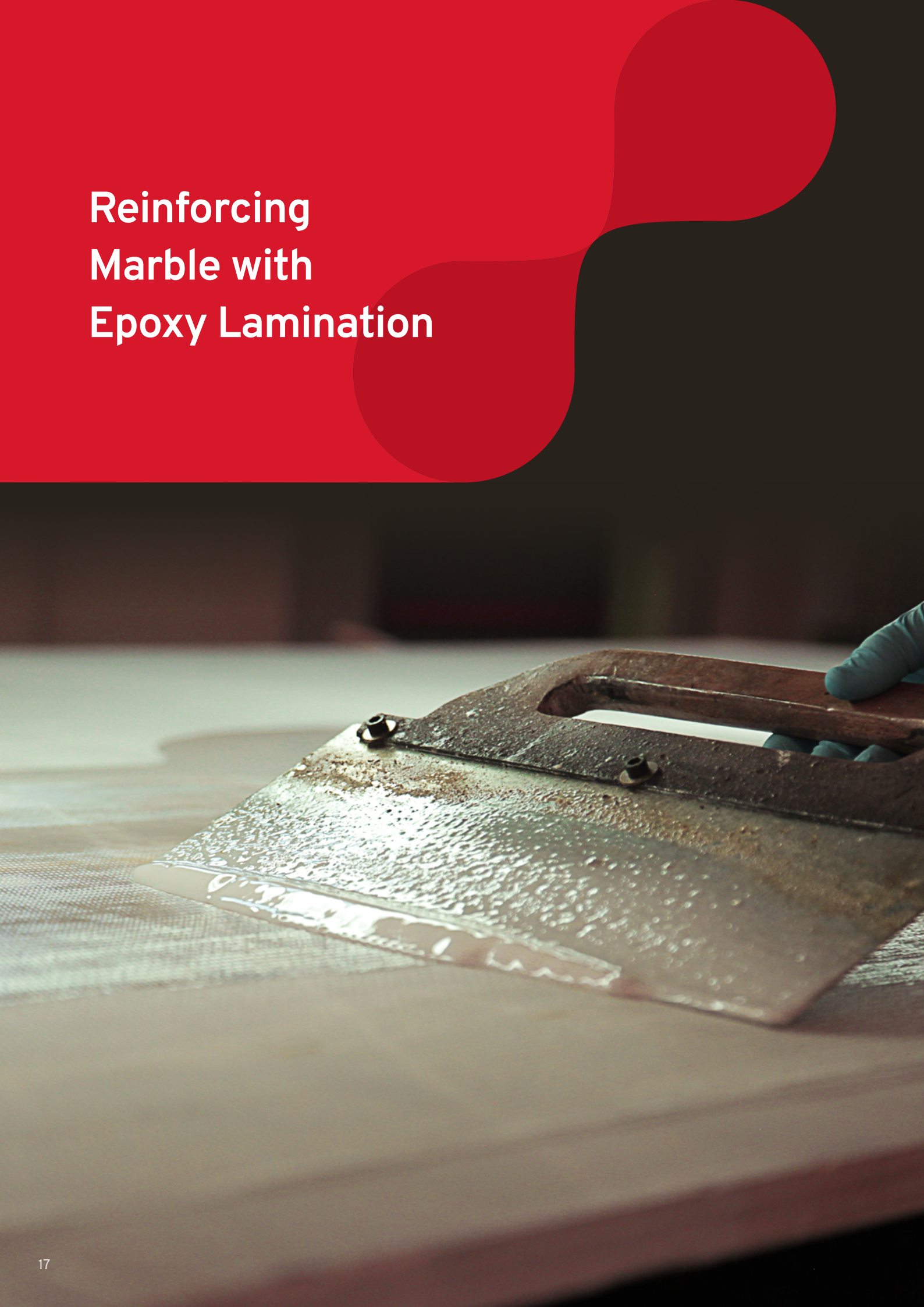
Adhesive Bonding: Spot Fixing (Megapoxy PM or PF)

- **Estimated coverage:** (based on bonding at least 10% of surface) = 1L per m^2 per 10mm cavity depth.
- **Example:** 20m^2 of stone with 10mm cavity = 20L

Adhesive Bonding: Notched Trowel (Megapoxy Megabond)

- **Estimated coverage:** 1L per m^2 per 1mm of adhesive thickness.
- **Example:** 3mm bed = 3L per m^2

Reinforcing Marble with Epoxy Lamination



Using epoxy resin to reinforce marble with fiberglass mesh is a proven way to strengthen natural stone slabs and prevent cracking during handling, transport and installation.

Especially useful for thin, brittle or exotic marble, this technique improves durability and stability.

The process involves applying fiberglass mesh to the back of the slab with epoxy resin as the bonding agent. It's widely used in countertop fabrication, wall cladding and other applications where strength and reliability matter.

What You Will Need

- **Epoxy adhesive solution:** Two-part (resin + hardener); low-viscosity, clear.
- **Fibreglass mesh**: Lightweight (80–160 g/m^2), alkali-resistant, typically supplied in 1m wide rolls.
- **Cleaning solvent:** Acetone or alcohol (for surface prep).
- **Tools:** Roller or notched trowel, gloves, mixing container, brush, spatula.

Step-by-Step Process

1. Surface Preparation

- Clean the back of the marble slab using a solvent like acetone.
- Ensure the surface is dry, dust-free and oil-free.
- Lightly sand polished slabs to improve adhesion.

2. Mix Epoxy

- Mix resin and hardener thoroughly in a 3:1 ratio by weight or volume.
- Stir for at least 2–3 minutes until fully blended. (See Mixing Guide, page 21.)
- Only mix the amount you can use within the epoxy's working time (approx. 30 minutes).

3. Apply Epoxy

- Pour or brush a thin, even layer onto the back of the slab.
- Spread using a notched trowel or roller.

4. Place Mesh

- Lay the fiberglass mesh gently over the wet epoxy.
- Use a roller or gloved hands to press it down, removing air pockets or wrinkles.
- For extra strength, a second coat of epoxy can be applied on top.

5. Allow to Cure

- Let the assembly cure undisturbed for 12–24 hours, depending on temperature, conditions and epoxy used.
- Optional: Use heat or UV lamps (only if compatible with your resin system).

