

QUICKFIX INJECTION SYSTEM



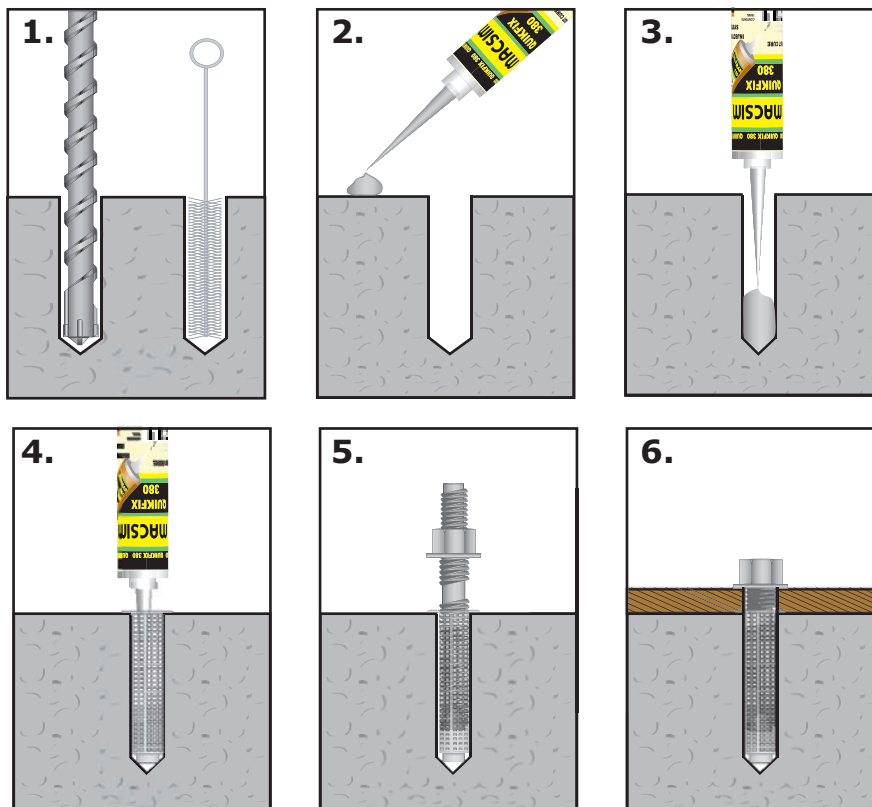
Description

The Macsim Quickfix Injection Anchoring System is the result of the latest technology in polymer chemistry. It provides high strength, stress free anchoring into both solid masonry materials using standard Macsim studs and into hollow concrete block using special block sleeves and studs for optimum performance.

Features

- Available with or without stop valve
- Non contaminating stop valve (380ml only)
- New non leaking back stops
- Vacuum packed so no air bubbles or air in system leading to longer shelf life and better mixing
- Valve version is styrene free - low odour
- Available in 380ml and 150ml
- Available in tropical mix for hot climates
- Extremely high strength
- Excellent performance in lightweight concrete
- Just the right gel time
- No stress masonry product

Installation Procedure



Installation Procedure

- A. Solid Masonry Materials (Steps 1-3 & 5-6)
 - B. Hollow Concrete Block and Bricks (Steps 1-2 & 4-6)
1. Drill the correct diameter hole to the required depth according to the particular size stud being installed. Using a rigid, round wire brush, scour the sides of the hole to remove dust residue from the walls. Blow out all excess dust.
 2. Prior to using a new cartridge, dispense approximately one dessert spoon of resin. This ensures the resin dispensed into the hole is evenly mixed and maximum effect is achieved.
 3. Insert nozzle into the hole and fill the hole to at least one third.
 4. Insert Sleeve - Insert nozzle into the Sleeve and insert sufficient resin to form a solid body of resin in the cavity behind the block face.
 5. Prior to resin gelling, insert the appropriate stud and using your finger rotate the stud back and forward to ensure resin is evenly deposited into its threads. Wipe off any excess resin.
 6. Once the resin has totally cured, attach the fixture & tighten the nut.

Stop Valve Operation

1. To open Press "GREEN" valve, first time is difficult as it's breaking the seal
2. To Close, press "RED" valve.
3. Always release pressure on the gun after closing valve.

Overhead Installation

For the overhead application it is necessary to use a special retaining collar, to prevent the resin draining from the hole. Simply follow the instructions for drilling and cleaning the hole, push a retaining collar into the mouth of the hole and then continue to follow normal installation procedure

PRODUCT SPECIFICATION MANUAL

Installation Recommendations

Code	Description	Box Qty
71PC150	Standard Mix - Polyester Mix, 150ml resin cartridge with 1 mixer nozzle Suits Standard Caulking Gun	10
71PC	380ml Resin Cartridge, no tap, with 2 mixer nozzles Suits Standard 10:1 Ratio Applicator	8
71PCT	Premium Mix - Epoxy Mortar Mix, Styrene Free, High Strength, Wet Areas 380ml resin cartridge, with tap, 2 mixer nozzles Suits Standard 10:1 Ratio Applicator	8
71PCTM	Premium Tropical Mix - Epoxy Mortar, Styrene Free, High Strength, Wet Areas 380ml Resin Cartridge, Slow setting time for hot climates, 2 mixer nozzles Suits Standard 10:1 Ratio Applicator	8
71PC825	825ml Resin Jumbo Cartridge	4



