



Nitofill EPLV

(formerly known as Expofill)

Low viscosity epoxy injection resin

Uses

Nitofill EPLV is recommended for injecting into cracks in concrete or masonry to form a permanent bond or seal.

Nitofill EPLV is also suitable for plate bonding application such as bonding of steel plate to reinforced concrete structures.

Advantages

Nitofill EPLV is an epoxy resin formulated to provide the following characteristics.

- Low viscosity allows penetration into the finest cracks
- Formulated for hot climates
- Suitable for structural repairs
- Excellent bond to concrete, brick and masonry
- Minimum creep under sustained load
- Resistant to wide range of chemicals
- Non-shrink, adheres with no loss of bond

Description

Nitofill EPLV two part, solvent-free, low viscosity epoxy resin system is mixed in the proportions supplied to form a strong permanent bond and seal in cracks in concrete and masonry. Nitofill EPLV is designed to be injected into cracks using suitable resin injection equipment.

Design criteria

Nitofill EPLV is designed to seal and bond cracks in concrete and masonry. Crack widths between 0.2 and 0.9mm can be treated. Consult Fosroc office for further details.

Technical support

Fosroc offers a comprehensive range of high performance, high quality concrete admixtures, flooring, jointing and repair products. In addition, Fosroc offers comprehensive technical support, site problem solving. Specifiers and contractors are encouraged to contact our trained staff for answers to their questions.

Properties

Colour	: Amber
Pot life	: 30 mins @28°C
Compressive Strength	
1 day	: 50 N/mm ²
7 days	: 60 N/mm ²
14 days	: 70 N/mm ²
Specific Gravity	: 1.1 ± 0.1
Flexural Strength	: 60 N/mm ²
Tensile Strength (ASTM D638M-91)	: 40 N/mm ² at 7 days
Effective Shrinkage (ASTM C883-92)	
cycled at 25°C to 50°C	: Passed
Thermal compatibility (ASTM C884-92)	
cycled at 25°C to 50°C	: Passed
cycled at 25°C to 100°C	: Passed
Slant Shear Bond Strength (ASTM C882-92)	: 25 N/mm ²

Instructions for use

Nitofill EPLV can be applied using either injection packers fixed into holes drilled directly into the crack or drilled diagonally from concrete adjacent to the crack or by the fixing of injection nipples bonded to the surface using Nitomortar FC.

Preparation

Clean the surface and remove any dust, unsound or contaminated material, plaster, oil, paint, grease, corrosion deposits or algae.

Blow the cracks and treated surfaces with oil free air to ensure complete removal of all dust and loose particles. Ensure that surfaces are blown dry.

In the presence of running water the flow must be stopped using Nitofill WS60 which produces a rapid setting water-stopping foam. When the water has stopped the cracks can be re-injected with Nitofill UR63.

Nitofill EPLV

Fixing injection packers

The injection packers inserted into pre-drilled holes shall be fixed at intervals along the length of each crack. The distance between each packer will depend upon the width and depth of the crack. Spacing shall be close enough to ensure that the resin will penetrate along the crack to the next point of injection. This will normally be between 200mm and 500mm.

The surface of the cracks between the packers shall be sealed with a band of Nitomortar FC, 30 to 40 mm wide and 2 to 3 mm thick. Both sides of any cracks which go all the way through a wall or slab shall be sealed this way. In the case of a wall or slab cracked all the way through, packers shall be located on both sides with those at the back placed at midway points between those at the front.

The Nitomortar FC shall be allowed to cure for 8 hours at 35°C. At low ambient temperatures (5°C to 12°C) the curing time will be extended and the applicator shall ensure that the surface sealant has adequately cured prior to continuing. One end of the injection hose shall be attached to the lowest packer on vertical cracks or to either end of horizontal cracks. Each crack shall be treated in a single, continuous operation. Sufficient material shall, therefore, be made ready prior to the commencement of the work.

Nitofill EPLV application

Thoroughly mix entire hardener and base resin contents until liquid becomes clear.

