PenePurFom 1k

MATERIALS

PenePurFoam 1K

DESCRIPTION

Single component, intense, injectable low viscosity, hydrophilic, polyurethane resin. When reacts with water, it forms a dense, flexible, waterproof, fine cellular foam to stop water leakage.

RECOMMENDED FOR

- Stopping water penetration from cracks in structures
- Sealing moist and dry cracks up to 0,15 mm
- Sealing of expansion joints prior to «PeneBand»/ «PeneBand S» application

ADVANTAGES

- Forms flexible foam due to intense reaction with water
- Single-component, ready for use
- Accelerated polymerization with catalyst

PROPERTIES

- Excellent seawater resistance
- Solvent-free, halon-free
- Resin reaction products are resistant to acids, alkalis and microorganisms

SPECIFICATIONS

Parameter name	PenePurFoam 1K	PenePurFoam 1K catalyst	Test procedure
Pot life * of resin and catalyst mixture (when not in contact with water and air), 20±2 ºC, min.	48		GOST 27271
Density, kg/m^3	1000 ± 50	1000 ± 50	GOST 18329
Dynamic viscosity * at: 5ºC, Pa·s 25ºC, Pa·s	 3,0 ± 0,5 0,7 ± 0,1	 0,06 ± 0,01 0,02 ± 0,01	GOST 10587
Resin volume expansion at 20±2 ºC when in contact, max., %: - with catalyst and water - with water	 1300 800	-	TS 5775-009-77919831-2013

* - resin viscosity rises as the temperature decreases; in higher temperatures the pot life will be reduced.

PACKAGING

«PenePurFoam 1K» – metallic can, 20 kg
«PenePurFoam 1K Catalyst» – metallic can, 1 kg

TRANSPORTATION

all types of transport

SHELF LIFE

24 months when properly stored in a dry place at a temperature from 0 up to +50°C in unopened and undamaged original packaging.

Instructions for use PenePurFoam 1K

Apply when the temperature of the structural surface is from 5°C up to 35ºC.

Safety Precautions

Use PPE: chemical-resistant rubber gloves, cotton gloves, respirator, protective goggles, suitable protective clothing, rubber boots. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Surface Preparation

Flush clean water to joints, cracks using a pump or a high-pressure water jet.

Pump preparation

Use the manual pump "EK-100M" or the electric pump "EK-200" after mixing the resin with the catalyst. Before applying the resin, use hydraulic oil (e.g., Mobil HLP-68 or equivalent) in circulating mode for control flushing of the pump.

Injector installation

- Use ball valve type metal injection packers. Hole diameter should be 1-2 mm larger than the one of injector (for example, with an injector diameter of 10 mm, the hole diameter should be 11-12 mm).
- Drill injection holes with an angle of ~ 45° to the surface. The distance between the holes and from the edge of the crack, concrete joint should be ½ of the thickness of the structure
- Remove drilling residues from the holes using compressed air and install outermost injector
- For vertical surfaces and ceilings make a sawcut along the length of the crack at a width of approximately 25 × 25 mm and fill it with the mortar mixture "Screpa M500. For repair work"

Resin preparation

Warning! Minimum temperature - +17°C. Viscosity rises as the temperature decreases. In higher temperatures the pot life will be reduced.
- Calculate catalyst amount based on water filtration rate and ambient temperature (see table below)
- Make control batch to assess on-site pot life
- Prepare resin in the amount adequate to pot life: mix resin with catalyst during 3 minutes manually or using low speed drill (up to 300 RPM)

Catalyst amount, %	**Reaction time when in contact with water, depending on temperature**			
	+5°C	**+15°C**	**+25°C**	**+30°C**
0	60 min	40 min	30 min	20 min
1	11 min	8 min	7 min	6 min
2	8 min	7 min	6 min	5 min
3	7 min	6 min	5 min	4 min
4	6 min	5 min	4 min	3 min
5	4 min	3 min	2 min	1 min

Injection

Warning! For vertical surfaces, always inject from bottom to top (from the lowest injection packer).
- Pump until resin starts to flow from the next highest injection packer or until the pressure rises.
- Begin filling from the next injection packer and follow this sequence of injection
- If viscosity increases, rinse the pump with a solvent (for example, solvent 646 GOST 18188), and prepare a new mixture
- Ensure that all injection packers are filled with the resin before polymerization
- Use "Penecrete" mortar mix if injection packers need to be loosened and removed

Pump cleaning

Flush the pump and hoses with solvent (for example, xylene or GOST 18188 solvent 646) and hydraulic oil (for example, Mobil HLP-68 or equivalent). Remove cured resin mechanically.

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