

Nitofill® UR63

Mixing and application of Nitofill UR63

Application of the injection system may be commenced as soon as the Nitomortar PE has cured (at least 8 hours at 35°C). This will be extended at lower ambient temperatures. Mix the entire contents of the base and hardener components together until the liquid becomes clear.

The product is applied by standard resin injection equipment. The injection pressure should be at least 0.4 N/mm² (4 bar).

Making good

Remove the nipples. Make good any holes or voids with more Nitomortar PE and allow to cure. The Nitomortar PE used to seal cracks can then be ground off, or softened with a blow lamp and peeled off. Do not allow to burn.

Storage

Six months shelf life if stored at 30°C

Packaging

Usually available in 2kg packs

Cleaning

Use Nitoflor Sol

Precautions

Health and safety

Some people are sensitive to resins so gloves and a barrier cream should be used when handling all resins. If contact with the resin occurs, it must be removed, before it hardens, with a resin removing cream. Follow by washing with soap and water. Do not use solvent. The use of goggles is recommended but should accidental eye contamination occur, wash thoroughly with plenty of water and seek medical treatment immediately. Ensure good ventilation and do not smoke during use.

Fire

Nitoflor Sol and Nitofill UR63 are flammable

Flash point

Nitoflor Sol 33°C

Additional information

Nitofill UR63 is part of a wide range of adhesive, grouts, repair mortars and sealing compounds specifically designed and manufactured by Fosroc for the construction industry.

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Important note :

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Solvent free, two part polyurethane resin for sealing cracks

Uses

Can be injected into cracks in concrete or masonry in dry or damp conditions to form an elastic seal. Caution must be exercised with cracks which are live or filled with dust, water or salts.

Use with Nitofill WS60 to seal cracks in wet conditions in basements, subways and tunnels.

Advantages

- **Low viscosity** : Penetrates fine cracks and cavities.
- **Good adhesion**: Adheres strongly to dry or moist concrete
- **Flexible**: Strong but flexible to withstand differential structural movement
- **Tough** : Withstands high hydrostatic pressures
- **Impermeable**: On curing it forms a hard mass impermeable to water
- Suitable for use in high temperature conditions.

Description

Nitofill UR63 is a two part liquid polyurethane. When mixed in the proportion supplied they react to form a tough, slightly flexible resin. Nitofill UR63 has a good adhesion to concrete and masonry and when injected into cracks it allows some movement without loss of bond.

Technical support

The company provides a technical advisory service supported by a team of specialists in the field

Typical properties

Specific gravity	1.0	
Viscosity at 20°C	3 poise	
Cure properties (Tropical grade)		
Temperature	25°C	35°C
Pot life	35 min	20 min
Reaction time	95 min	55 min

Application instructions

Surface preparation

Care must be taken to provide a clean and sound surface for bonding and injecting.

1. Remove heavy deposits of grease and dirt by scrubbing with detergent solution and washing with plenty of clean water to ensure complete removal of the detergent. Dirt alone may be removed with wire brushes or similar mechanical means.
2. Remove deteriorated concrete, laitance and paint. The best treatment is grit blasting with sand, steel shot or a proprietary abrasive. Where grit blasting is impracticable, use rotary wire brushes.
3. Blow the cracks and treated surfaces with oil free compressed air to ensure complete removal of all dust and loose particles. Ensure that wet surfaces are blown dry.

In the presence of running water, the flow must be stopped by injecting Nitofill WS60 which produces a rapid setting foam. When the flow of water is stopped the cracks are re-injected with Nitofill UR63.

The surface of the crack must be sealed and injection nipples bonded in place before Nitofill UR63 is injected using Nitomortar PE.

Mixing of Nitomortar PE

Add the hardener component to the base components and mix thoroughly until a uniform colour is achieved.

Application of Nitomortar PE

Immediately after mixing, apply the compound to the surface cracks. Overlap the cracks on both sides by 15 - 20mm. In general aim to form a band of material 30 - 40mm width and 2 - 3 mm thick. Use the material to bond on injection nipples using locating pins to ensure correct sitting. Depending on the width and depth of the cracks the distance between nipples should be 200 to 500mm.

Fit nipples to both sides of a wall that is cracked all the way through, those at the back should be midway between those in front.

Take care not to block the nipple holes with Nitomortar PE.

