

Solvent-Based Polyurethane Injection Grout

INTRODUCTION

Solvent-Based Polyurethane Injection Grout is a single-component grouting material that, when injected into concrete, reacts chemically with water. Due to slow expansion and sustained pressure, the grouting material penetrates fine cracks, rapidly expands and cures, achieving a complete water-stop effect. It is one of the most effective grouting materials available today. To ensure sufficient time for smooth operation, this product expands to its maximum state in about 20 minutes at room temperature. If faster speed is required, an accelerator can be added, which can be purchased separately from the manufacturer.

APPLICATION

1. Sealing leaks in cracks, expansion joints, construction joints, and structural joints of various buildings and underground concrete projects.
2. Wall protection, leak sealing, and reinforcement in geological drilling projects.
3. Dam grouting in water conservancy and hydropower projects; tunnel crack sealing; anti-seepage and reinforcement of concrete cracks in dam structures.
4. Stabilization and reinforcement of high-rise buildings, railway foundations, and high-grade highway roadbeds.
5. Water sealing in mining tunnels and reinforcement of fractured layers such as roofs in coal mining or other mining operations.
6. Reinforcement of bridge foundations and crack repair in bridge structures.
7. Reinforcement of deformed buildings; crack repair and anti-subsidence measures in concrete structures such as water towers and pools.

ADVANTAGES

- Rapid Reaction:** Reacts quickly with water, expanding and solidifying.
- High expansion rate:** This product features a high expansion rate and is non-shrinking, capable of forming solid foam material up to 30 times its original volume, thereby further filling voids and providing waterproofing

and leak sealing.

- Strong Adhesion:** Provides strong adhesion to substrates and excellent chemical resistance.
- Easy to Operate:** Suitable for single-liquid high-pressure injection pumps and other equipment, simple to operate and ideal for quick repairs.
- Strong permeability:** Low viscosity, large penetration radius, capable of penetrating fine cracks and pores, with strong adhesion to the substrate, ensuring long-lasting repair effects.

PACKAGING

Specification:	7kg / pail, 10kg/pail, 20kg/pail
Appearance:	Single component, brown liquid.
Foaming ratio:	Max. 30 times
Shelf Life:	1 Year

CONSTRUCTION STEPS

1. Inspect and Clean

Carefully inspect the leaking areas and clean any dirt or debris around the cracks in preparation for grouting.

2. Drilling Injection Holes

Drill injection holes at the cracks. For deep cracks, inclined holes can be drilled to pass through the crack surface. Generally, the hole spacing should be 0.2-0.5 meters, and the depth should be approximately half the thickness of the concrete.

3. Embedding Injection Nozzles and Sealing the Cracks

Insert the injection nozzles and seal the cracks with fast-drying cement.

4. Grouting

Determine the grouting pressure and volume based on the specific conditions of the crack. When the same grouting material is used in neighboring holes, move to the adjacent hole. Grout under the specified pressure until the grouting completion standard is met.

5. Post-Grouting

After the grouting material has cured, remove the injection pipes and seal the holes with fast-drying cement.

6. Cleaning the Grouting Machine

PRODUCT DATA SHEET

Clean the grouting equipment using thinner or solvent. Afterwards, add engine oil for maintenance.

Note:

1.To ensure sufficient time for smooth operation, this product expands to its maximum state in about 20 minutes at room temperature. If faster speed is required, an accelerator can be added, which can be purchased separately from the manufacturer.

2.The ambient temperature during application should be above 0° C, as low temperatures may affect the reaction and curing speed.

3.Ensure adequate ventilation and keep away from any ignition sources during application. Open flames must not be used in the surrounding work area before the material has cured.

4.Immediately after use, machine must be thoroughly cleaned with a cleaning agent until completely clean.

HANDLING & HEALTH

- 1.Please wear rubber or plastic gloves to avoid contact with skin.
- 2.Product is for professional use only.
- 3.If the product comes into contact with skin during application, it is recommended to remove it with dry towel or cloth, followed by washing the skin with clean water.

STORAGE & SAFETY

- 1.This product is eco-friendly & non flammable
- 2.This product must be stored dry, protected from sun and rain.
- 3.This product can be stored in low-temperature environments during winter.

TECHNICAL DATA

No.	Test Item	Standard Requirement	Test Result	Individual Results
1	Appearance	Uniform liquid, no impurities, no separation.	Uniform liquid, no impurities, no separation.	Pass
2	Density, g/cm ³	≥ 1.05	1.156	Pass
3	Viscosity, mPa·s	≤ 1.0×10 ³	186	Pass
4	Setting time, s	≤ 800	362	Pass
5	Non-volatile content, %	≥ 78	86	Pass
6	Foaming rate, %	≥ 1000	2830	Pass
7	Compressive strength, MPa	≥ 6	6	Pass

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