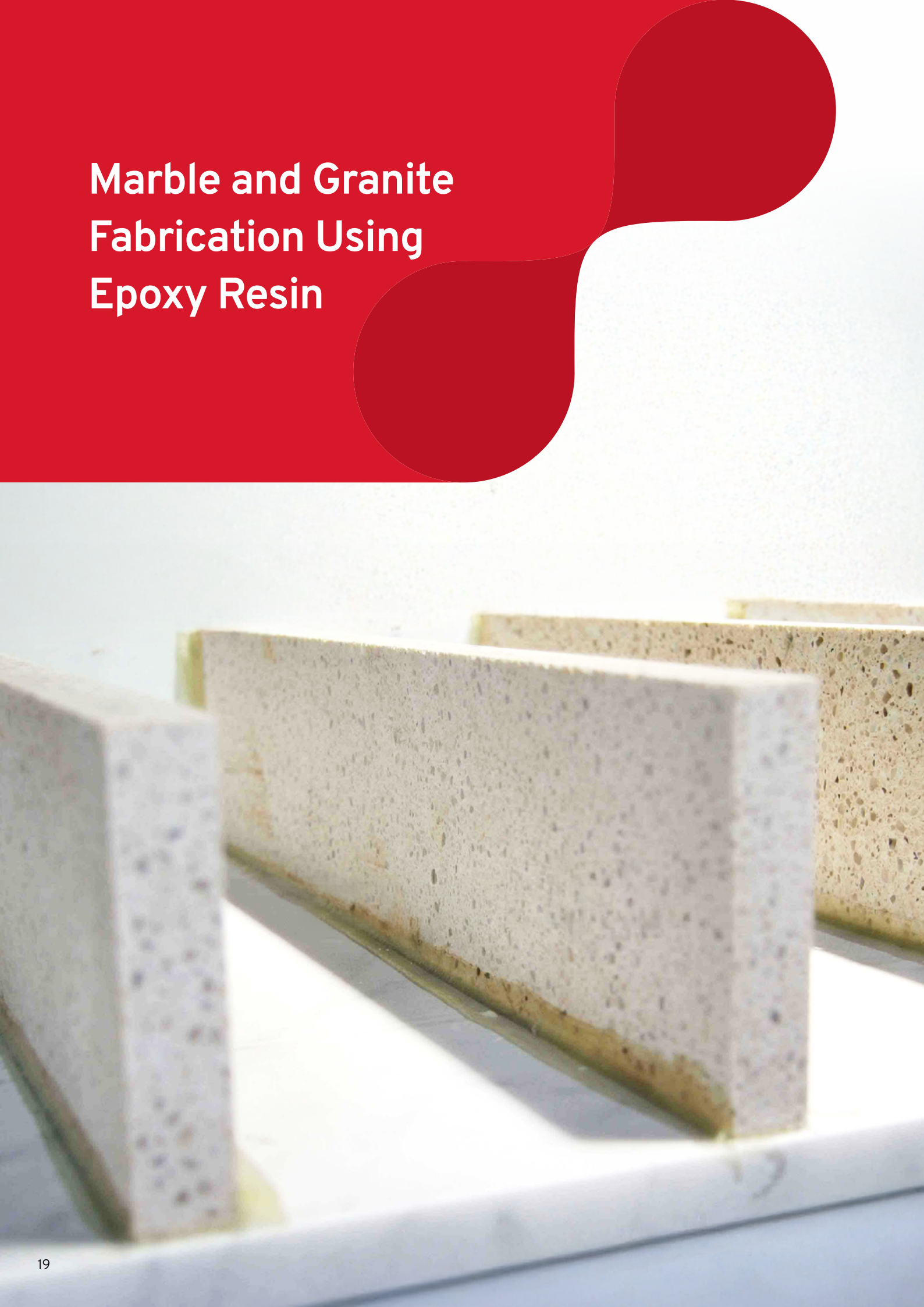
6. Final Check & Finishing

- Trim any excess mesh.
- Check for any air bubbles or weak adhesion before further fabrication.
- Once cured, the slab can be cut, polished or installed as normal.

Application Tips

- Use a low-viscosity epoxy such as Megapoxy H or Megapoxy HX for best penetration.
- Overlap mesh by 25–30mm when working in sections across large slabs.
- For extra reinforcement, apply a second epoxy and mesh layer after the first has fully cured.

Marble and Granite Fabrication Using Epoxy Resin



Epoxy resin plays a vital role in marble and granite fabrication – strengthening stone, repairing flaws, reducing porosity, enhancing appearance, and preparing surfaces for polishing and installation.

It helps transform slabs, panels and components into durable, high-performance surfaces for kitchens, bathrooms, commercial fitouts and architectural features.

Solutions like Megapoxy HX (clear and deeply penetrating), Megapoxy 63 and Megapoxy 69 (easily tinted for seamless repairs) are ideal for stone fabrication – from sealing and reinforcement to edge bonding and surface repair.

Why Use Epoxy in Stone Fabrication?

- **Strengthening:** Fills micro-cracks and increases structural integrity.
- **Repairing:** Fixes chips, cracks and surface imperfections.
- **Enhancing:** Deepens colour and gloss; improves visual uniformity.
- **Sealing:** Reduces porosity and water absorption.
- **Bonding:** Used in lamination (eg mitred edges and countertop build-up).

Common Epoxy Resin Types

- **Clear epoxy:** For transparent sealing and enhancing the natural look of the stone.
- **Pigmented epoxy:** Colour-matched for seamless repair work.
- **Thixotropic epoxy:** Gel-like formula for vertical surfaces and filling.
- **Low-viscosity epoxy:** Penetrates deep into fissures and flaws.

Fabrication Process with Epoxy

1. Surface Preparation

- Clean the slab thoroughly to remove dust, oils and moisture.
- Open cracks or chips using a diamond blade or grinder to clean.

2. Apply Epoxy

- Mix epoxy resin and hardener according to the product Technical Data Sheet. (See Mixing Guide, page 21)
- Apply using a brush, roller or squeegee.
  - > **For cracks:** Inject or trowel into the damaged area.
  - > **For slab reinforcement:** Coat the full surface evenly.
- **Optional:** While the epoxy is wet, apply fiberglass mesh to the back for added strength.

3. Curing

- Allow to cure undisturbed (typically 24 hours at 25°C).
- Infrared or heat lamps may be used to accelerate curing if compatible.

4. Grinding & Polishing

- Once cured, grind to level the epoxy with the stone surface.
- Polish to the desired finish and gloss.

Typical Applications

- Kitchen countertops.
- Wall cladding.
- Flooring inlays.
- Memorials and monuments.
- Custom furniture tops.

Advantages of Epoxy Resin in Stone Work

- Improves durability and performance.
- Enables use of cracked and otherwise unusable slabs.
- Enhances polishing outcomes and colour depth.
- Provides excellent water and chemical resistance.

Tips & Considerations

- Ensure adequate ventilation when using epoxy.
- Match epoxy colour closely with the stone, or use pigmented epoxy or colour tints to blend repairs seamlessly.
- Test epoxy on a sample piece before working on valuable stone.

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- Ensure adequate ventilation when using epoxy.
- Match epoxy colour closely with the stone, or use pigmented epoxy or colour tints to blend repairs seamlessly.
- Test epoxy on a sample piece before working on valuable stone.

Mixing Guide

For reliable results, always mix thoroughly using the correct method for your product type.

General guidelines

- Mix for a minimum of 3 minutes (using a timer is recommended) for thorough blending of standard cure epoxy resins.
- Pastes, gels and clear liquids can be visually checked: incomplete mixing will usually show as streaks or milkiness.
- Always measure accurately and mix until fully uniform.
- For liquid reins: avoid whipping to minimise air entrapment.

Paste & gel solutions

1. Use separate tools for dispensing and mixing Parts A and B.
2. Dispense equal amounts (same size and shape) of Part A and Part B, side-by-side on a flat board.
3. Work the two components together using a folding technique until the colour is uniform.

