



# Cem Shield

## POLYUREA

### SINGLE-COMPONENT POLYURETHANE INJECTION GROUT (ENHANCED TYPE JL007-II)

Polyurethane injection grout, enhanced version is a high-polymer single-polymer single-component leak sealing and injection grout formulated, using, environmentally stringent standards. It is based on polyurethane emulsion and processed through scientific methods. With high solid content and no shrinkage, this product exhibits superior leak sealing performance to conventional grouts, thanks to its hydrophilic reaction. Additionally, it has high strength and elongation, allowing it to effectively seal joints, contraction joints, construction joints, and horizontal joints. It is an ideal type of leak sealing and injection.

#### FEATURES

- If fully cures underwater and has good adhesion to wet
- If forms a dense internal structure, providing excellent leak sealing performance.
- The curing process is not sensitive to temperature and is in both high and low temperatures.
- Has a certain level of strength and elasticity after curing.
- Is a single-component product that does not shrink and does not require a vibrator or mixer for use.
- Is resistant to water, acids, and alkalis, as well as has good chemical resistance, and sealing pressure resistance.
- Is an environmentally friendly non-toxic, no odor, and no harm to human health.

#### PHYSICAL PROPERTIES

PRODUCT	SPECIFICATIONS
Color	Yellowish viscous liquid
Density (g/cm <sup>3</sup> at 25°C)	1.10 + 1.20
Viscosity (mPa.s at 25°C)	300 – 600
Shore A Hardness (7d)	≥ 25
Tensile Strength (MPa)	≥ 4.5
Elongation (%)	≥ 500
Flash Point (°C)	> 130



## APPLICATION

It is suitable for leak sealing and injection grouting in underground projects, subway systems, tunnels, pipe corridors, culverts, and other concrete structures. It is particularly effective for grouting and sealing in structures with significant vibration and deformation, such as shield tunnel segments, deformation joints, and expansion joints.

## PACKAGING SPECIFICATIONS

Net content of 10 liters per barrel

## STORAGE SHELF LIFE

10 months (when stored in a dry and ventilated place)

## applied range

The solid content of this material is as high as 97%, and its adhesion to concrete and steel bricks is very good. After curing, it is elastic and can adapt to the expansion and deformation of the structure, and there will be no cracking and leakage in the later stage.

## construction technology

1. grinding on both sides of the base surface
2. clean up the dust,
3. Inject polyurea grouting liquid for reinforcement. If the gap is too deep, you can use water stop or hemp as the backing, and reserve a depth of about 3 cm to inject polyurea material.

Attention: dry construction! Polyurea is a slow-drying material. Adding 3%~5% water, stirring evenly and then grouting can speed up the curing time of the material.

## Construction steps of plane expansion joint



## Construction steps of elevation expansion joint



## Application scenario demonstration



## Performance demonstration

