

Fosroc Solutions for Chemical Anchoring

www.fosroc.com



"The greatest constructions require solid foundations, the best being built on ROCK. Here is the foundation that supports FOSROC"

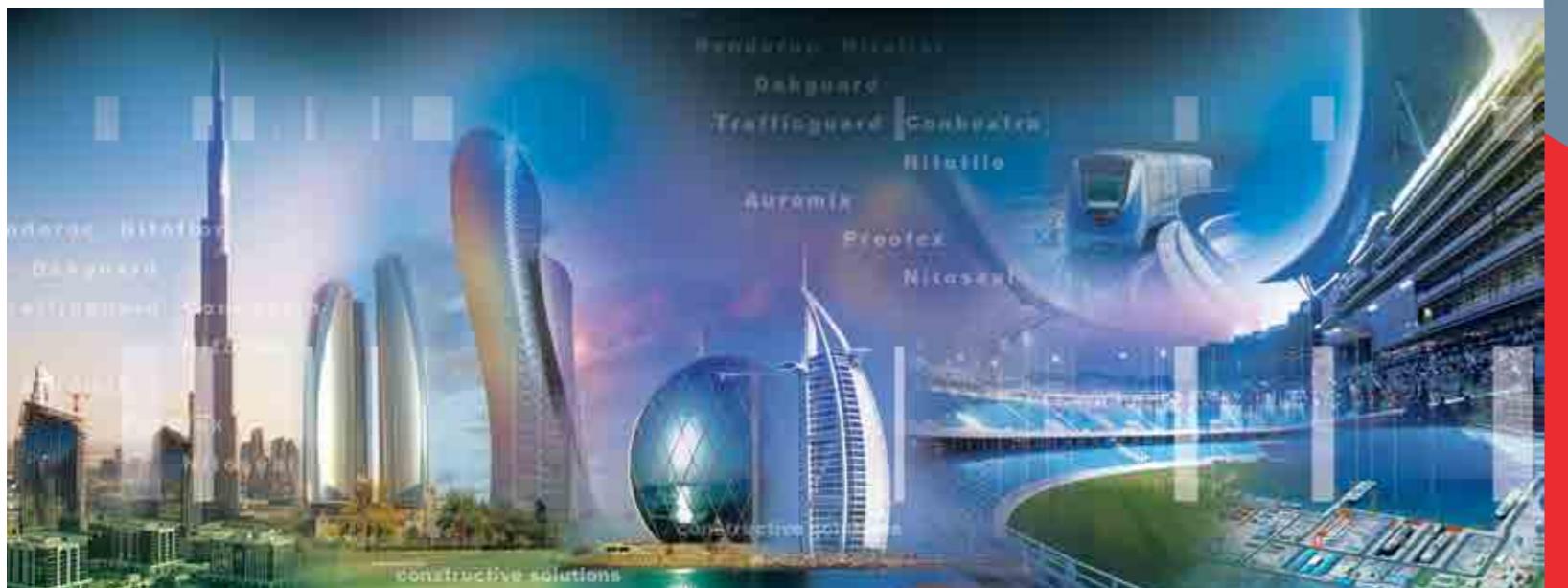
Dr. James Hay, Chairman - JMH Group

Our Profile

Fosroc commenced its Indian operations in 1981 and established a 100% subsidiary in 1999.

Fosroc has four state-of-the-art manufacturing facilities at Bengaluru, Karnataka; Ankleshwar, Gujarat; Kolkata, West Bengal and Keshwana, Rajasthan.

Fosroc Chemicals (India) Pvt. Ltd. works closely with its customers, including distribution and Applicator associates, through its well-equipped technical service department, a network of sales engineers, customer service professionals, Concrete technologist, Specification team etc. Fosroc India prides itself for the level of technical and customer support that it gives to its valued customers.



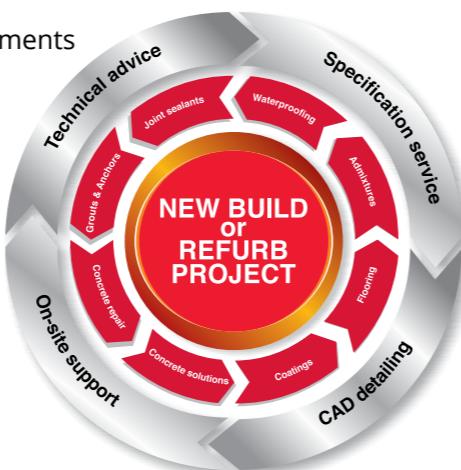
International leverage gives Fosroc the opportunity to offer tried and tested solutions from one geographical region to another with great confidence.

