Oil based Injection Polyurethane Grouting PU Foam

Sinomaco oilbased injection polyurethane grouting and plugging liquid material is a single componet and polyurethane based polymer chemical grouting and plugging material with isocyanate groups at the end formed by the reaction of compound polyol and polyisocyanate. It is widely used in basements, subways, tunnels, hydroelectric dams, oil and coal mining projects in urban buildings to strengthen, waterproof, and plug leaks. It reacts immediately after encountering water to produce gas, expands in volume and produces an insoluble The foam with a certain strength of water can not only waterproof and stop leakage, but also be more suitable for reinforcement.

Product Features

1. Impermeability: The impermeability of the material is normally above 380KPa, which is much higher than general waterproof materials, and the waterproof effect is obvious.

2. Compression resistance: The compressive strength of the consolidated body in standard sand is generally only between 4.9 and 19.6 MPa, which can play a better role in reinforcement.

3. The material can play an obvious role whether it is a dry crack or a mixed crack. Under the high pressure of the pouring machine, it first sinks to the bottom of the crack, and the rigid foam produced by the reaction with water slowly squeezes out the water little by little. Play the role of waterproof reinforcement.

4. The expansion rate is large and does not shrink. Normally reacting with water, the slurry can form 10-20 times the foam, which can further enrich the gap and play a role in waterproofing and plugging.

5. Because the slurry is a single component, it is easy to use and foams and solidifies quickly. Especially in emergency rescue can play an immediate role.

Scope of Application

1. Waterproof plugging of deformation joints, construction joints and structural joints of buildings and underground concrete works.

2. Waterproof plugging and reinforcement of inner walls of tunnels excavated in subway and tunnel engineering, as well as reinforcement and stability of railway subgrades.

3. Seepage prevention and plugging of dam foundation cracks in hydropower and water conservancy projects.

4. Water blocking and reinforcement in tunnels during oil drilling and coal mining to prevent deformation, cracking, and collapse of the foundation.

Construction Method

1. Carefully check the leaking part, find the leaking point (such as dry crack reinforcement can be filled with water first, then grouting), and remove the dirt around the crack.

2. Drill holes on both sides of the leakage crack at a distance of 200-500mm. The leakage points can

be denser, and the depth is generally more than 1/2 of the coagulation.

3. Embed needles of suitable length in the place where the holes are punched, and then tighten the needles one by one to allow the rubber parts to expand and lock the wall body until the hand does not shake.

4. Inject grouting into the needle one by one from bottom to top to control the pressure, which is generally greater than the groundwater pressure and lower than the pressure of the concrete. When you see white grout from the adjacent cracks, replace another needle to continue grouting.

5. The grout can be high-pressure grouting or manual grouting, especially the effect of high-pressure grouting is ideal.

6. After the grouting is completed, use a small hammer to gently knock off the needle protruding from the outside of the concrete so that the lower cement can be leveled.

7. It is used to apply cement to wet parts in the past, and if there is any remaining leakage, further grouting is required to achieve a never wet situation.

8. When grouting is finished, clean the grouting machine with xylene or acetone, and let the solvent circulate in the machine for a period of time to ensure that it is clean.

9.Then use oil to circulate in the machine for a period of time, properly maintain it, and extend its life.

Technical Data Sheet

S/N	Item		Value	
			Type I	Type II
1	Curing time	Initial	≥ 10 Min	≥ 2 Min & ≤ 10Min
		Final	≤ 360Min	≤ 15Min
2	Compressive strength	1hr	--	≥ 4.5Mpa
		3d	≥ 13Mpa	≥ 15Mpa
3	Flexural Strength	1hr	--	≥ 1.5Mpa
		3d	≥ 3.0Mpa	≥ 4.0Mpa
2	Layer impermeability pressure	7d	≥ 0.4Mpa	--
3	Sample impermeability pressure	7d	≥ 1.5Mpa	
4	Bonding strength	7d	≥ 0.6Mpa	
5	Heat resistance	100℃, 5h	No crack and peeling off	
6	Freeze-thaw cycle	20times	No crack and peeling off	

Product link：https://www.sinomaco.com/?p=1257