

# MasterFill PR I450

Hydrophilic polyurethane injection resin

## Material Description

**MasterFill PR I450** is a single component polyurethane which reacts with water to form a hydrophilic flexible seal. **MasterFill PR I450** is designed for the sealing/grouting and elastic connection of fissures and cavities in buildings and other civil engineering structures constructed of concrete, brickwork and natural stone. **MasterFill PR I450** is most suitable for use in consistently damp or wet environments.

## Areas of Application

- Tunnel linings - provides a seamless, protective coating to enhance durability and prevent water ingress in tunnels.
- Concrete foundations - protects against moisture, chemical exposure, and environmental wear to ensure long-term structural integrity.
- Subterranean curtains - serves as a highly effective waterproof barrier for below-grade structures.
- Retaining walls - prevents water penetration and enhances resistance to weathering and chemical attack.
- Slab-on-Ground - offers a protective, waterproof layer to mitigate rising damp and improve durability.
- Bridge abutments - shields concrete surfaces from moisture and aggressive environmental conditions.

## Characteristics and Benefits

- Hydrophilic properties - exceptional water-stopping capabilities, making it ideal for applications in wet or water-prone environments.
- Easy to use - single-pack formulation, eliminates the need for mixing, simplifying application and reducing preparation time.
- Highly flexible - accommodates movement in live structures, ensuring long-term performance without cracking or delamination.
- Broad surface compatibility - adheres effectively to most common construction materials, including concrete, steel, and masonry.

- Rapid foam and gel times - quick reaction and setting properties allow for fast application and reduced downtime, even in challenging conditions.
- Approved to AS/NZS 4020:2018 (tested to the maximum exposure level) - suitable for contact with potable water.

## Properties

Viscosity	800cps @ 25°C
Tensile Strength	2.55 MPa
Elongation @ Break	400%
Foaming Factor	3 – 3.5*
Start of Foaming	45 seconds*
Gel Time	55 seconds*
End of Foaming	200 seconds*
Tack Free Time	230 seconds*

## Application

For information about application, please obtain a copy of the “Polyurethane Injection MasterFlux PR systems” application guide from your local Master Builders Solutions Technical Sales Representative or download a copy from the website.

## Preparation

Evaluate joint or crack for injection. Drill holes either side of the crack, sloping towards the crack at an angle of approximately 45°, beginning at a distance of 120 - 150 mm from the crack. Insert packer at a depth of approximately 100mm. Pre-injection with water is recommended for priming and facilitation of reaction.

## Application

Commence from the widest part of the crack and proceed injecting outwards along the crack in each direction. Turn on pump and slowly increase pressure to a maximum of 30 bar. Stop pumping for every litre injected and allow 1 - 2 minutes for setting.

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Start and stop injection until the packer will no longer accept material or if the specified pressure has been reached. Move to the next packer and repeat injection process. Continue injection until crack is full and has been adequately sealed. Monitor the effectiveness of the work and allow to settle for 2 - 3 days before returning to site and completing additional injection if required. **MasterFill PR I450** may be injected into the crack with water at a ratio of 1:1.

## Packaging

**MasterFile PR I450** is available in 20kg drums.

## Storage & Shelf Life

Store in cool and dry warehouse conditions. Shelf life in these conditions is 12 months in unopened original bags.

## Precautions

For the full health and safety hazard information and how to safely handle and use this product, make sure that you obtain a copy of the Safety Data Sheet (SDS) from our office or website.

## Specification Clause

a single component hydrophilic polyurethane liquid which reacts with water to form a hydrophilic flexible seal.

It is used for the sealing/grouting and elastic connection of fissures and cavities in buildings and other civil engineering structures constructed of concrete, brickwork and natural stone.

The suitable product to meet the technical performance requirement mentioned in properties section of this document.

MasterFill PR I450 from Master Builders Solutions or equivalent can be selected based on this specification

## Disclaimer

MasterFill PR I450-ANZ-V2-1125

### STATEMENT OF RESPONSIBILITY

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