

Polyurea Injection Grout

INTRODUCTION

Polyurea Injection Grout is a high-performance polymer injection grout characterized by excellent waterproofing, high elasticity, chemical resistance, high solid content, and non-shrinkage properties. Its sealing performance surpasses that of conventional sealants. Additionally, the product offers high tensile strength and elongation at break, enabling it to bridge various structural cracks, pavement cracks, and voids. It effectively addresses leakage and recurrent leakage issues caused by expansion joints, contraction joints, and connection joints. It exhibits excellent adhesion to concrete, ceramic tile, and metal surfaces, and can cure even underwater. This product is environmentally friendly. It can also be used as an interior waterproof coating.

APPLICATION

- 1.Civil Engineering: Polyurea sealant is used in water conservancy projects such as dam reinforcement and seepage prevention, enhancing safety.
- 2.Subway Tunnels: In tunnel construction, polyurea grouting fills gaps between tunnel linings and surrounding rocks, preventing water leakage and ensuring safety.
- 3.Bridge Repair: Polyurea sealant, with its fast curing and high strength, is ideal for repairing bridge cracks and restoring load-bearing capacity.
- 4.Industrial and Civil Buildings: Polyurea sealant is used for waterproofing in basements, roofs, and walls, protecting the building structure.

ADVANTAGES

- Exceptional Durability: esistant to water immersion, acid and alkali, and high temperatures.
- Underwater Curing Capability: Can fully cure in water, tightly bonding with concrete even in humid or submerged conditions.
- Strength and Elasticity Balance: Possesses certain strength and elasticity, reinforcing structures while accommodating deformation.
- Dense Structure and Waterproof Performance: Dense internal structure, outstanding waterproof performance.
- Non-Shrinkage After Curing
- Excellent Adhesion to Multiple Substrates: Excellent adhesion to concrete, ceramic tile, and metal surfaces.

PACKAGING

Specification:	9kg / pail
Appearance:	Single component, gray viscous liquid.
Shelf Life:	1 Year

CONSTRUCTION STEPS

1.Locate Cracks or Leakage Points

For damp substrates, first remove any accumulated water; for dry substrates, clean the surface dust. Carefully inspect for cracks and mark them with a colored pen or chalk along the crack.

2.Analyze Leakage Points

Analyze the cracks (leakage points) to determine the depth and development pattern of the cracks, and to decide on the drilling depth. If the surface is hard to dry, use a blowtorch to dry it. Moisture in the crack will make it immediately visible, improving work efficiency.

3.Drilling

Based on the structure thickness, drill holes about 50-150mm from the crack, in a cross-pattern along both sides of the crack. The hole spacing is typically controlled between 20~50cm (depending on the specific situation). Use a 14mm drill bit. The holes should intersect the crack at an angle of 45°~70°, roughly around the middle 1/2 of the structure (drilling depth depends on slab thickness and angle).

4.Clean the Holes

Use a high-pressure washer to clean the grout holes.

5.Install Packers

Use tools to install and secure the packers, ensuring that the rubber part and the hole wall are dry before use, as moisture can cause slipping during tightening. Check the operation of the grouting equipment and pipes, verify the strength of the solidified grout nozzles, clear any cracks, and set the grouting parameters (such as grouting pressure).

6.Inject the Grout:

Start injecting from the bottom upwards on the structural surface. Stop immediately when the grout emerges from the crack, and proceed upwards in sequence. During injection, if grout has already filled the adjacent needle positions, skip those. If cracks extend at both ends or

intersect after grouting, drill additional holes at those points and re-grout. For complete filling, perform secondary grouting before the grout solidifies.

7.Remove the Nozzles

After 24 hours of grouting, confirm no leakage and then remove or dismantle the exposed grout nozzles.

8.Seal the Grouting Holes

After the grouting is complete, seal the holes to ensure waterproofing effectiveness.

9.Cleaning the Grouting Machine

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

Note:

- 1.For filling joints or pavement cracks, the product can be poured directly into the crack.
2. During application, the substrate temperature must be at least 3°C above the dew point.
- 3.When injecting the product with a grouting machine, a polyurea-specific injection machine or a machine with a power rating of 1500W or higher must be used. Otherwise, the product may not be properly dispensed.
- 4.When working in confined spaces, ensure adequate

ventilation is maintained.

- 5.Once the pail is opened, it is recommended to use it up within 3 to 5 days, provided the lid is tightly resealed. Otherwise, the product will cure upon exposure to air.

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 a dry paper 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.
- 4.During storage, it should be turned upside down every month to reduce sedimentation.

TECHNICAL DATA

No.	Test Item	Standard Requirement	Test Results	Individual Results
1	Solid content, %	≥ 98	98	Pass
2	Surface dry time, h	≤ 4	3	Pass
3	Full Drying time, h	≤ 8	7	Pass
4	Tensile strength, MPa	≥ 1.0	1.3	Pass
5	Elongation at break, %	≥ 400	402	Pass
6	Low-temperature bendability	-40°C, no cracks	-40°C, no cracks	Pass
7	Waterproofness	0.3MPa, 120min, waterproof	0.3MPa, 120min, waterproof	Pass
8	Heating shrinkage rate, %	-2.0 ~ +1.0	-1.9	Pass
9	Bonding strength, MPa	≥0.6	1.4	Pass
10	Density, kg/m ³	----	1.57	----

LEGAL NOTICE

This document is based on Boslai's current product knowledge and assumes proper storage, handling, and application under normal conditions. Due to variations in materials and site conditions, no warranties—express or implied—are provided. Users must verify suitability. Boslai reserves the right to modify products and specifications. Third-party IP rights apply. Orders follow current sales terms. For the latest technical datasheet, contact us.