Nitofill WS60

Storage

Six months shelf life if stored at 20°C

Packaging

Nitofill WS60	1, 5 & 20kg
Nitofill UR63	1, 5 & 20kg
Nitomortar PE	5 L
Nitoflor Sol	5 & 20 L

Precautions

Health and safety

Some people are sensitive to resins so gloves and a barrier cream should be used when handling Nitofill WS60. If contact with the resin occurs, it must be removed, before it hardens, with a resin removing cream. Follow by washing with soap and water. Do not use solvent. The use of goggles is recommended but should accidental eye contamination occur, wash thoroughly with plenty of water and seek medical treatment immediately. Ensure good ventilation and do not smoke during use.

Fire

Nitomortar PE and Nitoflor Sol are flammable

Flash point

Nitoflor Sol	33°C
Nitomortar PE resin	29°C

Additional information

Nitofill WS60 is part of a wide range of adhesive, grouts, repair mortars and sealing compounds specifically designed and manufactured by Fosroc for the construction industry.



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Nitofill WS60



constructive solutions

Rapid foaming and setting resin for stopping flow of water

Uses

Stops the flow of water when injected into cracks in concrete in the presence of moving water. Nitofill WS60 with Nitofill UR63 provides an effective system for crack sealing in wet conditions.

Advantages

- **Seals against water:** Reacts and produces foam resistant to water
- **Rapid acting :** Rapid reaction to produce water stop in presence of flowing water
- **Reinjectable :** Can be reinjected with Nitofill UR63 to produce a permanent seal.

Description

Nitofill WS60 is a two part liquid polyurethane when mixed in the proportions supplied it reacts rapidly with water to form a foam barrier.

Technical support

The company provides a technical advisory service supported by a team of specialists in the field

Typical properties

Specific gravity	1.14 ± 0.06
Density of foam	0.025
Viscosity at 20°C	2 - 3 poise
Pot life, in absence of water	
at 20°C	6 - 8 hours
at 30°C	3 - 4 hours
Reaction time with water	5 to 30 seconds dependent upon temperature

Specification clause

Water-stopping crack injection resin

Water-stopping crack injection resin foam shall be Nitofill WS60, a two part foaming liquid polyurethane. When mixed in the proportions supplied and injected into cracks in concrete, the resin shall react with moving water to form a foam water-stopping barrier.

The water-stopping injection resin shall have the following properties; pot life, in the absence of water, 6-8 hrs at 20°C; specific gravity of 1.14 ± 0.06; foam density of 0.025.

When used in conjunction with Nitofill UR63, a flexible two part polyurethane injection resin, it shall form a permanent seal in cracked concrete.

Application Instructions

Surface preparation

If water flow permits then the surfaces should be free from oil, grease and other contaminants. Nitofill WS60 can be applied using either injection plugs or adhesion packers (nipples) bonded to the surface with Nitomortar PE.

- Remove deteriorated concrete, laitence and paint. The best treatment is grit blasting with sand, steel shot blasting. Where grit blasting is impracticable, use rotary wire brushes.
- Blow the cracks and surfaces with oil free compressed air to ensure complete removal of all dust and loose particles.
- Drill the holes along the crack line at 45° inclination staggered at 200-500mm c/c.
- Fix the reinjectable nipples by using Nitomortar PE around the nozzles and for fixing the gaps.
- Immediately after mixing, Nitomortar PE, apply the compound to the surface cracks. Overlap the cracks on both sides by 15 - 20mm. In general aim to form a band of 30-40mm width and 2 - 3 mm thick. Depending on the width and depth of the cracks the distance between nipples should be 200 to 500mm. Take care not to block the nipple holes with Nitomortar PE.
- Application of the injection system may be commenced as soon as the Nitomortar PE has cured (atleast 2 hours)

Note : At low ambient temperatures the curing time must be extended in order to allow sufficient strength to build up in the sealant.

Application of Nitofill WS60

Thoroughly mix the accelerator with the base resin. Take care to exclude moisture as much as possible and place in an enclosed container after mixing. There will be a skin on the surface but the liquid underneath will be satisfactory for use.

Nitofill WS60 should be used with standard injection equipment having closed containers.

When flowing water has been stopped, reinject with Nitofill UR63 to give permanent seal.

After curing, remove the nipples & make good any holes or voids with a sealing compound and allow to cure.

Cleaning

Use Nitoflor Sol for all tools and equipments