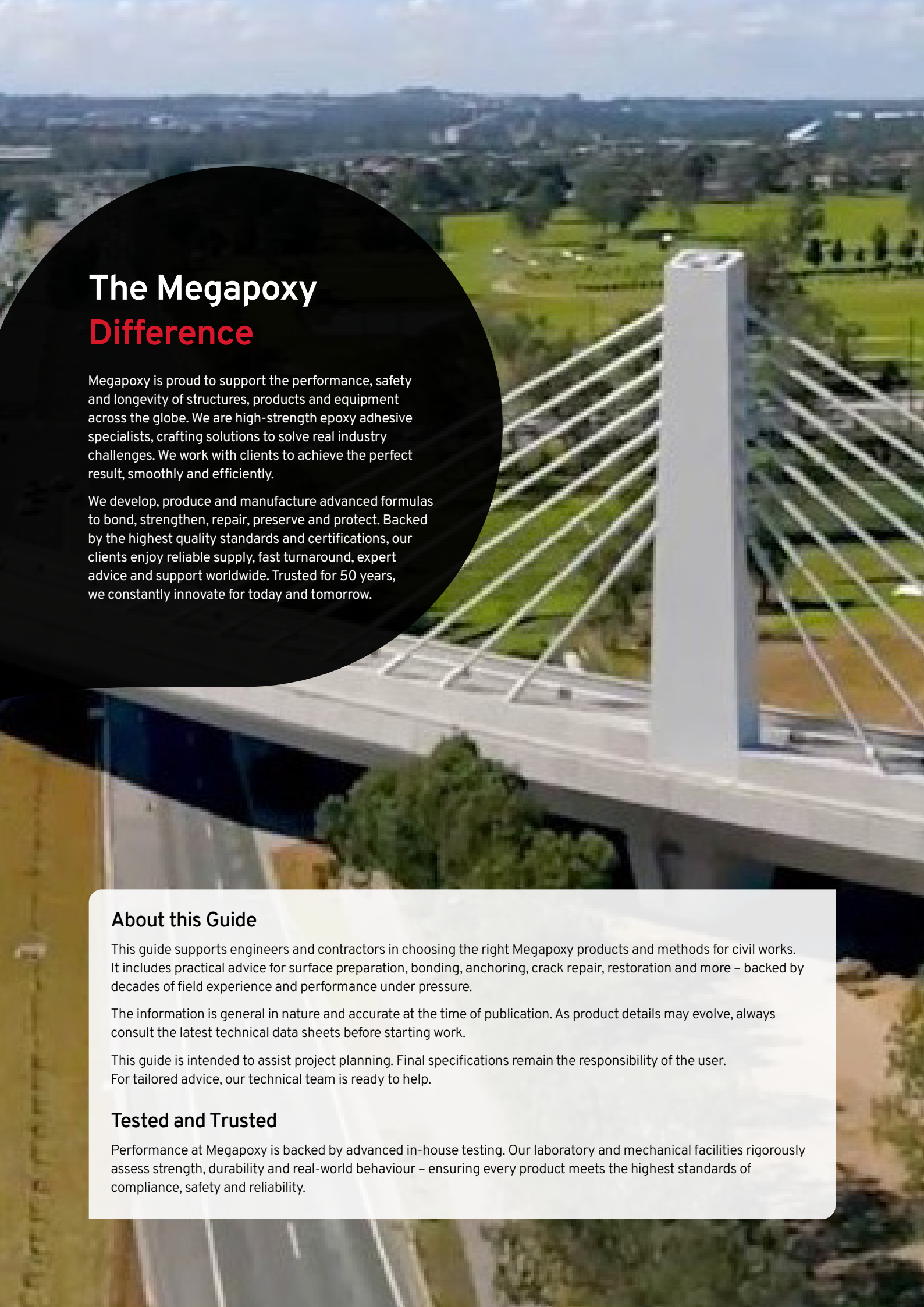
Megapoxy®

Application Guide for Civil Engineering and Infrastructure



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.

About this Guide

This guide supports engineers and contractors in choosing the right Megapoxy products and methods for civil works. It includes practical advice for surface preparation, bonding, anchoring, crack repair, restoration and more – backed by decades of field experience and performance under pressure.

The information is general in nature and accurate at the time of publication. As product details may evolve, always consult the latest technical data sheets before starting work.

This guide is intended to assist project planning. Final specifications remain the responsibility of the user. For tailored advice, our technical team is ready to help.

Tested and Trusted

Performance at Megapoxy is backed by advanced in-house testing. Our laboratory and mechanical facilities rigorously assess strength, durability and real-world behaviour – ensuring every product meets the highest standards of compliance, safety and reliability.

Contents

Surface Profiles and Preparation

For overlays and concrete restoration

Proper preparation of existing concrete surfaces is essential to achieve strong adhesion of resurfacers, overlays, sealers, coatings and stains.

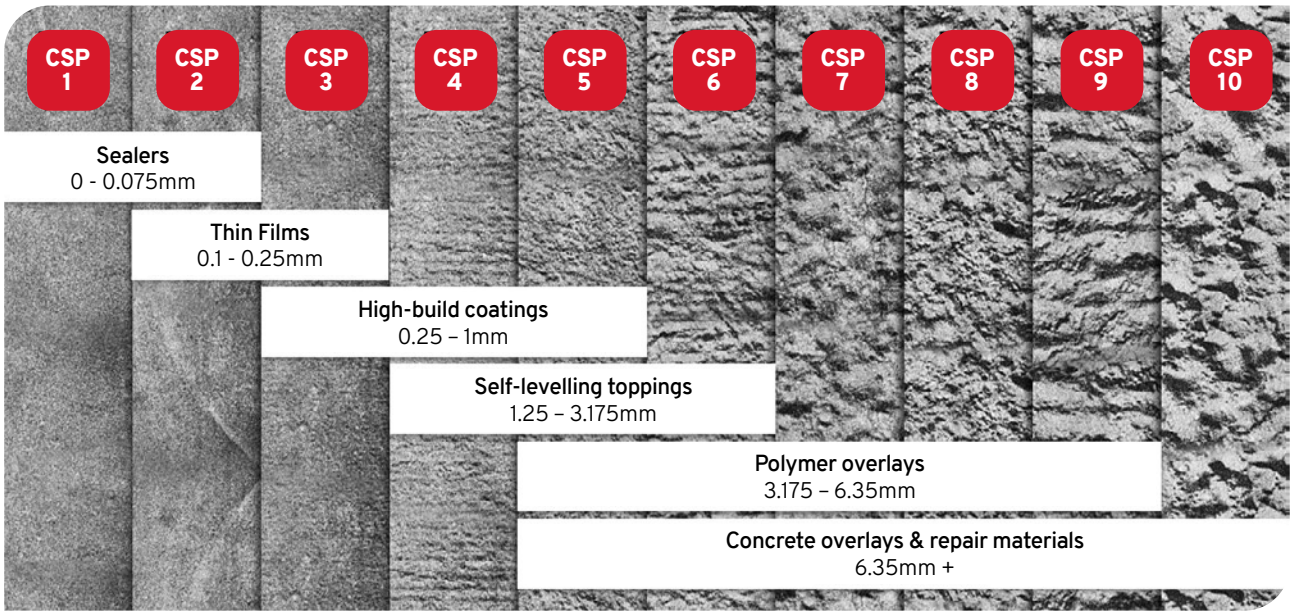
With many different products available, it is important to understand the required surface condition for the product you plan to use.

Taking steps to prepare the surface correctly saves time and money while preventing coating failure.