Clear liquid epoxy resins

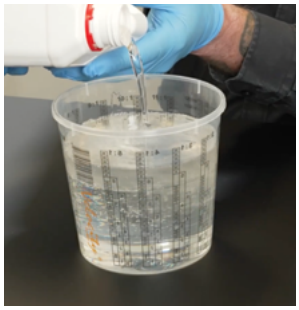
- Hand mix to minimise aeration (unless mixing large volumes – contact us for advice).
- Do not whip.

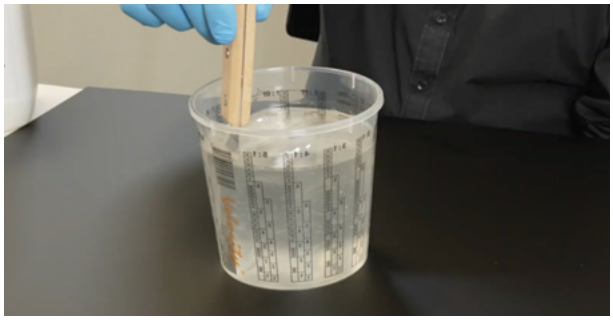
1. In a clean container, measure Part A and Part B in the correct ratio.
2. Mix for 2 minutes, scraping the base and corners.
3. Scrape the inside walls with a straight edge and mix for at least 1 more minute.
4. If mixed correctly, the resin should be clear and mostly free of bubbles.

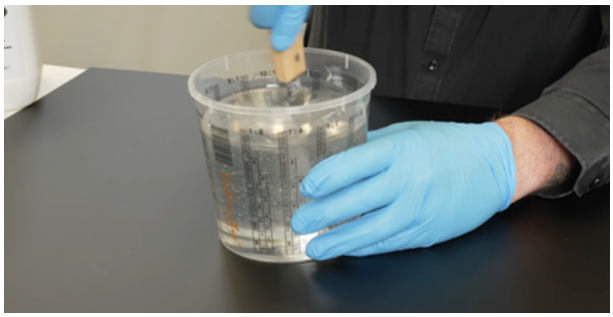
Coloured liquid epoxy resins

- Mix for a minimum of 3 minutes – timing is critical, as colour prevents visual checks for clarity.
- Do not whip.

1. In a clean container, measure Part A and Part B in the correct ratio.
2. Mix for 2 minutes, scraping the base and corners.
3. Scrape the inside walls with a straight edge and mix for at least 1 more minute.
4. If mixed correctly, the resin should be a uniform colour with no streaks.







Appendix

Technical Bulletins

Megapoxy®

H

Low Viscosity Hydrophilic Epoxy Resin

Technical Data Sheet

DESCRIPTION

Megapoxy H is a low viscosity, 100% solids, resin based, solvent-free, hydrophilic liquid resin.

It is suitable for use in repairs of structures that are in contact with potable water.

Megapoxy H complies with AS/NZS 4020:2018 "Testing of Products For Use In Contact with Drinking Water". Megapoxy H is resistant to hydrogen sulphide that may be present in pipes and plants used for treatment of sewage. Megapoxy H has excellent static and dynamic mechanical properties, and can be used with the fine aggregates to make high strength epoxy mortar.

It can be used for wet to dry concrete bonding. Repairs of cracked concrete, underwater and splashzone repairs.

Megapoxy H has very low volatile organic compounds.

RECOMMENDED APPLICATIONS

- New to Old Concrete Bonding
- Concrete Crack Repair
- Underwater and Splashzone Repairs
- Steel Anchoring
- Coating
- Floor Repairs
- Low Pressure Injection
- Epoxy Mortars

PROPERTIES

Mixing Ratio by Volume	3 Part A to 1 Part B
Work Time at 25°C:	30 minutes
Minimum Cure Time at 15°C	48 hours
Minimum Cure Time at 25°C	24 hours
Minimum Cure Time at 35°C	12 hours
Thin Film Cure at 25°C	5-6 hours
Minimum Application Temperature	10°C
Viscosity Part A at 25°C	1300 - 1900cps
Viscosity Part B at 25°C	75 - 90cps
Mixed Viscosity at 25°C	800cps
S.G. Part A at 25°C	1.12 - 1.14
S.G. Part B at 25°C	0.97 – 0.99
Mixed S.G. at 25°C	1.09
Colour Part A	Clear or N35 Grey
Colour Part B	Clear
Colour Mixed	Clear or N35 Grey

Megapoxy

Technical Data Sheet

CURED PROPERTIES

Yield Compressive Strength - ASTM C579	92MPa
Ultimate Compressive Strength - ASTM C579	120MPa
Bond Strength Concrete - ASTM D4541	>3MPa
Tensile Bond Strength Steel - ASTM D897	18MPa
Modulus of Elasticity - ASTM C579	1.7GPa
Flexural Strength - ASTM D790	59MPa
Tensile Strength - ASTM D638	57MPa
Tensile Lap Shear Strength - ASTM D1002	7MPa steel to steel
Hardness - Shore D - ASTM D2240-00	75 minimum
Dielectric Strength (kV/mm)	13.6
Surface Resistivity (Ohm) - ASTM D257	10^{12}
Volume Resistivity (Ohm.cm)	2.2×10^{11}
VOC (g/l) - ASTM D3960	2
Water Vapour Transmission - ASTM E96/E96M	0.095 (gram/hr m^2)
Water Absorption - ASTM D570	0.184 Increase in weight (%)

CHARACTERISTICS

- Very Low VOC
- Hydrophilic
- Thin Liquid
- Mixes easily manually or mechanically
- Very high strength permanent bonds
- Excellent tensile and compressive strengths, superior to concrete
- Excellent chemical resistance

SURFACE PREPARATION

Concrete

Concrete should be free from grease and oil. If necessary, clean with industrial heavy duty degreaser. When clean, remove surface laitance. This is best done by mechanical abrasion such as scabbling, grit blasting or grinding. If this is not possible acid etching must be carried out. Mix concentrated hydrochloric acid with equal volume of water and spread at the rate of 0.5 litre per square meter of concrete surface. Allow to react for about 10 minutes and wash the area thoroughly and scrub with a stiff bristled broom to remove loose sand. Allow to dry for 24 hours. For maximum adhesion the concrete should be surface dry.

Metal Surfaces

Metals should be grit blasted to AS 1627.2.2002. If this is not possible, mechanically abrade the surface to a clean, bright metal surface. Once this abrasion is complete, degrease the surface by flooding with an industrial grade degreaser. Wire brushing is not entirely satisfactory and gives minimal adhesion only.

Coated Surfaces

It is recommend to remove all coatings prior to bonding, bonding to coated surfaces will give inferior bond strengths compared to bonding directly to a prepared substrate.

Concrete:

The surface may be either flame-cleaned, or mechanically treated with a scutching tool, to remove all traces of paint. Complete the preparation by diamond grinding or scabbling.

Metals:

Steps should be taken to remove all paint and/or galvanizing. Good quality paint stripper should be used, followed by grit blasting or grinding to a bright metal finish.

