

# FLEXIBLE HYDROPHILIC INJECTION RESIN

## **Product Description**

PUR-X 300 is an MDI based hydrophilic, one-component flexible polyurethane injec-tion resin for waterproofing joints and cracks.

In contact with water the resin reacts and expands forming a permanent seal inside the leaking crack or construction joint.

## **Advantages**

1 Component hydrophilic PU resin, additional waterproofing due to post expansion.

Pre set reaction time of 4 minutes (at 21°C) which can be accelerated by using the PUR-X 300 Catalyst.

Resin expands 6 to 9 times its own volume.

PUR-X 300 can be injected as a 1 component injection resin or as a 2 component system using a 2 component injection pump. The resin can be diluted to a ration of 1 part resin to 2 parts water. The more water added, the more gel-like the end foam will be.

The cured PUR-X 300 is highly flexible with good adherence to the substrate, ideally suited for structures where structural movements may occur.

The cured polyurethane is harmless for the environment and resistant to most biological contamination.

## **Use and Areas of Application**

- Shut off water leaks in concrete, brickwork and sewers where movement and settlement may occur
- Water cut-off of water leaks in foundations such as diaphragm walls, piling sheets and secant piles
- Sealing water-carrying cracks and joints in tunnel segments
- Curtain grouting behind tunnel, concrete, brickwork and sewer walls
- Injection of failing membranes and liners in tunnels and buildings
- Injection into pre-installed injection hoses

### Application

Drill a hole of the appropriate diameter under an angle of 45° into the crack or joint, preferably upto half the thickness of the wall thickness. Fix a packer with the correct diameter into the borehole.

Determine the necessary reaction ti the resin. Read from the mixing table the required amount of catalyst that needs to be added in order to achieve that reaction time.

Mix the PUR-X 100 Cat thoroughly in the PUR-X 100 resin.

Make sure that the injection pump is fully operational. If necessary, pre inject water first into the crack or joint; this to make sure there is enough water present for the resin to react.

Connect the pump to the first packer. The starting point of the injection depends on the actual site conditions. For vertical cracks, normally the lowest packer would be the first injection point.

Start the injection at a low pressure. Increase the pressure until the resin starts to flow into the joint or crack. Move to the next packer when resin starts to flow out from the crack or joint or when the resin has reached the next injection point.

Allow the resin to react. After the set reaction time, return to the first packer and inject again if possible. When the resin does not flow into any packer anymore, stop the injection.



With a separate pump, pump a bit of water in each of the packers in order to allow the resin in the borehole and packer to set as well.

After all the resin has fully reacted, remove the packers and patch up the injection holes with a suitable cementitious material.

After all injection works have been finished, empty the hopper of the pump and flush the pump with pump cleaner or a water-free solvent. Clean injection hose and injection nipple with pump cleaner or solvent as well.

### **Technical Data**

#### **Appearance**

Yellow amberish resin

Viscosity 500 cPs (+/- 100) at 25°C

Flash point 150°C

Density 1.1 kg/litre

Reaction Time (21°C)
Water/Resin 8/1
Cream Time 30 sec
Gel Time 2 minutes

Tack Free 5 minutes

# Consumption

Consumption has to be assessed on site and is influenced by the amount of water leaking, thickness of the concrete slab or wall, presence of voids in and around the concrete etc.

## **Packaging**

PUR-X 300 is packaged in 1000kg IBC containers, 200kg steel drums and 20kg metal cans. PUR-X 300 Cat is packaged in 20kg metal cans and 2kg and plastic bottles.

# **Shelf Life and Storage**

PUR-X 300 is moisture sensitive and should be stored in a dry area between 5°C and 30°C. Shelf life of the resin: 12 months in original packaging.

Shelf life of the accelerator: 24 months in original packaging Once opened, containers should be used as soon as possible.

# Safety Precautions

Avoid contact with eyes and skin, always use personal protective equipment in compliance with local regulations.

Read the relevant Material Safety Data Sheet before use. Material Safety Data Sheets are available on www.neoferma.com

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