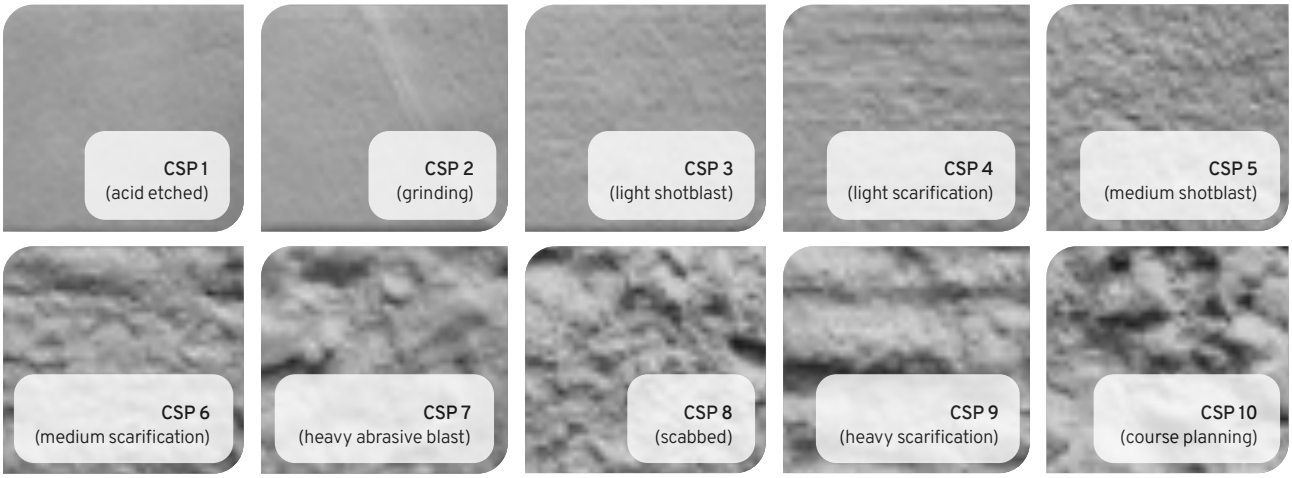
Concrete Surface Profiles (CSPs) were developed by the International Concrete Repair Institute (ICRI). They cover 10 classifications, from CSP1 (smoothest) to CSP10 (roughest) – as shown in the images below.

These industry standards guide installers to achieve the right texture for successful bonding of an overlay or coating.

STEP 1: Find the right CSP: Match the required surface texture to your coating.



STEP 2: Select the best preparation method: Use the right technique to achieve the required CSP.



Important for surface preparation

- The surface must be clean – without chemicals, oil, grease, curing contaminants and other compounds.
- The existing concrete must have the right surface profile for the selected overlay. Always check the manufacturer's recommendations.
- Mechanical profiling and acid etching are techniques for preparing floors for overlays and restorations. Mechanical profiling is the preferred and safest option for roughening concrete. Acid etching can work for some coatings, sealers and toppings – but can be difficult to completely rinse and neutralise, requires a well-ventilated area, and will not remove petroleum-based products or animal/vegetable oils from existing concrete.
- More aggressive surface preparation methods – like flame blasting, scarifying, scabbling and milling/ rotomilling – can cause micro-cracking. If this occurs, additional surface preparation is necessary.
- Repair cracking or spalling during surface preparation, before applying the final overlay.
- Maintain existing control, construction and expansion joints.
- Test by applying the coating to a mock-up or test area under actual ambient temperature and surface moisture conditions to ensure proper surface preparation.

Industry standards

Reference the following industry standards for preparation of concrete from the ASTM International (formerly known as American Society for Testing and Materials-ASTM), NACE International (formerly National Association of Corrosion Engineers), Society for Protective Coatings (SSPC), and the International Concrete Repair Institute (ICRI).

ASTM D4258, Standard Practice for Surface Cleaning Concrete for Coating.

ASTM D4259, Standard Practice for Abrading Concrete.

ASTM D4260, Standard Practice for Liquid and Gelled Acid Etching of Concrete.

ASTM D4261, Standard Practice for Surface Cleaning Concrete Unit Masonry for Coating.

ASTM D7682, Standard Test Method for Replication and Measurement of Concrete Surface Profiles Using Replica Putty.

SSPC-SP13/NACE 6, Surface Preparation of Concrete.

ICRI Standard 310.2 Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair with CSP Chips.

Methods of Surface Preparation

Solvent Degreasing

This method is used to remove oil, grease, wax, tar and other solvent-soluble contaminants from the surface of non-porous materials.

Before solvent cleaning, large deposits of contamination should be removed manually or with power tools. Surfaces can then be cleaned using an effective solvent, such as Megapoxy Thinners.

Common techniques for solvent cleaning include:

- Immersion in solvent.
- Spraying with solvent.
- Swabbing with rags or cloths.

Repeated cleaning using fresh solvent is needed for a completely clean surface.

After cleaning, the surface should be dried and promptly coated with adhesive to prevent recontamination.

Note

Solvent degreasing is considered a minimum preparation method. Other methods outlined in this guide generally provide superior results where long-term strength is required.

Abrasive Blast Cleaning

This is the most effective method of surface preparation, as it can fully remove all contaminants and create a textured surface for excellent adhesive bonding.

While commonly applied to steel, this method can also be used on galvanised steel, concrete, plastics and ceramics.

A range of abrasive materials can be used depending on the surface and required profile, including iron or steel shots, carborundum, ilmenite and sand.

Before abrasive blasting a surface:

- Remove heavy rust, weld splatter or major irregularities by mechanical means.
- Remove heavy deposits of oil, grease, wax or tar by solvent cleaning.

This helps ensure close contact between surfaces and maximises adhesive performance.

Always refer to the relevant Material Safety Data Sheets before use.

Ferric Chloride Etching

This method is used to prepare copper, brass and bronze surfaces. These metals are prone to rapid tarnishing and should be coated immediately after preparation.

Surface Preparation

1. Degrease the surface using solvent washing.
2. Abrasive blast the surface to create a roughened profile for improved adhesion.

Prepare Solution

- 300g Ferric Chloride
- 1000g (1 Litre) Distilled Water
- 200g (140ml) 70% Nitric Acid

IMPORTANT

First dissolve the ferric chloride in the water, then slowly add the nitric acid while stirring. Use only glass or glazed earthenware containers to hold the solution.

Etching Process

- Immerse the prepared surface in the solution at 25°C for 1 to 2 minutes.
- Wash thoroughly with clean water.
- Rinse with distilled water and dry immediately.
- Apply the adhesive or coating without delay.

Chromic Acid Etching

This method is used to prepare aluminium surfaces, by removing the tightly adherent film of inert aluminum oxide. This is critical to achieve strong and reliable adhesive joints.

Surface Preparation

- Degrease the aluminium surface using solvent washing.

Prepare Etching Solution

- 7500g (7.5L) Water
- 500g Sodium Dichromate
- 5000g (2.25L) 98% Sulphuric Acid

IMPORTANT

Only use glass or earthenware containers to hold the chromic acid solution. Wear protective eyewear and clothing.

Etching Process

- Immerse the surface to be etched in the solution at 65°C for 10 to 15 minutes. (Temperatures above 70°C reduce bonding performance.)
- Wash thoroughly with clear water and finally rinse in distilled water.
- Apply the adhesive or coating without delay (to prevent recontamination).

Always refer to the relevant Material Safety Data Sheets before use.

Methods of Surface Preparation (continued)

Hydrochloric Acid Cleaning

This method is used to clean sound concrete surfaces that have not been penetrated by contaminants. If the concrete has been contaminated by oil, grease, paint or similar, alternative cleaning methods must be used.