Fosroc Chemicals (India) Pvt. Ltd. provides time-tested solutions that include services such as:

- Diagnosis and Specification Support
- Application Support
- Distribution Support
- After-Sales Service
- Mix design support
- Concrete Repair
- Protective Coatings
- Joint Sealants and Adhesives
- Waterproofing
- Cement Additives

Fosroc Chemicals (India) Pvt. Ltd. remains focused on the Industry, Infrastructure and Building Segment with a wide range of quality products.

- Admixtures and Surface Treatments
- Grouts and Anchors
- Industrial Flooring
- Concrete Repair
- Protective Coatings
- Joint Sealants and Adhesives
- Waterproofing
- Cement Additives



LOKFIX E RANGE COMMON USES

- > Fixings to masonry and rock
- > Anchoring structural steels
- > Post installation re-bar
- > Ventilation ducts
- > Wall bracing & column jacketing
- > Railing and barriers
- > Replacing lost rebar
- > Anchors for machinery & cranes

Visit the Fosroc Lokfix Site for design info, product data, certification downloads application guides.



VISIT
LOKFIX.COM



FIXINGS MADE EASY WITH LOKFIX E RANGE

Chemical anchors and fastenings offer specific benefits to the designer and user, compared to mechanical fastening.

- > Fixing does not add stress to the concrete
- > Uniform distribution of load
- > Fixings may be closer to edges
- > Fixings may be closer together
- > Adjustable
- > Rock Anchoring
- > Chemical resistance
- > Fits varied fixing/rebar sizes
- > Prevents corrosion
- > Dry, damp & wet substrates

Fosroc Lokfix resins have been holding fixings for decades. Lokfix E range brings with it an new wave of fixing opportunities to the market. Combining the industry trusted brand with a clean and easy approach to application. Lokfix E has been tested to the European Standards and comes with accreditation and a new wave of design support to ensure that the correct product is in use every time.

LOKFIX E



EASY DESIGN

Fosroc's bespoke software will guide you right through the design process



EASY SPECIFY

Lokfix E products have industry leading accreditation



EASY MIX

Let the cartridge system do the mixing for you. - No more mess!



EASY APPLY

Use a standard cartridge gun for most applications



EASY ON THE PLANET

Fosroc E range contains no styrenes



LOKFIX E75

Pure Epoxy Resin
Styrene Free

Ideal for Heavy to very heavy weight fixings into cracked and un-cracked concrete, and post-installation of reinforcement

LOKFIX E55S

Vinylester Resin
Styrene Free

Ideal for Medium to heavy weight fixings into cracked and un-cracked concrete, and post-installation of reinforcement

LOKFIX E35S

Polyester Resin
Styrene Free

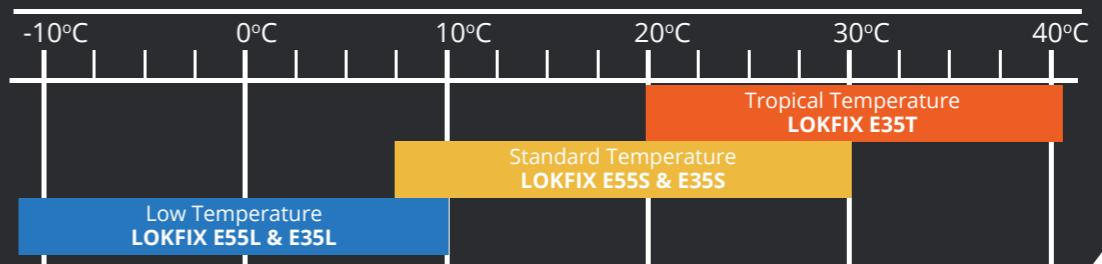
Ideal for Light to Medium weight fixings into un-cracked concrete and fixings in masonry

LOKFIX E RANGE

Fosroc's Lokfix E range has THREE main products so you can select a Lokfix to meet your application needs.