Technical Data Sheet

STEEL ANCHORING	For anchoring steel into concrete, drill a hole approximately 1.5 diameters of the steel to be grouted. Any dust or foreign matter must be blown out with oil-free, dry compressed air. Set the steel into the hole and pour the mixed Megapoxy H from one side to allow air to escape. Allow to cure for 24 hours. For grouting of steel horizontally use Megapoxy HT instead of Megapoxy H. The steel should be grit blasted and degreased to achieve good bond.
TYPICAL PULL OUT STRENGTH - 40 MPa CONCRETE	14 mm deformed bar inserted to depth 10 x diameter of bar : > 50 kN 25 mm deformed bar inserted to depth 8 x diameter of bar : > 150 kN 14 mm deformed bar inserted to depth 8 x diameter of bar : > 50 kN 25 mm deformed bar inserted to depth 10 x diameter of bar : > 150 kN
BASIC FORMULATION FOR CRACK SEALING AND ANCHORING STEEL INTO CONCRETE	Mixing Ratio by volume: 3 Parts A to 1 Part B Mix thoroughly for a minimum of 3 minutes and dispense by pouring or pressure injection.
CRACK REPAIR - TREATMENT OF CRACKS	The treatment of cracks in concrete not expected to undergo further movement can be carried out by one of the following methods: **Capillary Action** Methylated Spirits or Acetone is applied to the crack followed by brush coating of mixed Megapoxy H. As the solvent dries out, the resin is drawn into the crack. **Low Pressure Injection** Prepare concrete around the crack by lightly grinding the surface. Bond crack injection balloons over the crack at a distance of 300mm apart, depending on the crack width, using Megapoxy PM. Seal over the balloon bases and crack to a minimum width of 50mm either side of the crack, using Megapoxy PM. Once the Megapoxy PM has cured, mix the Megapoxy H and pour into the back of the crack injection gun. Open all the crack injection balloon taps, attach the crack injection gun to the crack injection balloon and pump the Megapoxy H into the balloon until it comes out of the next balloon or the balloon inflates to approx. 20mm. Turn tap off and repeat the process until all the balloons are inflated and remain inflated. Once every thing has cured, knock balloons of with a chisel below the steel clip, then using a 40grit flap disc, grind the surface back smooth. **Pressure Injection** Seal outside of crack with Megapoxy PM non-sag paste system. Some “V-ing” may be necessary to obtain better bonding. When applying the Megapoxy PM, bond over the crack nuts into which ball-less grease nipples can be screwed prior to injection the next day. Nuts should be placed 200 to 400 mm apart, depending on the depth of the crack. The deeper the crack, the closer the nut. Megapoxy H can be injected by grease gun or pressure pot. A nipple is screwed into the bottom-most nut and Megapoxy H injected until it exudes from the adjacent nut. Remove the nipple and plug with fitting bolt. The nipple is then screwed into the next nut and the procedure repeated until the crack is full. In some cases it may be necessary to seal concrete on the opposite side with Megapoxy PM. The following day the nuts can be removed with a chisel leaving a minimum of grinding to achieve a clean appearance.

Technical Data Sheet

IMPORTANT INFORMATION	It is essential that the correct mixing ratio be used and that the Part A and Part B are thoroughly mixed together before use. Inaccuracies and poor mixing will result in lower physical properties of the cured system and, if the error is sufficiently large, the system may not cure satisfactorily and discolour on ageing.

EPOXY MORTARS AND EPOXY CONCRETE

POURABLE EPOXY MORTARS

POURABLE EPOXY MORTAR (GROUT)	Mixing Ratio by volume	3 Parts A to 1 Part B 12 Parts Silica 50N by volume
	The proportion of silica 50N (epoxy quality fine sand) can be varied to provide suitable pourability in cold and warm weather conditions.	
LARGE POUR POURABLE EPOXY MORTAR (GROUT)	Mixing Ratio by volume	3 Parts A to 1 Part B 12 Parts Silica 16/30 by volume
	This mix of Megapoxy H and silica 16/30 (epoxy quality sand) can be used for larger and deeper sized pour while still maintaining strength. It can be varied slightly to provide different pourability. Suitable for large truncation pocket grouting. Compressive Strength : 75MPa	

TROWELLABLE EPOXY MORTARS

EASY TO WORK MORTAR	Mixing Ratio by volume	3 Parts A to 1 Part B 12 Parts Silica 50N by volume
	Prior to placement of this mortar, prime the prepared concrete surface with a brush applied coat of pre-mixed Megapoxy H. Finish the placed mortar using a steel trowel. To avoid sticking and dragging of the trowel, broadcast a thin layer of Silica 50N on the mortar surface and work with trowel until desired surface finish is achieved. Allow to cure for 24 hours. Compressive Strength : 80MPa	
HIGH STRENGTH CORRECTIVE RESURFACING MORTAR.	Mixing Ratio by volume	3 Parts A to 1 Part B 12 Parts Silica 50N by volume 12 Parts Silica 30/60 by volume
	Prior to placement of this mortar, prime the prepared concrete surface with a brush applied coat of pre-mixed Megapoxy H. Finish the placed mortar using a steel trowel. To avoid sticking and dragging of the trowel, broadcast a thin layer of Silica 50N on the mortar surface and work with trowel until desired surface finish is achieved. Allow to cure for 24 hours. This provides a moisture tolerant epoxy modified leveling screed upto 6 mm in thickness. Compressive Strength : 70MPa	

Megapoxy

Technical Data Sheet

EPOXY CONCRETE	
HIGH STRENGTH MEGAPOXY H BASED CONCRETE	Mixing Ratio by volume 3 Parts A to 1 Part B 10 Parts Silica 50N by volume 10 Parts Blue Metal 10 - 20 mm by volume Prior to placement of this mortar, prime the prepared concrete surface with a brush applied coat of pre-mixed Megapoxy H. Finish the placed mortar using a steel trowel. To avoid sticking and dragging of the trowel, broadcast a thin layer of Silica 50N on the mortar surface and work with trowel until desired surface finish is achieved. Allow to cure for 24 hours. This provides a moisture tolerant epoxy modified leveling screed up to a 6 mm in thickness. Compressive Strength : 70MPa
NEW TO OLD CONCRETE ADHESIVE	Mixing Ratio by volume 3 Parts A to 1 Part B Mix Megapoxy H as detailed above and apply by brush, roller or airless spray to prepared old concrete at the rate of 1 to 1.5 litres per square metre. Place new concrete within 15 minutes of applying Megapoxy H to ensure good bonding. For vertical and overhead rendering use Megapoxy HT in place of Megapoxy H.

CLEANING	To keep mixing implements and working tools clean, use Megapoxy Thinners. Use disposable rubber gloves to protect hands and maintain proper industrial hygiene. For further details refer to the Megapoxy H Safety Data Sheets.
PACKAGING	Megapoxy H is available in 4lt & 20lt kits. Product should be stored in cool dry store.
TECHNICAL SERVICE	All purchasers of Megapoxy Products, are encouraged to avail themselves of our Technical Service for our Megapoxy Products. The information in this Bulletin is correct at time of publication, however continual research and development is being carried out and specs may change without notice.

Megapoxy®

HX

Extra Low Viscosity Epoxy Resin

Technical Data Sheet

DESCRIPTION

Megapoxy HX is a specially formulated extra low viscosity, 100% solids, resin based, solvent-free, hydrophilic liquid resin. Megapoxy HX is used regularly for the repair of cracked concrete by gravity penetration or low pressure injection. Megapoxy HX is also suitable for impregnation of porous substrates such as masonry and timber. Megapoxy HX has also been used successfully as a low viscosity laminating resin for fibreglass work.