Silicone mould oils or curing oils are particularly difficult to remove and will impair adhesion if not properly treated.

Prepare Solution

- 1 part Commercial Hydrochloric Acid + 2 parts water
- Add the acid to the water while stirring constantly.

IMPORTANT

Use only a rubber, glass, glazed earthenware or plastic container. Wear appropriate protective eyewear and clothing.

Etching Process

- Use a hair or plastic brush to swab the surface of the concrete at the rate of 1 litre per square meter.
- When frothing ceases, wash the surface with water using a high-pressure hose.
- If thorough hosing is not possible, the surface should be neutralised by washing with a weak solution of ammonia.
- Because this method can be hazardous, Hydrochloric Acid Etching is preferred for the preparation of most concrete surfaces.

Hydrochloric Acid Etching

This method is used for the removal of laitance from the concrete surface prior to applying epoxy primers and floor coatings.

Prepare Solution

- 1 part Commercial Hydrochloric Acid + 8 parts water.
- Add the acid to the water while stirring constantly.

IMPORTANT

Use only a rubber, glass, glazed earthenware or plastic container. Wear appropriate eye protection and protective clothing.

Etching Process

- Immerse the surface to be etched in the acid solution at 25°C for 2 to 4 minutes.
- Wash thoroughly with clean tap water.
- Rinse with distilled water.
- Dry thoroughly.

Always refer to the relevant Material Safety Data Sheets before use.

Preparation of Rubber Surfaces

This method is used to prepare rubber and neoprene surfaces.

- Remove oil and bloom from the surface with xylene, creating a uniform jet-black appearance.
- Buff with 80 grit emery paper or cloth to give a matt finish.
- Remove all dust and apply the adhesive in a uniform layer.

Preparation of Timber Surfaces

This method is used to prepare timber surfaces and components.

- Ensure surfaces to be joined are dry, sound and free from contamination by oil, grease, tar or old paint.
- Ideally, timber should be naturally dried to its equilibrium moisture content. Forced drying can be achieved carefully by using blow torches, taking care not to char the surface.
- Remove surface contamination and roughness by planing.
- Lightly sand the surface and remove all dust before bonding.

General Bonding Requirements

- All work with epoxy materials should be done in dry conditions with surface and air temperatures above 10°C and below 35°C.
- The hardening cycle of all epoxy resins starts when the hardener is mixed with them.
- Full design strength should be achieved in 7 days when cured. Approximately 75% of this strength is achieved in 24 hours.
- Heating the fillers (aggregates) or the surface (to which epoxy is to be applied) can accelerate the curing cycle.
- The most common method of acceleration is by indirect heating of the epoxy resin after placing by using an electric plate – acetylene torches must not be used.
- Maximum accelerated cure temperature will vary with the selected epoxy resin system.
- Always use the correct Part A to Part B ratio and mix thoroughly before use. Inaccuracies and poor mixing will result in lower physical properties of the cured system and potentially insufficient curing and discolouration on ageing.
- Bonding surfaces should be reasonably smooth and free of irregularities. A thin, even adhesive layer is most effective. If necessary, use a Megapoxy paste to fix irregularities.
- The Megapoxy adhesive must flow over the whole surface and penetrate all small cavities.
- Excess epoxy should be squeezed out.

IMPORTANT SAFETY INFORMATION

- Avoid prolonged contact with skin and use cotton or latex gloves.
- Wash affected areas with soap and warm water.
- Always refer to the relevant Material Safety Data Sheets before use.

Bonding

Bonding

Concrete to Concrete (Wide Gap Joints)

- Scabble back weak concrete and grit blast to expose firmly held aggregate.
- Premix Megapoxy H and apply by brush to prime surfaces to be joined.
- If concrete is damp, prime with Megapoxy H.
- To prepare Megapoxy H Mortar, add 3 parts Silica 50N (epoxy quality sand) to 1 part premixed Megapoxy H by volume.
- Mix thoroughly in a plastic bucket.
- Place Megapoxy Mortar into the gap using a ramming rod, trowel or putty knife.
- Allow to cure for 48 hour.
- For rapid curing, use Megapoxy H315 in place of Megapoxy H and allow to cure for at least 1 hour (but preferably 4 hours).

New Concrete to Old Concrete or Steel

- Grit blast steel to achieve a white metal finish.
- Scabble back weak or weathered concrete and grit blast.
- Pre-mix Megapoxy H and apply with a stiff brush at the rate of 1 litre per 1.5 square metre of old concrete surface.
- Place freshly mixed concrete before Megapoxy H sets (ie within 15 minutes of brush application).
- Cure new concrete with plastic sheet to prevent rapid loss of water.

Recommended Product

Megapoxy H

Low Viscosity Hydrophilic Epoxy Resin

- High-strength bonding, anchoring & sealing.
- VOC free.
- Safe for potable water applications.
- Mix with aggregate to create mortar systems.
- Two-part solution.

Bonding (continued)

Bonding Rubber to Steel or Concrete

- Cover the rubber surface with concentrated sulphuric acid for 15 minutes.
- Wash off acid thoroughly with water and dry.
- Flex the rubber surface to produce a finely cracked finished.
- Grit blast steel and concrete.
- Premix Megapoxy PM or 69 and apply to surfaces to be bonded.
- Assemble and allow curing.

Bonding Stainless Steel

- Degrease stainless steel using Megapoxy Thinners.
- Immerse for 10 minutes in a solution containing 9 parts water, 4 parts concentrated sulphuric acid and a small amount of a dishwashing detergent.
- Rinse in tap water and dry in an oven at 90°C.
- Wear clean cotton gloves when handling.
- Proceed with bonding as soon as treatment is complete.
- Premix Megapoxy PM or 69 and apply to surfaces to be joined using a putty knife.
- Assemble and allow curing for 48 hours.

Recommended Products

Megapoxy PM

Epoxy Paste Adhesive

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

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.

Bonding Ceramic Tiles

- Clean the underside of tiles by wiping with a clean cotton cloth soaked in Megapoxy Thinners.
- Sandblast concrete and steel substrates.
- Sand wooden surfaces to obtain a clean, sound timber base.
- Apply premixed Megapoxy PM or Megapoxy 69 to both substrate and tiles using a notched trowel.
- Assemble tiles into place.
- Allow curing for 24 hours before opening to traffic. Full cure takes 7 days.

Recommended Products

Megapoxy P1

Epoxy Paste Adhesive

- VOC-free: for structures involving drinking water.
- Excellent chemical resistance.
- Simple 1:1 mix ratio and easy-blend texture.
- Non-sag for vertical and overhead surfaces.
- High strength permanent bonds
- Two-part solution.

Megapoxy PM

Low Viscosity Liquid

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

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.

Bonding (continued)

Anchoring Steel into Rock or Concrete

- Drill a hole with a masonry drill, making it 15mm larger in diameter than the diameter of steel to be anchored.
- Blow loose concrete and dust from the hole.
- Grit blast steel to white metal finish.
- Using a plastic funnel, pour calculated quantity of premixed Megapoxy H into the hole. For vertical anchoring, Megapoxy HT can be used.
- Insert the steel rod/bar and hold it in position using a tape or wire tie until Megapoxy hardens.

Recommended Products

Megapoxy H

Low Viscosity Hydrophilic Epoxy Resin

- High-strength bonding, anchoring & sealing.
- VOC free.
- Safe for potable water applications.
- Mix with aggregate to create mortar systems.
- Two-part solution.

