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Fosroc® Nitofill UR63

Flexible foaming two part polyurethane injection resin

Uses

For injecting into cracks in concrete or masonry in wet conditions to form a slightly elastic seal.

Advantages

- Low viscosity - penetrates fine cracks and cavities
- Reacts with water and forms flexible closed cells that allow the movement of the crack
- Flexible to withstand differential movement
- Free expansion: 800%
- Chemically resistant against water, weak acids, alkali and micro-organisms
- Excellent adhesion to mineral construction materials (such as concrete, cement, brick and mortar) and metal
- Reaction speed is controlled by varying the amount of hardener. Use 6-9% hardener to achieve a good cell structure.

Description

Nitofill UR63 is a two part liquid polyurethane which reacts to form a tough, slightly flexible resin. Nitofill UR63 has good adhesion to concrete and masonry and when injected into cracks it allows some movement without loss of bond.

Properties

Colour :	yellow		
Free expansion :	800%		
Density	Base :	1.08 kg/l	
	Hardener :	0.947 kg/l	
Viscosity	Base :	105 mPas	@ 25°C
	Hardener :	8 mPas	@ 25°C

Reaction time: 100g resin + hardener + 28 g water

	Hardener	Start Reaction (sec)	End Reaction (min & sec)
10°C	6 %	22"	1'11"
	9%	16"	59"
15°C	6%	19"	51"
	9%	15"	44"
20°C	6%	18"	54"
	9%	14"	30"
25°C	6%	17"	40"
	9%	12"	29"

Preparation

Ensure all contact surfaces are free from oil or grease contamination and suitably prepared to allow the Nitokit Surface Sealant to bond.

Injection packers should be inserted into holes drilled at a 45 degree angle to the surface such that they intersect the crack. The distance between each packer is typically between 200 mm and 500 mm depending on the width of crack, depth of crack and degree of water penetration / water pressure.

Nitokit Surface Sealant

This is a polyester resin compound used to seal the front surface of the crack. For through cracks in slabs and walls, both sides of the crack may be sealed.

It is supplied as a liquid resin together with a powder hardener, which are mixed together to give a stiff paste.

Nitokit Surface Sealant has the added advantage that it can be rubbed down with suitable hand or power tools to give a smooth finish which readily blends with surrounding concrete, minimising the visual impact of the repaired crack.

Mix only the quantity of sealant that can be applied within the usable life. Pour a small quantity of the resin into a suitable bucket and slowly add the powder. Stir until a smooth thick cream consistency is obtained. Mix further quantities as required.

The usable life of the product is 20 to 25 minutes at 20°C.

Allow to cure for at least 2 hours at 20°C (4 hours at 10°C) before commencing injection.

Note, Nitokit Surface Sealant should not be used to seal cracks where running water is present.

Fosroc® Nitofill UR63

Injection

Before commencing ensure the first packer to be injected has its non-return valve fitted. All other packers should be open. Note for vertical applications, normally the lowest packer is injected first.

Pre-weigh required quantities of Nitofill UR63 resin and hardener. Mix together thoroughly using a drill and paddle. Mix only the amount which can be used within the pot life.

Pour the mixed material into the hopper of the injection equipment being used. Connect the outlet hose to the first injection packer and activate the pump.

When resin or foam is seen coming from the next injection packer, deactivate the pump immediately and install a non-return valve onto the next packer. Move the injection hose to the next packer and repeat until the entire crack is sealed.

Limitations

Nitofill UR63 is only to be used in wet or damp concrete or masonry where flexibility is required. For dry conditions consult Fosroc.

Cleaning

Tools and application equipment should be cleaned immediately after use using a proprietary polyurethane cleaner for Nitofill UR63 and Fosroc Solvent 105 for Nitokit Surface Sealant. Once cured, material can only be removed mechanically. Spillages should be absorbed with sand or sawdust and disposed of in accordance with local regulations.

Clean pump and manual equipment every time there is a stop of more than 15 minutes with a proprietary cleaner, or whenever necessary and at the end of the injection. Flush with an extra 1/4 litre of cleaner.

Storage

Six months shelf life if stored at 10°C - 30°C in unopened containers.

Packaging

Nitofill UR63 Base	25kg
Nitofill UR 63 Hardener	2.29kg
Nitokit Surface Sealant	5.5 ltr
Fosroc Solvent 105	5 ltr

Precautions

Health and safety

For further information refer to appropriate Product Safety Data Sheet, available at www.fosroc.com.

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