RECOMMENDED APPLICATIONS

- Casting
- Concrete Crack Repair
- Low Pressure Injection
- Surface Hardening
- Floor Repairs
- Laminating
- Masonry Sealing
- Capillary Action
- Vacuum Bagging

PROPERTIES

Mixing Ratio by Volume	3 Part A to 1 Part B
Work Time at 25°C:	60 minutes
Minimum Cure Time at 15°C	48 hours
Minimum Cure Time at 25°C	24 hours
Minimum Cure Time at 35°C	12 hours
Thin Film Cure at 25°C	6-8 hours
Minimum Application Temperature	10°C
Viscosity Part A at 25°C	400 - 600cps
Viscosity Part B at 25°C	15 - 20cps
Mixed Viscosity at 25°C	200cps
S.G. Part A at 25°C	1.10 - 1.12
S.G. Part B at 25°C	0.95 - 0.97
Mixed S.G. at 25°C	1.07
Colour Part A	Clear
Colour Part B	Clear
Colour Mixed	Clear

HX

Megapoxy

Technical Data Sheet

CURED PROPERTIES	Yield Compressive Strength - ASTM C579	70MPa
	Ultimate Compressive Strength - ASTM C579	140MPa
	Bond Strength Concrete - ASTM D4541	>3MPa
	Tensile Bond Strength Steel - ASTM D897	20MPa
	Modulus of Elasticity - ASTM C579	0.055GPa
	Flexural Strength - ASTM D790	80MPa
	Tensile Strength - ASTM D638	59MPa
	Tensile Lap Shear Strength - ASTM D1002	15MPa (steel to steel)
	Hardness - Shore D - ASTM D2240	75
	Dielectric Strength (kV/mm)	24.4
	Surface Resistivity (Ohm) - ASTM D257	10^{12}
	Volume Resistivity (Ohm.cm)	1.23×10^{11}
	VOC (g/l) - ASTM D3960	6

CHARACTERISTICS

- Low VOC
- Hydrophilic
- Thin Liquid
- Easily mixed manually or mechanically
- Very high strength permanent bonds
- Excellent tensile and compressive strengths, superior to concrete
- Excellent chemical resistance

SURFACE PREPARATION

Concrete

Concrete should be free from grease and oil. If necessary, clean with industrial heavy duty degreaser. When clean, remove surface laitance. This is best done by mechanical abrasion such as scabbling, grit blasting or grinding. If this is not possible acid etching must be carried out. Mix concentrated hydrochloric acid with equal volume of water and spread at the rate of 0.5 litre per square meter of concrete surface. Allow to react for about 10 minutes and wash the area thoroughly and scrub with a stiff bristled broom to remove loose sand. Allow to dry for 24 hours. For maximum adhesion the concrete should be surface dry.

Metal Surfaces

Metals should be grit blasted to AS 1627.2.2002. If this is not possible, mechanically abrade the surface to a clean, bright metal surface. Once this abrasion is complete, degrease the surface by flooding with an industrial grade degreaser. Wire brushing is not entirely satisfactory and gives minimal adhesion only.

Coated Surfaces

It is recommend to remove all coatings prior to bonding, bonding to coated surfaces will give inferior bond strengths compared to bonding directly to a prepared substrate.

Concrete:

The surface may be either flame-cleaned, or mechanically treated with a scutching tool, to remove all traces of paint. Complete the preparation by diamond grinding or scabbling.

Metals:

Steps should be taken to remove all paint and/or galvanizing. Good quality paint stripper should be used, followed by grit blasting or grinding to a bright metal finish.

HX

Megapoxy

Technical Data Sheet

CRACK REPAIR - TREATMENT OF CRACKS	The treatment of cracks in concrete not expected to undergo further movement can be carried out by one of the following methods: **Capillary Action** Methylated Spirits or Acetone is applied to the crack followed by brush coating of mixed Megapoxy HX. As the solvent dries out, the resin is drawn into the crack. **Low Pressure Injection** Prepare concrete around the crack by lightly grinding the surface. Bond crack injection balloons over the crack at a distance of 300mm apart, depending on the crack width, using Megapoxy PM. Seal over the balloon bases and crack to a minimum width of 50mm either side of the crack, using Megapoxy PM. Once the Megapoxy PM has cured, mix the Megapoxy HX and pour into the back of the crack injection gun. Open all the crack injection balloon taps, attach the crack injection gun to the crack injection balloon and pump the Megapoxy HX into the balloon until it comes out of the next balloon or the balloon inflates to approx. 20mm. Turn tap off and repeat the process until all the balloons are inflated and remain inflated. Once every thing has cured, knock balloons of with a chisel below the steel clip, then using a 40grit flap disc, grind the surface back smooth. **Pressure Injection** Seal outside of crack with Megapoxy PM non-sag paste system. Some "V-ing" may be necessary to obtain better bonding. When applying the Megapoxy PM, bond over the crack nuts into which ball-less grease nipples can be screwed prior to injection the next day. Nuts should be placed 200 to 400 mm apart, depending on the depth of the crack. The deeper the crack, the closer the nut. Megapoxy HX can be injected by grease gun or pressure pot. A nipple is screwed into the bottom-most nut and Megapoxy HX injected until it exudes from the adjacent nut. Remove the nipple and plug with fitting bolt. The nipple is then screwed into the next nut and the procedure repeated until the crack is full. In some cases it may be necessary to seal concrete on the opposite side with Megapoxy PM. The following day the nuts can be removed with a chisel leaving a minimum of grinding to achieve a clean appearance.
IMPORTANT INFORMATION	It is essential that the correct mixing ratio be used and that the Part A and Part B are thoroughly mixed together before use. Inaccuracies and poor mixing will result in lower physical properties of the cured system and, if the error is sufficiently large, the system may not cure satisfactorily and discolour on ageing.
CLEANING	To keep mixing implements and working tools clean, use Megapoxy Thinners. Use disposable rubber gloves to protect hands and maintain proper industrial hygiene. For further details refer to the Megapoxy HX Safety Data Sheet.
PACKAGING	Megapoxy HX is available in 4lt & 20lt kits. Product should be stored in cool dry store.
TECHNICAL SERVICE	All purchasers of Megapoxy Products, are encouraged to avail themselves of our Technical Service for our Megapoxy Products. The information in this Bulletin is correct at time of publication, however continual research and development is being carried out and specs may change without notice.

Megapoxy

PF

Rapid Set Epoxy Paste Adhesive

Technical Data Sheet

DESCRIPTION

Megapoxy PF is a rapid set epoxy adhesive which sets in seven minutes and attains more than half its ultimate strength within 15 minutes of mixing.

Megapoxy PF "hardens-as-you-hold-it" for immediate on the spot emergency repairs to tanks, pipes, machinery, concrete structures etc.