Megapoxy HT

Hydrophilic Epoxy Gel Adhesive

- Hydrophilic: can be used in damp environments.
- Non-sag for vertical and inclined application.
- Can be applied in thick films.
- Suitable to apply by spraying, brushing, knifing and trowelling.
- Two-part solution.

Bonding Steel to Concrete

- Grit blast steel to white metal finish.
- Degrease thoroughly using Megapoxy Thinners.
- Scabble or grit blast concrete to expose firmly held aggregate.
- Premix Megapoxy P1 or PM and apply by putty knife to all surfaces to be bonded.
- Assemble and allow to cure.

Recommended Products

Megapoxy P1

Epoxy Paste Adhesive

- VOC-free: for structures involving drinking water.
- Excellent chemical resistance
- Simple 1:1 mix ratio and easy-blend texture.
- Non-sag for vertical and overhead surfaces.
- High strength permanent bonds
- Two-part solution.

Megapoxy PM

Low Viscosity Liquid

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

Bonding (continued)

Bonding Concrete to Concrete (Narrow Gap Joints)

- Scabble back weak concrete and grit blast to expose firmly held aggregate.
- Premix Megapoxy P1 or PM and apply by putty knife to surfaces to be bonded.
- Assemble and allow curing.
- For rapid bonding, use Megapoxy PF in place of Megapoxy P1 or PM and allow to cure 1 hour (but preferably 4 hours).

Recommended Products

Megapoxy P1

Epoxy Paste Adhesive

- VOC-free: for structures involving drinking water.
- Excellent chemical resistance.
- Simple 1:1 mix ratio and easy-blend texture.
- Non-sag for vertical and overhead surfaces.
- High strength permanent bonds
- Two-part solution.

Megapoxy PM

Low Viscosity Liquid

- Suits vertical, inclined or overhead work.
- Easy 1:1 mixing.
- High chemical resistance.
- Cures in adverse conditions.
- General purpose and 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.
- Two-part solution.

Crack Repair

Overview

Effective crack repair is critical for civil engineering applications, where even minor weaknesses can become serious structural issues.

Megapoxy offers several proven methods for repairing cracks, depending on the size, depth and type of repair needed.

This guide covers three key methods.

1. Heat Treatment: surface repairs, using heat to open and dry cracks for better epoxy penetration.
2. Capillary Action: surface repairs, to flow into finer cracks.
3. Crack Injection Repair: for more serious, structural cracks.

For help selecting the right method for your project, please contact us (see back page).

1. Heat Treatment

The temperature of the concrete surrounding the crack is slowly raised to 82°C and Megapoxy H Low Viscosity is applied over the crack as paint.

Recommended Products

Megapoxy H

Low Viscosity Hydrophilic Epoxy Resin

- High-strength bonding, anchoring & sealing.
- VOC free.
- Safe for potable water applications.
- Mix with aggregate to create mortar systems.
- Two-part solution.

Megapoxy HX

Extra Low Viscosity Liquid

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

Crack Repair (continued)

2. Capillary action

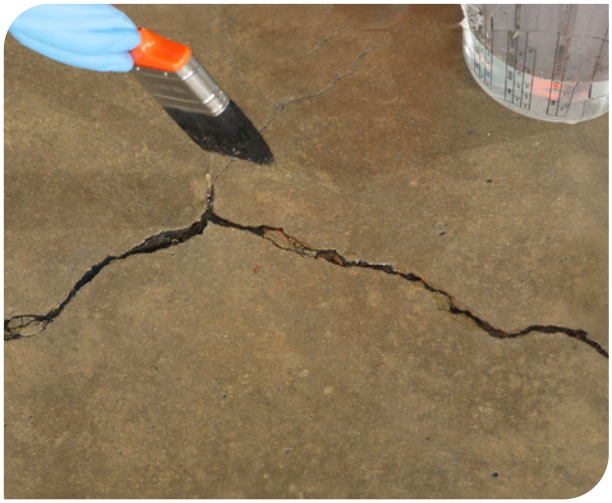
Capillary action crack repairs are surface repairs only – and not classed as structural repairs.

Surface Preparation

- All surfaces must be structurally sound.
- Remove all previous coatings, adhesives, efflorescence or laitance by chipping, abrasive blast cleaning, high pressure water washing, mechanical scrubbing or similar.
- All surfaces must be cleaned free from dirt, grease, oil or other surface contaminants. Ensure the surface is dry before application begins.
- See pages 3–8 for more detailed instructions.

Process

1. Prepare the area surrounding the crack as above.
2. Mix Megapoxy H or HX (use the QR code below to link to our Technical Bulletin). Only mix what can be used within the work time of Megapoxy H or Megapoxy HX.
3. Using methylated spirits, acetone or similar, paint the solvent onto the crack, ensuring it penetrates.
4. Before the solvent dries out, brush a generous amount of correctly mixed Megapoxy H/HX over the crack.
5. Repeat the process on each crack until they are all coated in a visible film of Megapoxy H/HX. The treated area surrounding the crack should be visibly darker and wet compared to the unpainted areas.
6. Once the Megapoxy H/HX has cured, there should visible Megapoxy H/HX on the treated surface around the crack – appearing shiny and darker than untreated areas. This confirms penetration of Megapoxy H/HX into the surface crack repair.
7. Repeat the process of applying the Megapoxy H/HX onto the crack – this time without using solvent – so there is no visible ridge line along the crack edges. This confirms that Megapoxy H/HX has penetrated below the surface to bridge, fill and seal the crack.



See the Video

For further instructions and a demonstration scan the QR code:

3. Megapoxy Crack Injection Repair System

The Megapoxy Crack Injection Repair System is a high-strength structural repair method that injects epoxy deep into concrete cracks, filling and sealing them from the inside out. It's designed to restore structural integrity in load-bearing elements.

The system includes:

- Megapoxy H or HX (depending on crack width and required flow): low-viscosity epoxy adhesives that penetrate cracks as narrow as 0.1mm.
- Injection balloons with air-release valves and connecting hoses.
- Megapoxy PM, a high-strength, non-sag adhesive for bonding and sealing.

This controlled pressure-injection method ensures full crack penetration and a durable internal bond — even in vertical, overhead or hard-to-access areas.

Surface Preparation

- All surfaces must be structurally sound.
- Remove all previous coatings, adhesives, efflorescence or laitance by chipping, abrasive blast cleaning, high pressure water washing, mechanical scrubbing or similar.
- Surfaces must be clean, dry and free of dust, grease, oil, or other contaminants.

See pages 3–8 for more detail about surface preparation.

Before You Begin – What You Will Need

- Grinder with diamond grinding wheel and crack chasing blade.
- Efficient mixing paddle.
- Spatulas and flat hard mixing board.
- Modified grease gun and injection hose assembly.
- A set of injection balloons – enough to cover the area to be repaired (see page 20 for guidance on spacing).
- Personal protection equipment, including protective clothing, gloves and eyewear.
- Products: Megapoxy H or HX; Megapoxy PM.

Step 1: Mixing the Balloon Bonding Product (Megapoxy PM)

Megapoxy PM is a non-sag epoxy paste adhesive used to bond the injection balloons securely to the concrete surface. This two-part epoxy product offers excellent tensile and compressive strength, with a smooth, easy-to-mix texture that's ideal for vertical or overhead application.

- Mixing ratio: 1:1 by volume (Part A:Part B).
- Mix time: Minimum 3 minutes (use a timer).
- Only mix the quantity you can use within the 45-minute work time.