Material Specification

Code	Description	Volume (ml)	Cure Rating	Resin Type	Hardener	Shut Off Valve
71PC	Quickfix Basic	380	Standard	Polyester	Styrene	No
71PCTM	Quickfix Tropical	380	Tropical	Polyester	Styrene	No
71PCT	Low Odour Mortar	380	Standard	Polyester	Styrene	Yes
71PCTMT	Low Odour Mortar	380	Tropical	Polyester	Styrene	Yes
71PC825	Epoxy Jumbo	825	Standard	Epoxy Acrylate	Styrene	Yes
71UB300	Ultrabond	300	Standard	Epoxy Acrylate	Acrylic	No

Ultimate Resin Physical Properties

Factor	Resin Type		
	Polyester	Epoxy Acrylate	EA Styrene Free
Compressive Strength (Nmm ²) - ASTM 695	48.0	58.4	>56
Tensile Strength (Nmm ²) - ASTM 638	10.0	14.5	<10
Flexural Strength (Nmm ²) - ASTM 790	20.0	26.5	>16
Elastic Modulus (Nmm ²)	4206	4941	3034
Flexural Modulus (Nmm ²)	3238	4472	3462
Mixed Density (g/cm ³)	1.65	1.65	1.65

Simple Load Characteristics

Stud Size	Hole Diameter (mm)	Embedding Depth (mm)	Ultimate Tensile*	Rec. Tensile Working	Rec. Shear Working	Ultimate Tensile
			(Kn)	Load (Kn)	Load (Kn)	(5.85 gr) (Kn)
M6	8	70	8.50	2.10	1.90	9.50
M8	10	80	22.36	4.40	3.40	15.10
M10	12	45	15.90	2.90	4.60	26.00
M10	12	90	29.14	7.50	4.60	26.00
M10	12	135	43.70	11.20	4.60	26.00
M12	15	55	19.90	3.70	6.60	37.40
M12	15	110	31.43	11.10	6.60	37.40
M12	15	165	47.15	17.10	6.60	37.40
M16	20	65	27.70	4.90	11.90	72.10
M16	20	130	71.80	15.40	11.90	72.10
M20	24	85	41.40	6.50	18.40	111.30
M20	24	170	78.05	18.60	18.40	111.30
M20	24	255	117.10	28.30	18.40	111.30

PRODUCT SPECIFICATION MANUAL

Simple Load Characteristics - Continued

* Ultimate Tensile load tested using 8.8 grade studs.

Loads are applicable in concrete strength greater than 25N/mm². Loading in other base materials is highly dependant on strength and would require on site testing to validate performance.

Loads assume edge distances are > than 1.2 x embedment and spacing 2.4 x embedment.

Curing Specification

Anchor Curing depends on the temperature of the base material at the time of application. Care must be taken not to apply loading, including setting torque to anchor until the hardening time has expired. The anchor will not accept full load capability until the cure time is exceeded and will be permanently damaged by premature loading.

POLYESTHER RESIN		Standard Mix		Tropical Mix	
Base Material Temperature (°C)	Gelling Time (minutes)	Full Load Curing Time (minutes)	Gelling Time (minutes)	Full Load Curing Time (minutes)	
0	30	640	N/A	N/A	
5	12	240	N/A	N/A	
10	9	180	N/A	N/A	
15	6	150	N/A	N/A	
20	5	120	N/A	N/A	
25	3	60	N/A	N/A	
30	N/A	N/A	11	180	
40	N/A	N/A	6	150	

EPOXY ACRYLATE RESIN		Standard Mix		Tropical Mix	
Base Material Temperature (°C)	Gelling Time (minutes)	Full Load Curing Time (minutes)	Gelling Time (minutes)	Full Load Curing Time (minutes)	
5	12	240	N/A	N/A	
10	9	180	N/A	N/A	
15	6	150	N/A	N/A	
20	5	120	N/A	N/A	
25	3	60	N/A	N/A	
30	N/A	N/A	11	180	
40	N/A	N/A	6	150	

EA STYRENE FREE		Standard Mix		Tropical Mix	
Base Material Temperature (°C)	Gelling Time (minutes)	Full Load Curing Time (minutes)	Gelling Time (minutes)	Full Load Curing Time (minutes)	
5	12	240	N/A	N/A	
10	9	180	N/A	N/A	
15	6	150	N/A	N/A	
20	5	120	N/A	N/A	
25	3	60	N/A	N/A	

Safety Of Use

Macsim Quickfix Chemical Injection Systems should be used with care. They contain substances that are harmful to health and are flammable.

Macsim publish a safety data sheet for all three resin types and these are readily available to our customer.

It is the users responsibility to ensure the instructions are followed and that the correct form of protective equipment is employed.

Macsim cannot be held responsible for the misuse or miss-application of the quickfix products.

Please contact our service centres for further information

Important Tips

- Shelf Life approximately 12 months at 20°C from manufacturers date.
- Allow 24 hours for maximum working strength.
- Macsim Quickfix is unaffected by petrol, water, oil and most corrosive substances.
- Do Not use when resin is likely to be in contact with:
 - (i) Ketones - i.e. acetone, phenols
 - (ii) Strong Alkaline - i.e. caustic soda, oxidizing agents