Properly mixed Megapoxy PF will not stain or discolour white or light coloured marble and ceramics

RECOMMENDED APPLICATIONS

Bonding

- Precast concrete articles
- Metal to metal or concrete
- Grouting bolts
- Natural stones
- Bricks and ceramics
- Bonding compressed cement sheet

Filling and Repair

- Concrete pipes and tanks Fibreglass articles
- Fibreglass articles
- Concrete floors and stairs
- Concrete column
- Insitu formed concrete
- Flush-filling countersunk screws in fibre cement sheet

PROPERTIES

Mixing Ratio by Volume	1 Part A to 1 Part B
Work Time at 25°C:	3 minutes
Minimum Cure Time at 15°C	2 hours
Minimum Cure Time at 25°C	1 hours
Minimum Cure Time at 35°	30 minutes
Minimum Application Temperature	10°C
Maximum Operating Temperature	80°C
Colour Part A	White
Colour Part B	White or Dark Grey
Appearance Mixed	White or Grey

CURED PROPERTIES

Compressive Strength - ASTM D695-23	70Mpa
Bond Strength Concrete - ASTM D4541	>3Mpa
Tensile Bond Strength Steel - ASTM D897-08	16Mpa
Modulus of Elasticity - ASTM D695	2Gpa
Flexural Strength ASTM D790-17	46Mpa
Tensile Strength - ASTM D638-22	21Mpa
Tensile Shear Strength - ASTM D1002-10	8Mpa
Hardness - Shore D - ASTM D2240-00	75
Coefficiant of Linear Thermal Expansion, Mean	57.9 x 10-6 (mm/mm/°C)
Dielectric Strength 50Hz @25°C(Kv/cm)	190

PF

Megapoxy

Technical Data Sheet

CHARACTERISTICS	• Very Low VOC • Smooth and easily workable • Simple 1:1 mix ratio • Creamy texture, blends easily • Non sag on vertical surfaces or overhead surface • Sets in 7 minutes at 25°C - 90% cure within 1 hour at 25°C • Very high strength permanent bonds • Excellent tensile and compressive strengths, superior to concrete • Excellent chemical resistance • Can be machined after 30 minutes cure at 25°C
SURFACE PREPARATION	**Concrete** Concrete should be free from grease and oil. If necessary, clean with industrial heavy duty degreaser. When clean, remove surface laitance. This is best done by mechanical abrasion such as scabbling, grit blasting or grinding. If this is not possible acid etching must be carried out. Mix concentrated hydrochloric acid with equal volume of water and spread at the rate of 0.5 litre per square meter of concrete surface. Allow to react for about 10 minutes and wash the area thoroughly and scrub with a stiff bristled broom to remove loose sand. Allow to dry for 24 hours. For maximum adhesion the concrete should be surface dry. **Metal Surfaces** Metals should be grit blasted to AS CK 9.4 - 1964 Class 3 finish. If this is not possible, mechanically abrade the surface to a clean, bright metal surface. Once this abrasion is complete, degrease the surface by flooding with an industrial grade degreaser. Wire brushing is not entirely satisfactory and gives minimal adhesion only. **Coated Surfaces** It is recommend to remove all coatings prior to bonding, bonding to coated surfaces will give inferior bond strengths compared to bonding directly to a prepared substrate. Concrete: The surface may be either flame-cleaned, or mechanically treated with a scutching tool, to remove all traces of paint. Complete the preparation by diamond grinding or scabbling. Metals: Steps should be taken to remove all paint and/or galvanizing. Good quality paint stripper should be used, followed by grit blasting or grinding to a bright metal finish.
IMPORTANT INFORMATION	It is essential that the correct mixing ratio be used and that the Part A and Part B are thoroughly mixed together before use. Inaccuracies and poor mixing will result in lower physical properties of the cured system and, if the error is sufficiently large, the system may not cure satisfactorily and discolour on ageing.
CLEANING	To keep mixing implements and working tools clean, use Megapoxy Thinners. Use disposable rubber gloves to protect hands and maintain proper industrial hygiene. For further details refer to the Megapoxy PF Safety Data Sheet.
PACKAGING	Megapoxy PF is available in 4lt & 20 litre kits and in Grey or White. Product should be stored in cool dry store.
TECHNICAL SERVICE	All purchasers of Megapoxy Products, are encouraged to avail themselves of our Technical Service for our Megapoxy Products. The information in this Bulletin is correct at time of publication, however continual research and development is being carried out and specs may change without notice.

Megapoxy

PM

Epoxy Paste Adhesive

Technical Data Sheet

DESCRIPTION

Megapoxy PM is a specially formulated non-sag epoxy filling and adhesive paste. This easy to use two-part epoxy product sets after mixing with excellent properties ideally suited for a wide range of applications.

Megapoxy PM has very low volatile organic compounds (VOC) content.

Properly mixed Megapoxy PM will not stain or discolour white or light coloured marble and ceramics.

RECOMMENDED APPLICATIONS

Bonding

- Precast concrete articles
- Metal to metal or concrete
- Grouting bolts
- Natural stones
- Bricks and ceramics
- Bonding compressed cement sheet

Filling and Repair

- Concrete pipes and tanks Fibreglass articles
- Fibreglass articles
- Concrete floors and stairs
- Concrete column
- Insitu formed concrete
- Flush-filling countersunk screws in fibre cement sheet

PROPERTIES

Mixing Ratio by Volume	1 Part A to 1 Part B
Work Time at 25°C:	45 minutes
Minimum Cure Time at 15°C	48 hours
Minimum Cure Time at 25°C	24 hours
Minimum Cure Time at 35°	12 hours
Minimum Application Temperature	10°C
Maximum Operating Temperature	70°C
Colour Part A	White
Colour Part B	White or Dark Grey
Appearance Mixed	White or Grey

CURED PROPERTIES

Compressive Strength - ASTM D695-23	80Mpa
Bond Strength Concrete - ASTM 4541	>3Mpa
Tensile Bond Strength Steel - ASTM D897-08	20Mpa
Modulus of Elasticity - ASTM D695	2Gpa
Flexural Strength - ASTM D790-17	38Mpa
Tensile Strength - ASTM D638-22	22Mpa
Tensile Shear Strength - ASTM D1002-10	13Mpa
Hardness - Shore D - ASTM D2240-00	86
Coefficient of Linear Thermal Expansion. Mean	70.4 x 10-6 (mm/mm/°C)
Dielectric Strength 50Hz @25°C(Kv/cm)	190