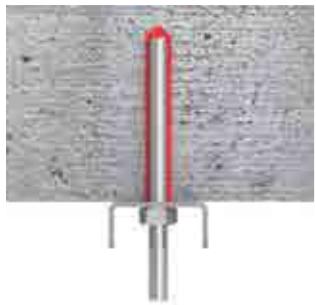


The Lokfix E55 and E35 ranges come with varying grades of temperature to ensure that their performance in application is optimised. Having the correct grade will ensure easier extrusion of the material, manageable working time and rapid cure time.



Optimal substrate and cartridge temperatures. See TDS for specific information

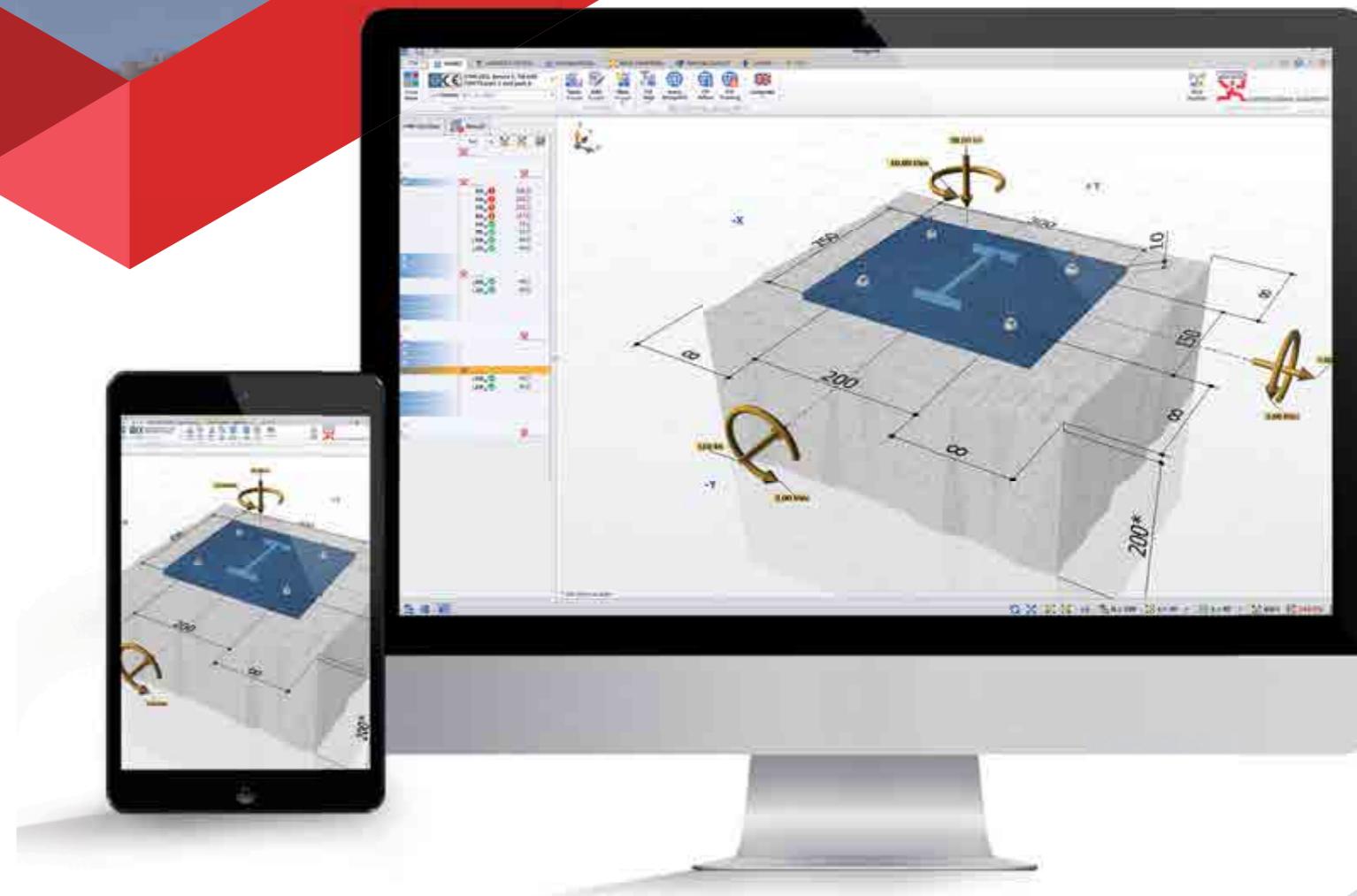
DESIGNING & SPECIFYING



Understanding the basic properties of each material is important when selecting the correct product. Our comparison chart gives the designer a quick and easy overview.