Mixing Instructions:

1. On a flat, non-porous board, place equal-sized volumes of Part A and Part B side by side (using separate spatulas for each part). Ensure they are visually similar in size (height, width and shape).
2. Use a clean spatula to mix them together using a folding motion to minimise air entrapment.
3. Scrape underneath the mixture and spread onto the board – so you collect and combine any unmixed material.
4. Clean spatulas during mixing by scraping off any uncombined Part A or B and mix thoroughly.
5. Continue folding and blending until the mix is smooth, uniform in colour, and streak-free — then it's ready to use.

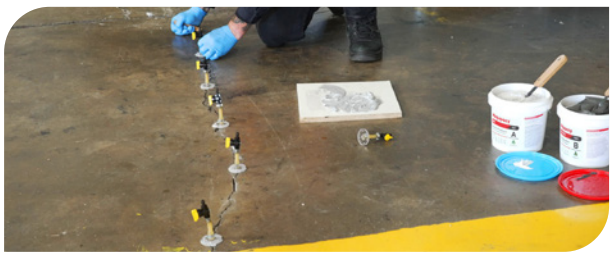
Crack Repair (continued)

Step 2: Bonding the Injection Balloons

Once Megapoxy PM is fully mixed.

1. Apply a small amount of Megapoxy PM to the outer ring of the plastic balloon base – take care not to get any paste inside or onto the smaller inside ring.
2. Place this first injection balloon (with Megapoxy PM applied on outer ring of base) at one end of the crack.

3. Repeat along the crack, spacing balloons approximately 200–300mm apart. For narrower cracks, use closer spacing.
4. Repeat until the balloons cover the entire crack length.



Step 3: Sealing the Crack for Injection

After all the balloons are in place.

1. Mix more Megapoxy PM.
2. Use it to seal over the base of each balloon, avoiding the latex section.
3. Continue to seal over the crack in-between balloons, ensuring a continuous bond line.
4. If the crack runs through to the opposite side of the structure, seal it completely on that side too.
5. Allow Megapoxy PM to fully cure – typically 24 hours at 25°C – before injection.
6. Once cured, turn all balloon taps to the open position in preparation for injection.

Tips: Installing Injection Balloons

- Fix the base of each Injection Balloon to the concrete using Megapoxy PM or Megapoxy PF (rapid cure) adhesive.
- Install balloons with the TAP in the open position – this makes injection easier once the adhesive has cured.
- Space balloons approximately 250mm apart as a general guide (adjust for crack width or complexity).
- For jobs requiring more working time to seal the crack and adhere the Injection Balloon, use Megapoxy PM (medium cure formulation).

See the Video

For further instructions and a demonstration scan the QR code:

Step 4: Mixing the Crack Injection Product (Megapoxy H or HX)

Megapoxy H is a low-viscosity, hydrophilic epoxy resin suitable for a wide range of bonding, filling and coating applications. It is used extensively to repair concrete, as a wet-to-dry concrete adhesive, and to create epoxy mortar systems. Megapoxy HX offers similar benefits, with an extra-low viscosity ideal for fine cracks and deep penetration.

Guideline:

- Megapoxy HX for crack widths 0.1mm to 1mm.
- Megapoxy H for crack widths 0.5mm and above.

Both:

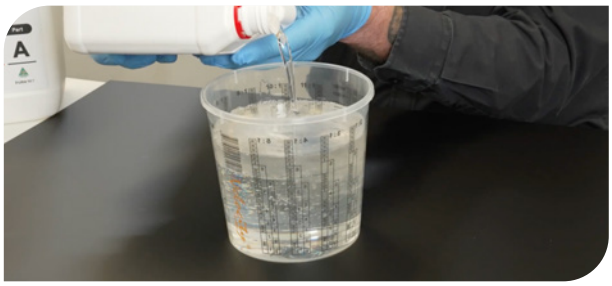
- Mixing ratio: 3:1 (Part A: Part B) by volume.
- Available in: Clear or N35 Grey.
- Pack sizes: 4L and 20L kits.
- VOC-free.

Note

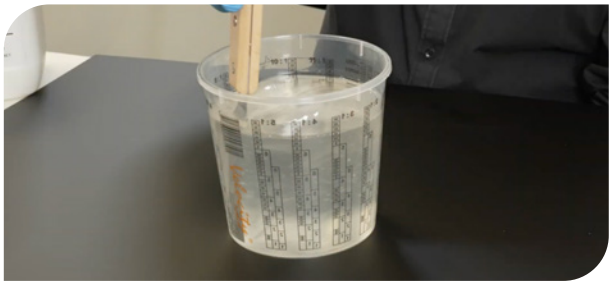
- Only mix the amount of resin you can apply within the 30-minute working time. Additional batches can be prepared as needed during the process.
- Megapoxy H and HX follow the same mixing instructions. Select the resin based on crack width and flow requirements.
- It is recommended to hand mix liquid resins to keep aeration to a minimum. For large volume applications, contact us to discuss suitable mechanical mixing methods (see back page).
- Do not whip the resin.

Mixing Instructions:

1. In a clean container, measure out Part A and Part B in the correct 3:1 volume ratio.



2. Mix for 2 full minutes, scraping the base and corners of the container to ensure thorough blending.



3. After 2 minutes, scrape down the inside walls of the container with a straight edge, then mix for at least 1 more minute.

Note

- If mixed properly, the resin will be clear and fairly free from streaks or bubbles.
- Coloured resin cannot be visually checked for clarity, so ensure you mix for the full 3 minutes minimum.
- Any small bubbles that do appear will usually dissipate as the epoxy warms and cures.

For further instructions and a demonstration scan the QR code:

Crack Repair (continued)

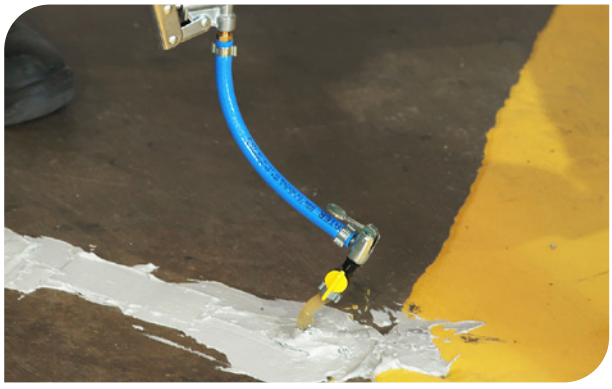
Step 5: The Crack Injection Process

Remove the rubber end cap from the crack injection gun and pour in the mixed Megapoxy H or HX.

Tip

You can leave the end cap off during use for easier refilling. The cap is only needed if the gun is being put down.

Start at one end of the crack. Attach the Thumb-Lock connector to the first open Injection Balloon and begin slowly pumping Megapoxy H or HX into the balloon.



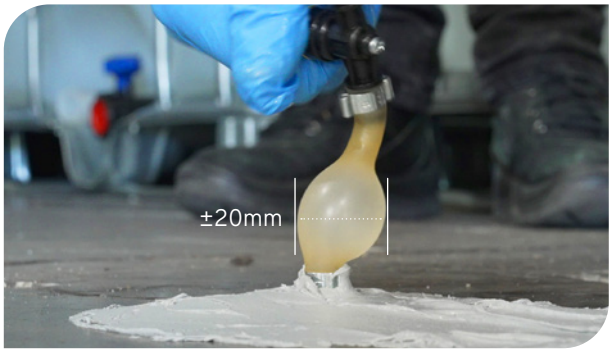
What Happens Next

As you inject the resin, one of two things may occur:

a) The balloon inflates:

- This means the crack is filling properly at that point.
- Continue injecting until the latex section inflates to around 20mm in diameter.

