Fosroc®
Nitofill® PU140

constructive solutions

Multi-purpose expanding hydrophilic flexible polyurethane grout

Uses

Nitofill PU140 is a multi-purpose injection resin designed to seal leaking cracks, voids or fractures in concrete structures. The single component system reacts with water to form a closed cell foam that expands filling the void and forming a tight, impermeable elastomeric seal, stopping the water flow.

The resulting appearance of the polyurethane is dependent on the amount of water encountered. The liquid may be pumped as a single component directly into a leaking crack, fracture or joint or injected with water. Typical applications include:

- Sealing against water ingress
- Sealing against leaking cracks and joints
- Sealing against water in masonry and brickwork
- Void filling
- Back grouting

Description

Nitofill PU140 is a multi-purpose hydrophilic polyurethane injection resin which reacts with available water to initiate expansion in the product to seal leaking cracks and joints in concrete and fill voids in generally inaccessible locations.

Advantages

- Rapidly forms a highly resilient semi-flexible seal that allows movement to the crack, fracture or joint
- Reacts even with sea water or mineral water

Design Criteria

When Nitofill PU140 is mixed 1 part resin to 1 part water (w:w) it forms a cream within 15 seconds and a gel in 2 min @ 21^{O}C.

Properties

Specific Gravity:	1.1
Viscosity:	150 - 400 mPaS @ 25^{O}C
Appearance:	Brown liquid
Isocyanate (NCO) value:	4.2 - 4.5%
Cream time:	15 sec (1:1 ratio water)
Gel time:	2 min (1:1 ratio water)
Tack free time:	5 min (1:1 ratio water)
Expansion:	200% (1:1 ratio water)

Application Instructions

Nitofill PU140 can be injected by two methods:

1. Single Component Pump that is equipped for high pressure. The resin will react with the water in the structure and form a foam.
2. Twin Piston Pump water / resin ratio can be varied to form different density foams.

High pressure packers and couplers should be used for the injection of Nitofill PU140. Nitofill Steel Packer 10mm x 95mm or Nitofill Steel Packer 13mm x 100mm connected to Nitofill Coupler 4 Jaw will produce a reliable application. The grease nipple valve allows pumping hose to connect/ disconnect quickly with positive shut-off.

Application

Drill appropriate size holes at a 45° angle to intersect the crack or joint approximately half way through the thickness of the concrete (300mm wall, drill to intersect at 150mm depth).

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.

It is recommended that the material be conditioned to appropriate temperatures for at least 12 hours prior to application.

Pump Nitofill PU140 slowly until resin appears on face of crack. Start at lowest point and work upwards.

Reaction with water results in the formation of a flexible polyurethane foam which is hydrophilic and chemically resistant.

Dry cracks that are not actively leaking at the time of injection and are subjected to periodic water leaks, need to be flushed out with water. This is only required if the crack is dry and there is no moisture available for the reaction of polyurethane resin.

The resin can be pumped by means of a single component in injection pump that is equipped for high pressure.

Important: Keep containers sealed whilst not being used. Moisture may be absorbed into the Nitofill PU140 from the atmosphere causing it to react. Careful consideration should be given to applications below 10°C on a falling thermometer to avoid possible crystallization.

Cleaning

Nitofill PU140should be removed from tools, equipment and mixers with Fosroc Solvent 10 immediately after use. Cured material can only be removed mechanically.

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Supply

Nitofill PU140 20kg:	FC300902-20KG
Fosroc Solvent 10 4 litre:	FC600800-4L
Nitofill Steel Packer 10mm x 95mm (MOQ pack of 100):	FC344228-UNIT
Nitofill Steel Packer 13mm x 100mm (MOQ pack of 100):	FC344227-UNIT
Nitofill Coupler 4 Jaw (MOQ pack of 5):	FC344226-UNIT

Storage

Nitofill PU140 has a shelf life of 12 months from date of manufacture if kept in a dry store in the original, unopened packaging.

Containers should be kept properly closed and stored indoors in a well-ventilated area. Storage at room temperature (20-25°C) also provides a convenient viscosity for handling.

Storage at low temperatures (below 15°C) is not recommended because it may lead to some crystallisation. If crystallisation does occur, melt-out at elevated temperatures may be necessary. Storage at temperatures above 50°C is not recommended since this can lead to the formation of insoluble solids, and also increases the rate of viscosity increase on extended storage.

During handling Nitofill PU140 must be protected from water ingress and atmospheric moisture. Isocyanates react with water to form carbon dioxide gas which can result in pressure buildup in closed containers.

Important notice

A Safety Data Sheet (SDS) is available from the Fosroc website. Read the SDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

Product disclaimer

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. Parchem does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.

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