	Lokfix E35S	Lokfix E55S	Lokfix E75
Fixings into solid & hollow masonry	✓	✓	
Threaded rod into solid concrete	✓	✓	✓
Threaded rod into cracked concrete		✓	✓
Rebar into cracked & solid concrete		✓	✓
Post installation of reinforcement	✓	✓	✓
Fire testing	F120	F120	
Seismic testing	C1	C1 & C2	
VOC Class	A+	A+	A+
Dry, wet & flooded concrete	✓	*✓	*✓
Use with skeleton Gun	✓	✓	
Design software assistance		✓	✓
Max tested load on threaded rod in concrete*	95kN	229kN	512kN

* Always consult technical information for specific details



LOKFIX SOFTWARE

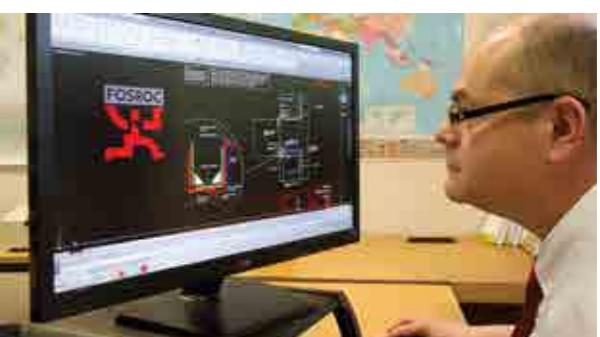
Lokfix E range has been created with the aim of meeting the needs of the designer and user. We have provided a wide range of supporting information to assist our clients to rapidly engineer the right solution.

Fosroc provide free of charge design software to enable engineers to rapidly check common calculations in accordance with the regulations.

Fosroc products rigorously tested and validated to the most up-to date European standard EAD standards (superseding ETAG accreditations). This means they require less site testing.

Quick consumption guides and product selection tools are provided.

All of this can be viewed and downloaded on www.lokfix.com





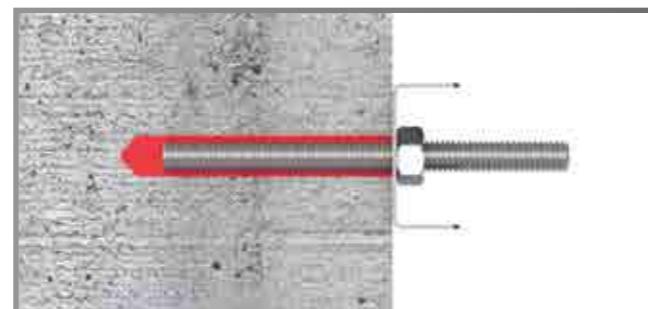
LOKFIX E75

Pure Epoxy 3:1 Side by Side Cartridge

Lokfix E75 is Berger Fosroc's solution for large and heavy duty anchoring into cracked and un-cracked concrete. It is also suitable to anchoring heavy duty rebar. It has industry leading strength with loads tested in dry, damp and flooded bore hole conditions. Comes with industry leading accreditation and design software.

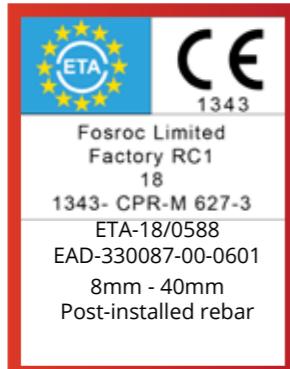
FEATURES

- ✓ Longer working times for deeper embedment depth
- ✓ C1 & C2 seismic resistance*
- ✓ Does not apply expansive force to the substrate
- ✓ Fixings can be spaced closer together
- ✓ Enables fixings closer to edges
- ✓ Resistant to a variety of chemicals *
- ✓ Low VOC
- ✓ Tested with diamond drilled bore holes*
- ✓ Temporary service temperature tested to 72°C*
- ✓ Fire rated up to 2 hours*
- ✓ Re-usable
- ✓ LEED compliant
- ✓ Available with design software