Once inflated, close the tap, move to the next balloon, and repeat the process until all balloons are inflated and remain inflated.



b) Resin flows out of the next open balloon instead of inflating the first:

- Close the tap on the second balloon (where the resin is escaping).
- Continue injecting into the first balloon, which should now begin to inflate.
- Once the first balloon inflates to approx. 20mm, close its tap.
- Then move to the second balloon (which you had closed earlier).
- Reopen its tap and connect your injection hose.
- Inject Megapoxy H/HX into that balloon.
- Repeat the process until all balloons are inflated and remain inflated.

Visual Confirmation of Complete Fill

The Megapoxy Crack Injection System is a visual system — all Injection Balloons should remain inflated once the crack is completely filled.

If any balloons deflate and there are no visible leaks around the balloon base or sealed crack line, it means the crack is not yet full.

Continue injecting Megapoxy H or HX until all balloons remain inflated.

Troubleshooting & Leaks

While pumping Megapoxy H/HX into the Injection Balloon, a small pinhole leak may occur where Megapoxy PM was used to seal the balloons over the crack. If this occurs:

- Turn off the Injection Balloon, disconnect the injection gun and replace the rubber end cap if the gun needs to be put down.
- If the balloon was inflated, open the tap to release pressure and allow the balloon to deflate. This should reduce crack pressure and stop the leak.
- Wipe away any leaked Megapoxy H/HX.
- Mix a small batch of Megapoxy PF (Rapid Set Paste).
- Apply a liberal coat of PF over the leaking area.
- Once set (approx. 30 minutes at 25°C), injection can be resumed.

See the Video

For further instructions and a demonstration scan the QR code:

Surface Finishing

Once the repair is complete and cured:

- Use a chisel to strike between the silver clamp and plastic disc of each Injection Balloon to remove it cleanly.
- Any remaining Megapoxy PM or balloon base residue can be removed with mechanical methods such as grinding or scraping

Cleaning Up:

- Clean the Injection Gun by pumping Megapoxy Thinners through it until clear. This ensures no residue is left inside.
- Any uncured Megapoxy H or HX can be wiped away and cleaned using Megapoxy Thinners.

Joint Sealing

Expansion Joint Nosing Application Instructions

Designed to absorb impact and protect concrete edges, joint nosing must be applied with precision to ensure long-term performance.

Surface Preparation

- Cut back the deck by at least 100mm on each side of the joint using a concrete saw.
- Scabble the exposed deck material to create a rough texture, then blow out all loose debris with compressed air.
- Sandblast all concrete surfaces that will come into contact with Megapoxy until firm aggregate is exposed.

Formwork Preparation

- Construct formwork to create a central cavity (joint) for the Megapoxy 260.
- Wrap the formwork entirely in polyethylene sheeting to ensure proper release from the Megapoxy nosing.

IMPORTANT

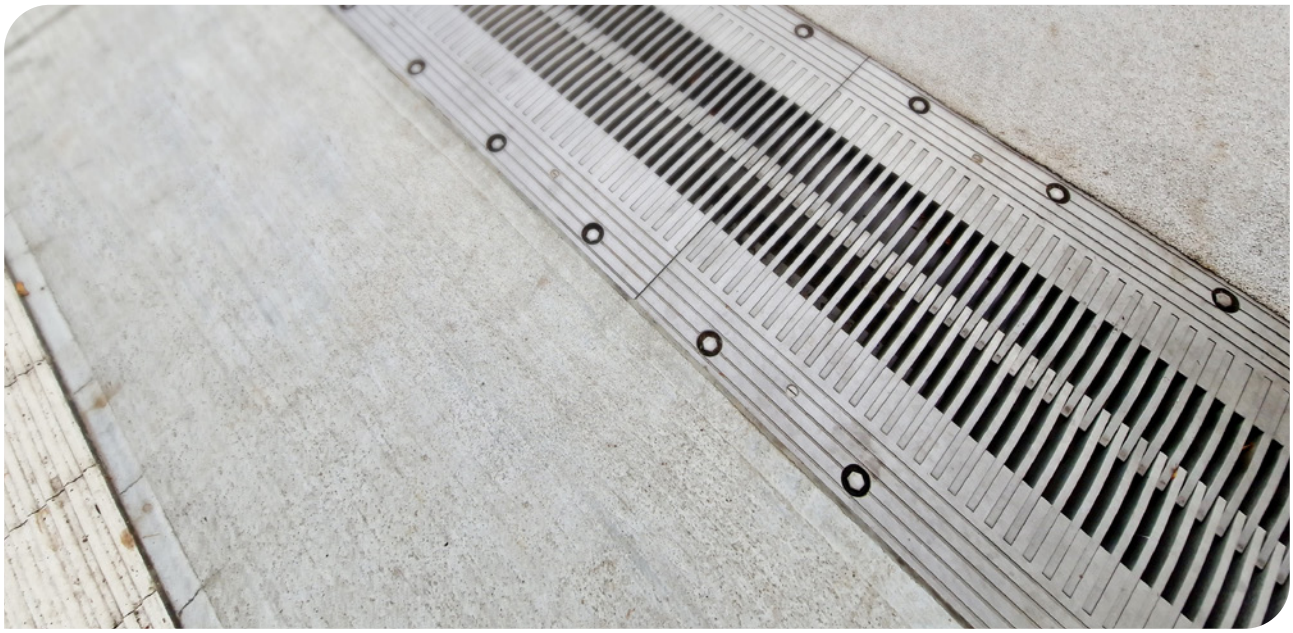
Do not use grease or other release agents.

Mixing & Application

- Pre-mix Megapoxy H and sand according to the Technical Data Sheet (TDS).
- Place the mixed Megapoxy H into the sides of the nosing cavity, tamping it firmly to eliminate air voids, while leaving the polyethylene-wrapped formwork in the center.
- Smooth the surface with a steel trowel to achieve a uniform finish on each side of the nosing.

Curing & Sealant Application

- Allow the applied Megapoxy H to cure for 24 hours.
- After curing, carefully remove the polyethylene-wrapped central formwork.
- Proceed with pouring Megapoxy 260 into the cavity.
- Allow an additional 24 hours before exposing the joint to traffic or load-bearing conditions.



Horizontal Joint Application Instructions

Proper sealing of horizontal joints is essential to support load transfer and protect against environmental exposure.

Surface Preparation

- Thoroughly clean the joint cavity by wire brushing, and remove all loose material using compressed air.
- For new joints, use a concrete saw to cut the deck and ensure it is completely dry before proceeding.

Priming

- Prime the exposed concrete joint faces using Megapoxy H, applied with a brush to ensure full coverage.

Mixing & Application

- Mix Megapoxy H and sand according to the Technical Data Sheet (TDS) instructions.
- Apply the mixed material using a spatula or trowel, smoothing it to achieve a uniform, textured finish.
- Work methodically from one end of the joint to the other.

Curing

- Allow the treated joint to cure for a minimum of 24 hours before exposing it to traffic or load-bearing conditions.

Recommended Products

Megapoxy H

Low Viscosity Hydrophilic Epoxy Resin

- High-strength bonding, anchoring & sealing.
- VOC free.
- Safe for potable water applications.
- Mix with aggregate to create mortar systems.
- Two-part solution.

Megapoxy 260

Flexible Epoxy Resin

- Designed for control and construction joints.
- Crack repairs.
- High impact resistance.
- Pre-metered.
- Movement tolerance ± 8-10%.
- Can be coloured with Megapoxy pigments.

