

AQUAFILL ZT-108

POLYURETHANE INJECTIVE GROUT



DESCRIPTION

ZT-108 Polyurethane injective grout is a polymer compound which mainly made up by toluene diisocyanate and trihydroxy-soluble polyether. It can be reacted with water; the volume expands quickly so that seals and blocks the leakage passage rapidly.

PRODUCT FEATURE

- **Fast speed:** After reacting with water, it solidifies as elastic colloidal solid in seconds.
- **Convenient and efficient:** Low viscosity, good grout ability and simple equipment.
- **Well waterproof effect:** Good anti-permeability, high strength, large expansion rate and well supporting stability.
- **Secondary waterproofing:** It reacts with water, and releases carbon dioxide then foams and swells. Meanwhile, it has secondary waterproofing.

ADVANTAGES

- Once ZT-108 grout meet water, it emulsifies and foam immediately. Then this reaction form impermeable elastic gelatinous solid which have many performance advantages, such as: water- proofing performance, good extension, good elasticity, good impermeability, low temperature tolerance and it can maintain same performance under water event for long time.
- As ZT-108 grout is hydrophilic material after mix with water, for this reason the mixture is low viscosity, good grouting property and also non-toxic, harmless, non-pollution material.

- When the reaction is going on inside the mixture, it created CO_2 which make expanding pressure inside mixture. For this reason, mixture can go deeper into tiny gap of structure. This material can fully fill in porous structure this reaction we called it dual penetrating.
- This grout has good expansibility foam ability and it include plenty of water. Curing speed and viscosity can be adjusted.
- This water-soluble polyurethane grouting materials is one component material, it is easy to construct with simple economy construct equipment.

MAIN APPLICATION

Leaking stoppage of tunnel, colliery, well drain, dyke, wharf, and other underground structure.

Leaking stoppage and seal of construction joint, settlement joint, deformation joint, lap joint and other distress in concrete.

INSTALLATION

- **Grout Prepare**
First step we should use the measurement tools to make sure slurry ratio according to requirements.
- **Substrate Prepare**
We should find out the cracks in the basement roof and remove the surface layer 500mm around the leaking point to expose the structural layer.
Then we should clean leaking water spot with steel brush to make sure surface may not have floating sink, sand etc. All cracks and leakage points shall be plugged with permeation-crystal waterproof plugging mortar.
Make layout of grout inject point then make holes by electric drill and put grout needle which is connect to grouting machine.
- **Construction**
Stir grout material then start grouting, we should control grout speed, grout volume and grout pressure should be around $200\text{-}750\text{kg/cm}^2$.
If grout pressure is increase or decrease suddenly or gout material spilt out, we should stop grouting to find out the reason. After the construction is completed, seal the holes with permeation-crystal waterproof plugging mortar.

SUPPLY

5kgs/bucket; 10kgs/bucket; 20kgs/bucket

ATTENTION

Construction workers should wear protective equipment such as gloves, goggles and construct with assigned machine, grout material. If the mixture spit on human skin, we should wash it with plenty of soapy water. We should pay special attention to pressure gauge of grout machine during grouting to avoid bursts of pipes. Any of grout material with solid particles is forbidden to use in grout machine, we should use engine oil to test machine working pressure, rather than any other viscosity liquid. It is forbidden to left grout material in equipment for long time after the pulp is finished, it is necessary to wash the grouting machine with acetone in time and after we clean it we can use 50cc engine oil to lubricate it.

PHYSICAL PROPERTIES

Implemented Standard: JC/TC2041-2010

No.	ITEM	INDEX
1	Density, g/cm ³ ≥	1.0
2	Viscosity, mpa · s≤	1.0x10 ³
3	Curing time, s≤	150
4	Water expansion rate, %≥	20
5	Water absorption (10 times water)/s≤	200
6	Nonvolatile content / %≥	75
7	Expansion rate /%≥	350



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