

Zero VOC, One Part Hydrophilic Polyurethane

Description

PENTENS PU-169 is a low viscosity, single component hydrophilic flexible polyurethane grout based on MDI. It reacts only when it contacts with water and forms a highly resilient flexible seal that allows movement to the cracks, fractures and joints. It is used to stop leaks and fill underground voids. It can also stop or slow the deterioration of steel bar or other internal features of the concrete. This success is due to the placement of PENTENS PU-169 throughout the depth of the crack.

Uses

PENTENS PU-169 can be injected directly under pressure, or injected with water at varied water and resin ratios, into a leaking crack and fractures, and foam, expand to fill the voids, forming a tight, impermeable elastomeric seals to stop water flow.

Areas of application include:

- Retaining walls
- Bathrooms
- Floor slabs
- Water tanks
- Terraces and balconies
- Patios
- RC gutters and planter boxes
- Swimming pools
- Suspended floors
- Basements and fountains

Advantages

- All MDI, safe handling
- Solvent free, zero VOC, non-flammable, environmental safe
- Underwater injection approved
- Good elastic strength, tolerant of movement
Inert after curing, constant volume, no shrinkage
- Precatalysed to control reactivity
- Excellent bond to most surfaces, include wet concrete surface
- Negative side application possible
- Deep penetration into very small cracks
- Does not create new cracks
- Non-toxic.

Technical & Physical Data

Form	Light yellow clear liquid
Solubility in Water	Hydrophilic
Non-Volatiles	100%
Density, g/cm ³	1.08
Viscosity, cps (ASTM D2196)	600
Flash point	>180°C
Max. Expansion,	5 times
Induction Time, 20°C/68°F	10 sec
Gel Time, 20°C/68°F	30 sec
Elongation at break (%) (ASTM D412-98)	>30
Appearance (Cured)	White tenacious polyurethane foam
Corrosiveness	Non-corrosive
Chemical Resistance	Resistant to most organic solvents, mild acids, alkalis
Shelf Life	1 year when unopened and undamaged
Storage Condition	Store in a dry cool place
Packaging	20 kg/pail

Important Notes

1. Minimum ambient and substrate temperature is 5°C.
2. Material shall be store in a dry cool place. Good storage stability for unopened containers at 15°C ~ 30°C.

Instruction for Use

STEP 1 : Clean Surface

Sometimes the concrete surface is hidden under a surface of mineral deposits left from long-term water leakage.

STEP 2 : Drill Injection Holes

In order to inject the resin into the crack, it is necessary to install injection ports, also called mechanical packers.

The depth of the drill hole intersecting the crack should be somewhere close to the center of structure, if possible.

STEP 3 : Insert Injection Packers

Place packers in the previously drilled hole, so that the top of the rubber sleeve is below the concrete surface. If the packer can't be pushed into the hole, tap it in. Tighten the packer with a wrench as tight as necessary.

STEP 4 : Flush Crack If Necessary

In some circumstances, it can be very useful to flush the crack with water to improve the subsequent penetration of the PENTENS injection resin into thicker walls.

STEP 5 : Crack Injection

Choose the proper resin for the correct application. The nature of the crack / joint and the conditions at the job site determine the choice of material. For general purpose, you may choose PENTENS PU-108. Active water flow at a high rate is best stopped by using PENTENS PU-169 for the first step then follows by PU-108. Moving cracks and expansion joints should be injected with PENTENS PU-169. Hairline cracks and dry cracks should be sealed using PENTENS T-800. Some problems are solved by using a combination of products.

STEP 6 : Clean Up

Once the injection work is completed, a good and thorough clean up is essential. The packers can be removed within 1 hour and the holes should be patched by using PENTENS T-800.

For more details, please refer to our Technical Department.

Cleaning

Tools and equipment just can be clean with PENTENS SO3 or suitable thinner immediately after use.

Safety

Impervious gloves and barrier cream should be used when handling these products. Eye protection should be worn. In case of contact with eyes, wash thoroughly with plenty of water and seek medical advice if symptoms persist. If contact with skin occurs, it must be removed before curing takes place. Wash off with an industrial skin clearer followed by plenty of soap and water. Do not use solvent. Ensure adequate ventilation when using these products.