Non-Skid Coatings, Membranes and Waterproofing of Steel and Concrete Surfaces

Non-Skid Coating for Steel Plates

- Grit blast steel to white metal finish.
- Degrease by flooding with Megapoxy Thinners.
- Premix Megapoxy H and apply by brush or lambswool applicator.
- Immediately broadcast sand or carborundum grit over the wet resin surface.
- Allow to cure for a minimum of 3 hours, then remove excess sand or grit.

IMPORTANT

It is essential that the aggregate is applied within 15 minutes after spreading. For further information see page 37 or visit:

Non-Skid Coating for Asphalt, Portland Cement, Concrete & Timber Traffic Areas

- Scrub surface to be coated with strong detergent solution.
- Rinse off thoroughly and allow to dry completely.
- Premix Megapoxy H and spread with a rubber squeegee over the dry, dust free prepared area at the rate of 1 litre per square metre.
- Immediately broadcast 5mm diameter crushed stone or calcined bauxite over the Megapoxy H layer.
- Allow to cure for 12 hours before removing excess aggregate and opening to traffic.

Recommended Products

Megapoxy H

Low Viscosity Hydrophilic Epoxy Resin

- High-strength bonding, anchoring & sealing.
- VOC free.
- Safe for potable water applications.
- Mix with aggregate to create mortar systems.
- Two-part solution.

General Treatments & Repair Methods

This section outlines proven methods to restore and protect civil infrastructure – including underwater zones, heritage materials and exposed environments.

Dielectric Membrane for Concrete

- Grit blast concrete. Apply two coats of premixed Megapoxy H by spray gun or lambswool applicator to a minimum thickness of 0.25mm.
- Apply the second coat 6–12 hours after the first coat to ensure complete intercoat adhesion.

Galvanised Iron Repairs

- Clean by flooding with Megapoxy Thinners and abrade with carborundum paper.
- Premix Megapoxy PM or Megapoxy 69 and apply with putty knife to form 1.5mm thick layer over or on the area surrounding the repair.
- Press an open weave fibreglass cloth into the Megapoxy – and overcoat with a further layer of Megapoxy.

Recommended Products

Megapoxy H

Low Viscosity Hydrophilic Epoxy Resin

- High-strength bonding, anchoring & sealing
- VOC free
- Safe for potable water applications
- Mix with aggregate to create mortar systems
- Two-part solution.

Megapoxy PM

Low Viscosity Liquid

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

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.

General Treatments & Repair Methods (continued)

Sandstone Repairs & Restoration

- Chip out loose and cracked sandstone. Blow out all loose stone and dust.
- Pre-mix Megapoxy P1 or Megapoxy PM and apply by trowel.
- Allow to cure.

Timber Repair & Restoration

- Chip out or cut out all weak, rotten or weathered wood until a sound timber surface is achieved.
- Mix Megapoxy 69 and apply with a putty knife to restore original shape.

Recommended Products

Megapoxy P1

Epoxy Paste Adhesive

- VOC-free: for structures involving drinking water
- Excellent chemical resistance
- Simple 1:1 mix ratio and easy-blend texture
- Non-sag for vertical and overhead surfaces
- High strength permanent bonds
- Two-part solution.

Megapoxy PM

Low Viscosity Liquid

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

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.

Underwater & Splash Zone Repairs

- Prepare all surfaces before application: Scabble concrete to expose a clean, rough surface. Grit blast steel to remove contaminants. Chip or cut away any weak or rotten timber.
- To 1 part pre-mixed Megapoxy H or Megapoxy HT, add 3 parts Silica 50N sand by volume, and mix thoroughly.
- Transfer the mortar to a plastic bucket and take it to the underwater repair site.
- To apply, place and press mortar with a steel trowel against surface to be repaired and work to displace water from bond area interface.
- Use formwork to ensure correct contour of repair. If this is not possible, the diver should continue shaping the mortar with the trowel until setting commences (approximately 30 minutes).
- The repair must be protected from tidal disturbance by wrapping with plastic sheeting until hardening occurs.

Waterproofing Concrete

- Prepare concrete surface by grit blasting.
- Apply pre-mixed Megapoxy H by brush, squeegee or roller.
- Broadcast Silica 50N over the wet Megapoxy H and allow to cure for 24 hours.
- Sweep off excess Silica and apply the second coat of Megapoxy H.
- For a more wear resistant floor surface, repeat the process 3 times, or until the desired thickness is built up.

Recommended Products

Megapoxy H

Low Viscosity Hydrophilic Epoxy Resin

- High-strength bonding, anchoring & sealing
- VOC free
- Safe for potable water applications.
- Mix with aggregate to create mortar systems
- Two-part solution.

Megapoxy HT

Hydrophilic Epoxy Gel Adhesive

- Hydrophilic: can be used in damp environments
- Non-sag for vertical and inclined application
- Can be applied in thick films
- Suitable to apply by spraying, brushing, knifing and trowelling
- Two-part solution.

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 adhesive. Repairs of cracked concrete, underwater and splashzone repairs.

Megapoxy H is volatile organic compounds free (Nil V.O.C.)

RECOMMENDED APPLICATIONS

- New to Old Concrete Bonding
- Concrete Crack Repair
- Concrete 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°	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

Megapoxy

Technical Data Sheet

CURED PROPERTIES

Compressive Strength - ASTM D695	100Mpa
Bond Strength Concrete - ASTM D4541	>3Mpa
Tensile Bond Strength Steel - ASTM D897	20Mpa
Modulus of Elasticity - ASTM D695	11Gpa
Flexural Strength - ASTM D790	40Mpa
Tensile Strength - ASTM D638	40Mpa
Tensile Shear Strength - ASTM D1002	13Mpa
New to Old Concrete Bonding: Slant Shear Test:	36MPa
Hardness - Shore D - ASTM D2240-00	75 minimum

CHARACTERISTICS

- VOC Free
- Hydrophilic
- Thin Liquid
- Mixes easily by hand
- 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.

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.

Technical Data Sheet

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 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: **Heat Treatment** The temperature of concrete surrounding the crack is slowly raised to 80°C and the mixed Megapoxy H is applied over the crack as a paint. On cooling the resin will be drawn into the crack where it will cure and provide a water tight seal. **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 : 85Mpa	

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 : 90Mpa	
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

HT

Hydrophilic Epoxy Gel Adhesive

Technical Data Sheet

DESCRIPTION	Megapoxy HT is a 100% solids, resin based, solvent-free, hydrophilic epoxy gel adhesive. Megapoxy HT is resistant to hydrogen sulphide that may be present in pipes and plants used for treatment of sewage. Megapoxy HT 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 adhesive. Repairs of cracked concrete, underwater and splashzone repairs. Megapoxy HT is volatile organic compounds free (Nil V.O.C.)
RECOMMENDED APPLICATIONS	• New to Old Concrete Bonding • Concrete Crack Repair • Concrete Repairs • Steel Anchoring • Coating • Floor Repairs • Epoxy Mortars • Underwater Repairs

PROPERTIES	
Mixing Ratio by Volume	3 Part A to 1 Part B
Work Time at 25°C:	30 minutes at 25°C
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
S.G. Part A at 25°C	1.00 - 1.05
S.G. Part B at 25°C	0.97 – 0.99
Mixed S.G. at 25°C	1.03
Colour Part A	N35 Grey
Colour Part B	Clear
Appearance Mixed	N35 Grey

CURED PROPERTIES	
Compressive Strength - ASTM D695	100Mpa
Bond Strength Concrete - ASTM D4541	>3Mpa
Tensile Bond Strength Steel - ASTM D897	20Mpa
Modulus of Elasticity - ASTM D695	11Gpa
Flexural Strength - ASTM D790	40Mpa
Tensile Strength - ASTM D638	40Mpa
Tensile Shear Strength - ASTM D1002	13Mpa
New to Old Concrete Bonding: Slant Shear Test:	36MPa
Hardness - Shore D - ASTM D2240-00	75 minimum

HT

Megapoxy

Technical Data Sheet

CHARACTERISTICS CONTINUED	• VOC Free • Hydrophilic • Thin Liquid • Mixes easily by hand • 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.
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, grouting steel vertically, Megapoxy H can be used. The steel should be grit blasted and degreased to achieve good bond.
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.