Nitofill EPLV should be used with standard injection equipment having closed containers. The injection pressure should be at least 0.4N/mm² (4 Bar)

Only mix sufficient resin that can be used within the pot life of the material.

Following completion of the injection works the injection system shall be allowed to cure for 24 hours and shall be left undisturbed for this time.

Making good

Remove the packers or nipples. Make good any holes or voids with Nitomortar FC and allow to cure. The Nitomortar FC can be ground off or softened with a blow lamp and peeled off. Do not allow to burn.

Application to horizontal cracks

Nitofill EPLV can be applied to horizontal areas by the following process. Material penetration into the crack using this method will not be as deep as that achieved by injection.

Generally, the crack should be veed out to a reservoir to facilitate penetration by the Nitofill EPLV system. Alternatively, putty can be placed along both sides of the crack to provide reservoir capacity. This minimises wastage.

Cleaning

Nitofill EPLV and Nitomortar FC should be removed from tools, equipment and mixers with Fosroc Solvent 102 immediately after use. Hardened material can only be removed mechanically.

Limitations

- Nitofill EPLV can only be used on dry or damp concrete or masonry
- Nitofill EPLV should not be used on live cracks or where further movement is expected. In these cases contact the local Fosroc office.
- Nitofill EPLV should not be used in the presence of running water. In these cases Nitofill WS60 or Nitofill UR63 should be used.

Estimating

Supply

Nitofill EPLV	: 2 litre packs
Nitomortar FC	: 1 and 4 litre packs
Fosroc Solvent 102	: 5 litre packs

Storage

Shelf life

All products have a shelf life of 6 months at 20°C if kept in a dry store in the original, unopened containers.

Storage Conditions

Store in dry conditions in the original, unopened containers. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced to 2 to 3 months.

Nitofill EPLV

Precautions

Health and safety

Nitofill EPLV contains resins which may cause sensitization by skin contact. Nitofill EPLV, Nitomortar FC, and Fosroc Solvent 102 should not come in contact with skin or eyes, or be swallowed. During use avoid contact with skin and eyes and inhalation of vapour. Some people are sensitive to resins, hardeners and solvents. Wear suitable protective clothing, gloves and eye/face protection. Use only in well ventilated areas, if working in confined areas, suitable respiratory protective equipment must be used. The use of barrier creams provide additional skin protection.

Should accidental skin contact occur, remove immediately with a resin removing cream followed by soap and water. Do not use solvent. In case of contact with eyes, rinse immediately with plenty of clean water and seek medical advice. If swallowed seek medical attention immediately - do not induce vomiting.

Fire

Nitofill EPLV and Nitomortar FC are non-flammable.

Fosroc Solvent 102 is flammable. Keep away from sources of ignition. No smoking. In the event of fire extinguish with CO₂ or foam. Do not use a water jet.

Flash points

Fosroc Solvent 102:	33°C
---------------------	-------------

For further information, refer to the Product Material Safety Data Sheet.

Additional information

Fosroc manufactures a wide range of complementary products which include:

- waterproofing membranes & waterstops
- joint sealants & filler boards
- cementitious & epoxy grouts
- specialized flooring materials

Fosroc additionally offers a comprehensive package of products specifically designed for the repair and refurbishment of damaged concrete. Fosroc systematic approach to concrete repair features the following:

- hand-placed repair mortars
- spray grade repair mortars
- fluid micro-concretes
- chemically resistant epoxy mortars
- anti-carbonation/anti-chloride protective coatings
- chemical and abrasion resistant coatings

For further information on any of the above, please consult your local Fosroc office.



Fosroc (Thailand) Limited

777/9 Moo 7,
Bangplee-Tamru Road,
Bangplee Yai, Bangplee,
Samutprakarn 10540 Thailand

www.fosroc.com

Important note

Fosroc products are guaranteed against defective materials and manufacture and are sold subject to its standard Conditions for the Supply of Goods and Services, copies of which may be obtained on request. Whilst Fosroc endeavours to ensure that any advice, recommendation, specification of 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 of information given by it.

telephone:
+66 (0)2325 0913-15

fax:
+66 (0)2337 3551

email:
thailand@fosroc.com