PM

Megapoxy

Technical Data Sheet

CHARACTERISTICS	• Very Low VOC • Simple 1:1 mix ratio • Creamy Texture, blend easily • Non sag on vertical & overhead surfaces • Adheres and cures under adverse conditions (cold & damp) • Good strength retention after prolonged immersion in water • High strength permanent bonds • Excellent tensile and compressive strengths, superior to concrete • Excellent chemical resistance • Flash Point above 200°C
SURFACE PREPARATION	**Concrete** Concrete should be free from grease and oil. If necessary, clean with industrial heavy duty degreaser. When clean, remove surface laitance. This is best done by mechanical abrasion such as scabbling, grit blasting or grinding. If this is not possible acid etching must be carried out. Mix concentrated hydrochloric acid with equal volume of water and spread at the rate of 0.5 litre per square meter of concrete surface. Allow to react for about 10 minutes and wash the area thoroughly and scrub with a stiff bristled broom to remove loose sand. Allow to dry for 24 hours. For maximum adhesion the concrete should be surface dry. **Metal Surfaces** Metals should be grit blasted to AS CK 9.4 - 1964 Class 3 finish. If this is not possible, mechanically abrade the surface to a clean, bright metal surface. Once this abrasion is complete, degrease the surface by flooding with an industrial grade degreaser. Wire brushing is not entirely satisfactory and gives minimal adhesion only. **Coated Surfaces** It is recommend to remove all coatings prior to bonding, bonding to coated surfaces will give inferior bond strengths compared to bonding directly to a prepared substrate. Concrete: The surface may be either flame-cleaned, or mechanically treated with a scutching tool, to remove all traces of paint. Complete the preparation by diamond grinding or scabbling. Metals: Steps should be taken to remove all paint and/or galvanizing. Good quality paint stripper should be used, followed by grit blasting or grinding to a bright metal finish.
IMPORTANT INFORMATION	It is essential that the correct mixing ratio be used and that the Part A and Part B are thoroughly mixed together before use. Inaccuracies and poor mixing will result in lower physical properties of the cured system and, if the error is sufficiently large, the system may not cure satisfactorily and discolour on ageing.
CLEANING	To keep mixing implements and working tools clean, use Megapoxy Thinners. Use disposable rubber gloves to protect hands and maintain proper industrial hygiene. For further details refer to the Megapoxy PM Safety Data Sheet.
PACKAGING	Megapoxy PM is available in 4lt & 20 litre kits and in Grey or White. Product should be stored in cool dry store.
TECHNICAL SERVICE	All purchasers of Megapoxy Products, are encouraged to avail themselves of our Technical Service for our Megapoxy Products. The information in this Bulletin is correct at time of publication, however continual research and development is being carried out and specs may change without notice.

Megapoxy®

Megabond

Structural Epoxy Adhesive

Technical Data Sheet

DESCRIPTION

Megabond is a high strength two component 100% solids epoxy adhesive.

It is creamy white in colour, easy to mix and spreads easily with a notched trowel. Megabond is suitable for bonding stone and tile to all masonry surfaces including cement sheet, cement render, plasterboard and timber, it is suitable for both interior and exterior applications.

Megabond will not stain light coloured marbles and bonds water sensitive and composite stone. Megabond can be coloured to suit using Megapoxy coloured pigment pastes.

High shock and chemical resistance.

RECOMMENDED APPLICATIONS

Bonding

- Precast concrete articles
- Metal to metal or concrete
- Miter Joints
- Natural stones
- Bricks and ceramics
- Bonding compressed cement sheet

Filling and Repair

- Stone holes and voids
- Chipped or damaged stone edges
- Concrete floors and stairs
- Concrete column
- Insitu formed concrete
- Fibreglass articles

PROPERTIES

Mixing Ratio by Volume	1 Part A to 1 Part B
Work Time at 25°C:	45 minutes
Minimum Cure Time at 15°C	48 hours
Minimum Cure Time at 25°C	24 hours
Minimum Cure Time at 35°	12 hours
Minimum Application Temperature	10°C
Maximum Operating Temperature	80°C
Colour Part A	White
Colour Part B	Natural
Appearance Mixed	Off White

CURED PROPERTIES

Compressive Strength - ASTM D695-23	60Mpa
Bond Strength Concrete - ASTM D4541	>3Mpa
Tensile Bond Strength Steel - ASTM D897-08	10Mpa
Modulus of Elasticity - ASTM D695	2Gpa
Flexural Strength ASTM D790-17	50Mpa
Tensile Strength - ASTM D638-22	18Mpa
Tensile Shear Strength - ASTM D1002-10	6Mpa
Hardness - Shore D - ASTM D2240-00	60
Coefficient of Linear Thermal Expansion, Mean	60 x 10-6 (mm/mm/°C)

Megabond

Megapoxy

Technical Data Sheet

CHARACTERISTICS	• Low VOC • Smooth and easily workable • Simple 1:1 mix ratio • Creamy texture, blends easily • Spreads easily with notched trowel • Rapid setting • Very high strength permanent bonds • Excellent tensile and compressive strengths, superior to concrete • Excellent chemical resistance
SURFACE PREPARATION	**Concrete** Concrete should be free from grease and oil. If necessary, clean with industrial heavy duty degreaser. When clean, remove surface laitance. This is best done by mechanical abrasion such as scabbling, grit blasting or grinding. If this is not possible acid etching must be carried out. Mix concentrated hydrochloric acid with equal volume of water and spread at the rate of 0.5 litre per square meter of concrete surface. Allow to react for about 10 minutes and wash the area thoroughly and scrub with a stiff bristled broom to remove loose sand. Allow to dry for 24 hours. For maximum adhesion the concrete should be surface dry. **Metal Surfaces** Metals should be grit blasted to AS CK 9.4 - 1964 Class 3 finish. If this is not possible, mechanically abrade the surface to a clean, bright metal surface. Once this abrasion is complete, degrease the surface by flooding with an industrial grade degreaser. Wire brushing is not entirely satisfactory and gives minimal adhesion only. **Coated Surfaces** It is recommend to remove all coatings prior to bonding, bonding to coated surfaces will give inferior bond strengths compared to bonding directly to a prepared substrate. Concrete: The surface may be either flame-cleaned, or mechanically treated with a scutching tool, to remove all traces of paint. Complete the preparation by diamond grinding or scabbling. Metals: Steps should be taken to remove all paint and/or galvanizing. Good quality paint stripper should be used, followed by grit blasting or grinding to a bright metal finish.
IMPORTANT INFORMATION	It is essential that the correct mixing ratio be used and that the Part A and Part B are thoroughly mixed together before use. Inaccuracies and poor mixing will result in lower physical properties of the cured system and, if the error is sufficiently large, the system may not cure satisfactorily and discolour on ageing.
CLEANING	To keep mixing implements and working tools clean, use Megapoxy Thinners. Use disposable rubber gloves to protect hands and maintain proper industrial hygiene. For further details refer to the Megabond Safety Data Sheet.
PACKAGING	Megabond 20 litre kits White. Product should be stored in cool dry store.
TECHNICAL SERVICE	All purchasers of Megapoxy Products, are encouraged to avail themselves of our Technical Service for our Megapoxy Products. The information in this Bulletin is correct at time of publication, however continual research and development is being carried out and specs may change without notice.

Megapoxy

63

High Strength Epoxy Adhesive Gel

Technical Data Sheet

DESCRIPTION

Megapoxy 63 is a high strength two component 100% solids, solvent free, epoxy adhesive.

It is translucent in colour, easy to mix and spreads readily with a notched trowel.

Megapoxy 63 is suitable for bonding stone and tile to all masonry surfaces, ideally suited to thin film applications where strength is a requirement in tight bonding applications. It can be coloured to suit using Megapoxy pigment pastes.

Megapoxy 63 has high shock and chemical resistance.