COMMON APPLICATIONS

- ✓ Accredited for use in dry, damp and flooded bore hole.*
- ✓ Can be used with cracked and un-cracked concrete.
- ✓ Fixing of post installed reinforcement
- ✓ Anchoring of threaded rod fixings
- ✓ Anchoring of internal threaded rod sleeves
- ✓ Internal, external and submerged conditions
- ✓ Can be applied to almost any size of fixing
- ✓ For horizontal, vertical and overhead application
- ✓ Bonding and surface crack sealing applications
- ✓ Rock Anchoring



* Always consult technical information for specific details



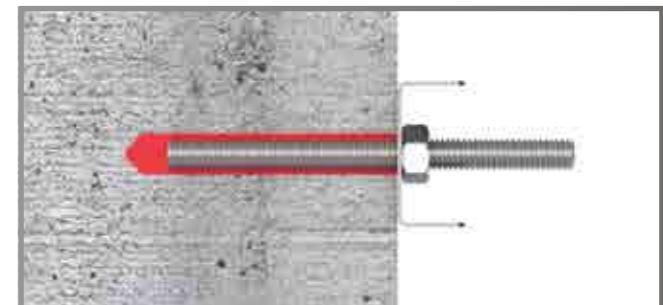
LOKFIX E55S

Vinyl-ester- Styrene Free Coaxial foil tube cartridge

Lokfix E55S is Fosroc's solution for medium to heavy duty anchoring into cracked and un-cracked concrete and post installation of reinforcement. Also used in stone and masonry. Low temperature grade is available. Comes with industry leading accreditation and design software.

FEATURES

- ✓ Fast return to service
- ✓ C1 seismic resistance*
- ✓ Does not apply expansive force to the substrate
- ✓ Fixings can be spaced closer together
- ✓ Enables fixings closer to edges
- ✓ Resistant to a variety of chemicals*
- ✓ Low VOC
- ✓ Fire rated up to 2 hours*
- ✓ Temporary service temperature tested to 120°C*
- ✓ Performs over a wide variety of temperatures
- ✓ Re-usable
- ✓ Available with design software



COMMON APPLICATIONS

- ✓ Accredited for use in dry, damp and flooded bore hole.
- ✓ Can be used with cracked and un-cracked concrete
- ✓ Fixing of post installed reinforcement (available only for Lokfix E55S)
- ✓ Anchoring of threaded rod fixings
- ✓ Anchoring of internal threaded rod sleeves
- ✓ Internal, external and submerged conditions
- ✓ Can be applied to almost any size of fixing
- ✓ For horizontal, vertical and overhead application
- ✓ Can be used for fixing into solid and hollow masonry



* Always consult technical information for specific details

LOKFIX E35S

Polyester Styrene Free single shaft cartridge

Lokfix E35S is Fosroc's solution for light to medium anchoring fixings into un-cracked concrete, solid and hollow masonry substrates.

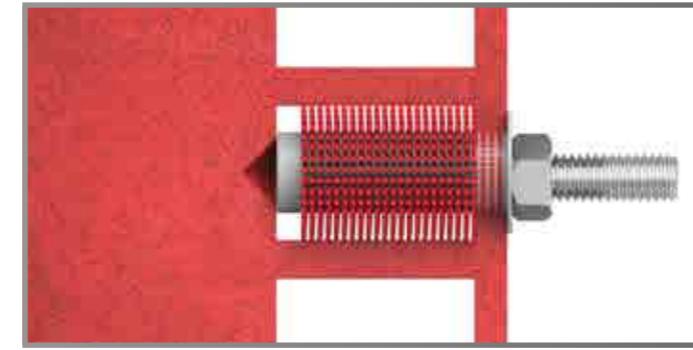
FEATURES

- ✓ Fast return to service
- ✓ May be used with a good quality skeleton gun (300ml)
- ✓ No additional mixing equipment required
- ✓ Fixings can be spaced closer together
- ✓ Enables fixings closer to edges
- ✓ Resistant to a variety of chemicals*
- ✓ Low VOC
- ✓ Does not apply expansive force to the substrate
- ✓ Waterproof, protecting the fixing from corrosion
- ✓ Temporary service temperature tested to 80°C*
- ✓ Re-usable
- ✓ Performs over a wide variety of temperatures
- ✓ High and low temperature grades available



