

PENTENS PU-107

Product Data Sheet

100% Solid, Zero VOC, Hydrophobic Polyurethane Grout

Description

PENTENS PU-107 is a 100% solid hydrophobic polyurethane grout which produces a catalyzed mixture when mixed with PENTENS PU-10 Hydrophobic Polyurethane Grout Catalyst. This catalyzed mixture expands when it comes into contact with any source of water or moisture. Depending on the temperature and amount of catalyst used, it quickly cures to form a tough, flexible, non-flammable, impermeable closed-cell foam that is essentially unaffected by corrosive environments and adheres tenaciously to practically any substrates - wet or dry.

PENTENS PU-107 is used to stop leakages through cracked or honeycombed concrete, voids, expansion joints and pipe intrusions. Applied by using injection, the grout is commonly specified for use in repairing concrete walls, ceilings and floors.

Uses

Areas of application include:

- Defective concrete (cracked or honeycombed)
- Concrete joints
- Limestone
- Brick construction
- Pipe intrusions
- Waste water tanks
- Drinking water reservoirs
- Sewers, manholes, utility boxes, etc.
- Tunnels, dams
- Soil stabilisation

Advantages

- Negative side application possible.
- Deep penetration into very small cracks.
- Foam increases in volume to fill cavities and voids.
- Adjustable gel times.
- Excellent bond on wet surfaces.
- Good adhesive strength, tolerant of movement.
- Inert after curing, constant volume, no shrinkage.
- Does not create new cracks.
- Non-toxic. Potable water certified.

Technical & Physical Data

Solid	100%
Colour	Dark brown
Solubility in Water	Hydrophobic
Density, g/ml (ASTM D 3800-79)	1.12
Viscosity, cps (ASTM D 2196)	1000-1200
Max. Expansion, (5% of PU-10 added)	36 times
Bond Strength	9 kgf/cm ²
Appearance	Light yellow polyurethane foam
Corrosiveness	Non-corrosive
Chemical Resistance	Resistant to most organic solvent, mild acids, alkalis
Shelf Life	1 year when unopened and undamaged
Storage Condition	Store in a dry, cool place
Packaging	
■ PU-107	20kg /pail
■ PU-10	1kg /can

Important Notes

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

Reaction Time @ 25°C

PU-10	Induction Time	Gel Time
0%	2'55"	57'30"
1%	1'17"	11'45"
3%	30"	2'50"
5%	23"	1'52"

Note:

- 1% PU-10 = 10ml per liter of grout.
- Shake the can of PU-10 well before adding to grout.
- PU-107 should never be used with more than 5% of the PU-10 amount recommended on this data sheet. Excess acceleration will cause a vigorous expansion that is prone to shrinkage.

Instruction for Use

Step 1: Clean Surface

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

Step 2: Drill Injection Holes

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

The depth of the drilled hole intersecting the crack should be somewhere close to the center of the 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 tightly as necessary.

Step 4: Flush Crack If Necessary

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

Step 5 : Crack Injection

Pour the desired amount of PENTENS PU-107 (Grout) into a clean pail. Measure the appropriate amount of PU-10 (Catalyst), add it to PU-107 and then stir until adequately mixed. If very short set time is required, for example, in a gushing leak, additional catalyst may be added to the grout. As the job progresses, return at least twice to previously injected ports and re-inject with more grout. This procedure aids in getting a denser resin into all sections of the void. PENTENS recommends injecting each port three times separately.

Step 6: Clean Up

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

For more details, please refer to PENTENS Technical Department.

Cleaning

Tools and equipment can be easily cleaned 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, rinse immediately 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 cleanser followed by plenty of soap and water. Do not use solvent. Ensure adequate ventilation when using these products.