HT

Megapoxy

Technical Data Sheet

EPOXY MORTARS AND EPOXY CONCRETE

EPOXY CONCRETE

NEW TO OLD CONCRETE ADHESIVE	Mixing Ratio by volume: 3 Parts A to 1 Part B Mix Megapoxy HT 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 HT 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 HT Safety Data Sheets.
PACKAGING	Megapoxy HT is available in 1lt, 4lt and 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°	12 hours
Thin Film Cure at 25°C	4 - 6 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

CURED PROPERTIES

Compressive Strength - ASTM D695	95Mpa
Bond Strength Concrete - ASTM D4541	>3Mpa
Tensile Bond Strength Steel - ASTM D897	20Mpa
Modulus of Elasticity - ASTM D695	11Gpa
Flexural Strength - ASTM D790	35Mpa
Tensile Strength - ASTM 638	35Mpa
Tensile Shear Strength - ASTM D1002	10Mpa
Hardness - Shore D - ASTM D2240	>75

HX

Megapoxy

Technical Data Sheet

CHARACTERISTICS	• VOC Free • Hydrophilic • Thin Liquid • Mixes easily by hand • 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 Megapoxy PF 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.

PM

Megapoxy

Technical Data Sheet

CHARACTERISTICS	• VOC Free • 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.

PM

Megapoxy

Technical Data Sheet

CHARACTERISTICS	• VOC Free • 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

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	10Mpa
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	80
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	• VOC Free • Smooth and easily workable • Simple 1:1 mix ratio • Creamy texture, blends easily • Non sag on vertical surfaces or overhead surface • Sets in 3 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

P1

Epoxy Paste Adhesive

Technical Data Sheet

DESCRIPTION

Megapoxy P1 is a two component gap filling adhesive based on DGEBA epoxy resin and carbonate free filler. Easy to use, this product sets after mixing with excellent properties for a wide range of applications.

Megapoxy P1 is volatile organic compounds free (Nil VOC) and is suitable for use in repairs of structures that are in contact with potable water. Megapoxy P1 complies with AS/NZS 4020:2005 "Testing of Products For Use In Contact with Drinking Water".

Megapoxy P1 is resistant to hydrogen sulphide that may be present in pipes and plants used for treatment of sewage.

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:	60 minutes
Minimum Cure Time at 15°C	48 hours
Minimum Cure Time at 25°C	24 hours
Minimum Cure Time at 35°	12 hours
Full Cure Time at 25°C	4 Days
Minimum Application Temperature	10°C
Maximum Operating Temperature	80°C
Colour Part A	White
Colour Part B	Black
Appearance Mixed	Dark Grey

P1

Megapoxy

Technical Data Sheet

CURED PROPERTIES	Compressive Strength - ASTM D695	80Mpa
	Bond Strength Concrete - ASTM D4541	>3Mpa
	Tensile Bond Strength Steel - ASTM D897	16Mpa
	Modulus of Elasticity - ASTM D695	2Gpa
	Flexural Strength - ASTM D790	18Mpa
	Tensile Strength - ASTM 638	45Mpa
	Tensile Shear Strength - ASTM D1002	14Mpa
	Hardness - Shore D - ASTM D2240	80
	Dielectric Strength 50Hz @25°C(Kv/cm)	190

CHARACTERISTICS

- VOC Free
- Simple 1:1 mix ratio
- Creamy Texture, blend easily
- No – 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

CONCRETE & STEEL PROTECTION

Megapoxy P1 is suitable for protection of reinforcing steel where concrete cover is insufficiently thick, and to prevent corrosion Megapoxy P1 can be applied directly to steel, grit blasted to a bright metal finish.

Properly mixed and applied Megapoxy P1 is a stone like solid that will retain strength permanently.

Applications to concrete necessitates surface preparation to ensure that Megapoxy P1 is bonded to a sound substrate.

Experience show that a minimum of a 3mm layer of Megapoxy P1 provides protection to reinforcing steel equivalent to approximately 50mm of concrete cover.

P1

Megapoxy

Technical Data Sheet

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 P1 Safety Data Sheet.
PACKAGING	Megapoxy P1 is available in 4lt and 20lt kits.
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®

260

Flexible Epoxy Resin

Technical Data Sheet

DESCRIPTION	Megapoxy 260 is a two component, 100% solids, resin based, solvent-free, flexible epoxy resin. Designed for control and construction joints, where wider joints widths and toughness is required for a variety of jointing applications. Can be coloured with Megapoxy epoxy pigments.	
RECOMMENDED APPLICATIONS	• Construction Joints • Parking Structures • Factory Floors • Joints in Decks	• Control Joints • Warehouse Floors • Ramps and Driveways • Concrete Stairs

PROPERTIES	
Mixing Ratio by Weight	100 Part A to 28.5 Part B
Work Time at 25°C:	35 minutes
Minimum Cure Time at 15°C	48 hours
Minimum Cure Time at 25°C	24 hours
Minimum Cure Time at 35°	12 minutes
Minimum Application Temperature	10°C
Maximum Operating Temperature	80°C
Viscosity Part A at 25°C	30000 – 40000cps
Viscosity Part B at 25°C	130 – 160cps
Mixed Viscosity at 25°C	31550cps
S.G. Part A at 25°C	1.05 – 1.10
S.G. Part B at 25°C	0.97 – 0.99
Mixed S.G. at 25°C	1.02
Colour Part A	Amber - May be coloured
Colour Part B	Clear
Appearance Mixed	Amber - May be coloured

CURED PROPERTIES	
Movement Tolerance	8 - 10%
Compressive Strength - ASTM D695	15Mpa
Bond Strength Concrete - ASTM D4541	>3Mpa
Tensile Bond Strength Steel - ASTM D897	>3Mpa
Modulus of Elasticity - ASTM D695	12Mpa
Tensile Strength - ASTM D638	4Mpa
Hardness - Shore A	75 minimum
Hardness - Shore D	30 minimum

260

Megapoxy

Technical Data Sheet

CHARACTERISTICS	• VOC Free • Pre-metered • Mixes easily by hand or mechanically • Trafficable • Good flexibility • Very high strength • Can be coloured
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. If the surface is damp, use Megapoxy H as a primer. **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 260 Safety Data Sheet.
PACKAGING	Megapoxy 260 is available in 2.5lt 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

69

High Strength Epoxy Adhesive Gel

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°	12 hours
Minimum Application Temperature	10°C
Colour Part A	White
Colour Part B	Light Yellow
Appearance Mixed	Light Yellow

CURED PROPERTIES

Compressive Strength - ASTM D695	70Mpa
Bond Strength Concrete - ASTM D4541	>3Mpa
Tensile Bond Strength Steel - ASTM D897	30Mpa
Modulus of Elasticity - ASTM D695	1.9Gpa
Flexural Strength - D790	15Mpa
Tensile Strength - D638	25Mpa
Tensile Shear Strength - ASTM D1002	>20Mpa
Hardness - Shore D - ASTM D2240-00	70 minimum

69

Megapoxy

CHARACTERISTICS	• VOC Free • 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 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 69 is available in 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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