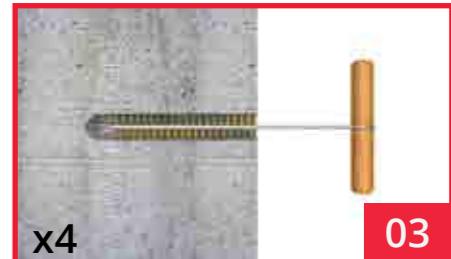
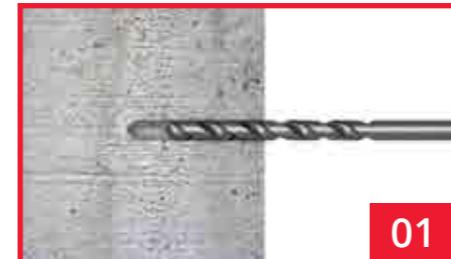
COMMON APPLICATIONS

- ✓ Accredited for use in dry, damp and flooded bore hole.*
- ✓ Anchoring of threaded rod fixings
- ✓ Internal, external and submerged conditions
- ✓ Can be applied to almost any size of fixing
- ✓ For use in solid and hollow masonry
- ✓ For horizontal, vertical and overhead application.



LOKFIX E APPLICATION GUIDE

The Application of Lokfix E products is relatively simple but should be undertaken carefully and in close accordance with the designers instructions. Incorrect preparation or application can lead to failure. The following is a brief overview to the application process for dry concrete. For full details consult the application method statement specific to the material you have selected and the substrate into which you need to fix.



CREATE THE HOLE

Select the appropriate fixing type and determine the correct depth and diameter, using the respective Lokfix E TDS, create the hole using a rotary percussion or hammer drill. If you strike reinforcement, stop and consult the design engineer.



AIR CLEAN

Using a blow out pump or an oil free compressed air lance, blow out debris from the hole four times. If the hole is wet, use air to dry it. Pay attention to changes in setting and curing times.



BRUSH CLEAN

Select the correct brush for the application ensuring the bristles exceed the hole diameter and the brush can reach the bottom of the hole (use handle extensions if necessary). Brush out debris four times.

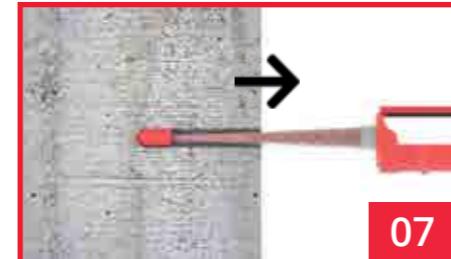
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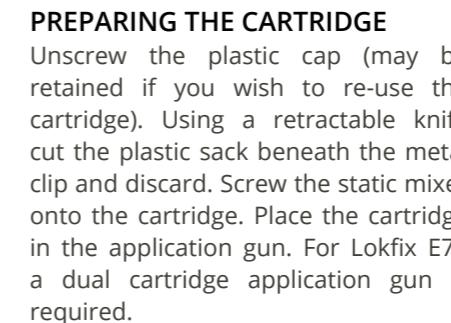
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AIR CLEAN

Blow out debris four more times. If there is visible dust at the end of this process, repeat air and brush cleaning until it is gone. Ensure there is no oil, grease or dust contamination in the hole.



PREPARING THE CARTRIDGE



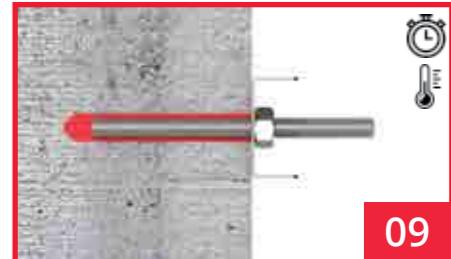
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RESIN APPLICATION

Insert the nozzle to the back of the hole and apply Lokfix. Draw the cartridge slowly back out of the hole until it is $\frac{3}{4}$ full. For deep holes or overhead holes the use of extension tubing and resin stoppers are vital to eliminate the occurrence of voids.



09

Insert the fixing into the hole using a twisting motion, setting the fixing in the centre of the hole. Some resin should extrude from the hole, this should be removed immediately. Pay close attention to application temperatures and time to ensure this is done within the setting period.

LOADING

Do not touch or adjust or load the fixing during the curing period. Pay close attention to application temperatures and time. Wet Areas will take longer to cure. Consult the respective TDS. Once set has been achieved the fixing may be loaded. Take care not to over-tighten nuts.

* Always consult technical information for specific details



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Important Note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard terms and conditions of sale, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification or information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products, whether or not in accordance with any advice, specification, recommendation or information given by it.

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