RECOMMENDED APPLICATIONS

Bonding

- Miter Joints
- Natural stones
- Bricks and ceramics

Filling and Repair

- Stone holes and voids
- Chipped or damaged stone edges

PROPERTIES

Mixing Ratio by Volume	2 Part A to 1 Part B
Work Time at 25°C:	30 minutes
Minimum Cure Time at 15°C	48 hours
Minimum Cure Time at 25°C	24 hours
Minimum Cure Time at 35°C	12 hours
Minimum Application Temperature	10°C
Maximum Operating Temperature	100°C
Colour Part A	Translucent
Colour Part B	Translucent
Appearance Mixed	Translucent

CURED PROPERTIES

Compressive Strength - ASTM D695-23	120Mpa
Bond Strength Concrete - ASTM D4541	>3Mpa
Flexural Strength - ASTM D790-17	85Mpa
Tensile Strength - ASTM D638-22	36Mpa
Hardness - Shore D - ASTM D2240-00	89

CHARACTERISTICS

- DžĈĞĂ/OC
- Smooth and easily workable
- Simple 2:1 mix ratio
- Thick gel texture, blends easily
- Spreads easily with notched trowel
- Allows thin glue lines
- Good resistance to yellowing
- Very high strength permanent bonds
- Excellent tensile and compressive strengths,Ă superior to concrete
- Excellent chemical resistance
- Does not shrink
- Neutral in colour
- Can be coloured

Megapoxy 63

Megapoxy

Technical Data Sheet

SURFACE PREPARATION	**Natural Stone and Porcelain** • Abrade lightly the areas to be bonded • Cross hatching or biscuiting can aid in bonding smooth surfaces • Surface must be clean, dry and free of dust • Pin fixing holes must be clean and dust free **Concrete** Must be free from grease and oil. If necessary, clean with industrial grade degreasing agent. Once clean, steps must be taken to remove laitance; this is best done by using mechanical abrasion or acid etching. **Coated Surfaces** It is recommend to remove all coatings prior to bonding, bonding to coated surfaces will give inferior bond strengths compared to bonding directly to a prepared substrate.
IMPORTANT INFORMATION	It is essential that the correct mixing ratio be used and that the Part A and Part B are thoroughly mixed together before use, Inaccuracies and poor mixing will result in lower physical properties of the cured system and, if the error is sufficiently large, the system may not cure satisfactorily and discolour on ageing.
CLEANING	To keep mixing implements and working tools clean, use Megapoxy Thinners. Use disposable rubber gloves to protect hands and maintain proper industrial hygiene. For further details refer to the Megapoxy 63 Safety Data Sheet.
PACKAGING	Megapoxy 63 is available in 3 litre & 15 litre kits. Shelf life of unopened kits is 2 years minimum. Product should be stored in a cool dry environment.
TECHNICAL SERVICE	All purchasers of Megapoxy Products, are encouraged to avail themselves of our Technical Service for our Megapoxy Products. The information in this Bulletin is correct at time of publication, however continual research and development is being carried out and specs may change without notice.

Megapoxy

69

High Strength Epoxy Adhesive Gel

Technical Data Sheet

DESCRIPTION

Megapoxy 69 is a translucent, non-sag gel type epoxy structural adhesive for bonding metals to metals, metals to concrete and masonry, assembly of granite and marble fabrications, and many other civil engineering applications requiring superior bond strengths. Megapoxy 69 is also ideal for structural timber joinery and applications in the marine environment. It retains its high strength after repeated high impact forces.

RECOMMENDED APPLICATIONS

Bonding

- Timber
- Metal to metal
- Natural Stone
- Bricks and ceramics
- Fibreglass
- Aluminium

Filling and Repair

- Splits and Cracks
- Knot Holes
- Infills
- Stone voids
- Concrete column
- Steel

PROPERTIES

Mixing Ratio by Volume	1 Part A to 1 Part B
Work Time at 25°C:	45 minutes
Minimum Cure Time at 15°C	48 hours
Minimum Cure Time at 25°C	24 hours
Minimum Cure Time at 35°C	12 hours
Minimum Application Temperature	10°C
Colour Part A	White
Colour Part B	Light Yellow
Appearance Mixed	Light Yellow

CURED PROPERTIES

Ultimate Compressive Strength - ASTM C579	120MPa
Bond Strength Concrete - ASTM D4541	>3MPa
Tensile Bond Strength Steel - ASTM D897	19MPa
Modulus of Elasticity - ASTM C579	1GPa
Flexural Strength - ASTM D790-18	66MPa
Tensile Strength - ASTM D638-22	31MPa
Tensile Lap Shear Strength - ASTM D1002-00	17MPa (steel to steel)
Tensile Lap Shear Strength - ASTM D1002-00	16MPa (steel to aluminium)
Tensile Lap Shear Strength - ASTM D1002-00	14MPa (aluminium to aluminium)
Hardness - Shore D - ASTM D2240-00	70
Dielectric Strength (kV/mm)	10.7
Surface Resistivity (Ohm) - ASTM D257	10^{12}
Volume Resistivity (Ohm.cm)	2.81×10^{11}
VOC (g/l) - ASTM D3960	3

69

Megapoxy

Technical Data Sheet

CHARACTERISTICS	• Very Low VOC • Smooth and easily workable • Simple 1:1 mix ratio • Creamy texture, blends easily • Non sag on vertical surfaces or overhead surface • Very high strength permanent bonds • Excellent tensile and compressive strengths, superior to concrete • Excellent chemical resistance
SURFACE PREPARATION	**Concrete** Concrete should be free from grease and oil. If necessary, clean with industrial heavy duty degreaser. When clean, remove surface laitance. This is best done by mechanical abrasion such as scabbling, grit blasting or grinding. If this is not possible acid etching must be carried out. Mix concentrated hydrochloric acid with equal volume of water and spread at the rate of 0.5 litre per square meter of concrete surface. Allow to react for about 10 minutes and wash the area thoroughly and scrub with a stiff bristled broom to remove loose sand. Allow to dry for 24 hours. For maximum adhesion the concrete should be surface dry. **Metal Surfaces** Metals should be grit blasted to AS 1627.2.2002. If this is not possible, mechanically abrade the surface to a clean, bright metal surface. Once this abrasion is complete, degrease the surface by flooding with an industrial grade degreaser. Wire brushing is not entirely satisfactory and gives minimal adhesion only. **Coated Surfaces** It is recommend to remove all coatings prior to bonding, bonding to coated surfaces will give inferior bond strengths compared to bonding directly to a prepared substrate. Concrete: The surface may be either flame-cleaned, or mechanically treated with a scutching tool, to remove all traces of paint. Complete the preparation by diamond grinding or scabbling. Metals: Steps should be taken to remove all paint and/or galvanizing. Good quality paint stripper should be used, followed by grit blasting or grinding to a bright metal finish.
IMPORTANT INFORMATION	It is essential that the correct mixing ratio be used and that the Part A and Part B are thoroughly mixed together before use, Inaccuracies and poor mixing will result in lower physical properties of the cured system and, if the error is sufficiently large, the system may not cure satisfactorily and discolour on ageing.
CLEANING	To keep mixing implements and working tools clean, use Megapoxy Thinners. Use disposable rubber gloves to protect hands and maintain proper industrial hygiene. For further details refer to the Megapoxy 69 Safety Data Sheet.
PACKAGING	Megapoxy 69 is available in 1 litre, 4 litre & 20 litre kits. Product should be stored in cool dry store.
TECHNICAL SERVICE	All purchasers of Megapoxy Products, are encouraged to avail themselves of our Technical Service for our Megapoxy Products. The information in this Bulletin is correct at time of publication, however continual research and development is being carried out and specs may change without notice.

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