Hydrophobic Polyurethane Injection Grout

Two-Component, Closed-Cell PU for Injection, Water Cut-Off & Undersealing

Product Description

Hydrophobic Polyurethane Injection Grout is a two-component injection resin designed for rapid water cut-off, crack injection, void filling and slab undersealing in concrete and masonry. Upon reaction the A/B components form a closed-cell foam/solid with adjustable gel time and high expansion, enabling fast reinstatement of service on critical assets including airport runways and taxiways.

Key Features

• Fast reaction with adjustable gel time; supports rapid return to service.
• High expansion (free-rise 1–25×) for efficient void filling and undersealing.
• Closed-cell structure for low water uptake and durable waterproofing.
• Stable performance at low/high temperatures (–30 °C / 80 °C).
• Low component viscosities for deep penetration; pumpable with 2K equipment.
• Typical reopen 30–120 min after injection (temperature and criteria dependent).

Recommended Uses

• Crack injection and water cut-off in basements, tunnels, culverts and below-grade structures.
• Void filling and backfilling behind retaining walls and around penetrations (engineered design).
• Slab undersealing and stabilization for pavements, industrial floors and bridge decks.
• Airport runway/taxiway undersealing — injection beneath PCC slabs to fill voids, mitigate pumping/rocking and restore support with minimal closure time.

Technical Data — Component Properties

Item	Typical Value
A-Component Appearance	Oily liquid
A-Component Viscosity (25 °C)	≤ 0.6 Pa·s
A-Component Density (25 °C)	1.22–1.25 g/cm³
B-Component Appearance	Oily liquid
B-Component Viscosity (25 °C)	≤ 1.0 Pa·s
B-Component Density (25 °C)	1.0–1.2 g/cm³
Reaction Start / Gel Time (25 °C)	10 ± 5 s / 50 ± 20 s
Free-Foaming Multiple	≥ 50

Technical Data — Cured Material

Item	Typical Value / Requirement
Free-Rise Expansion Ratio	1–25×
Dimensional Stability (–30 °C)	≤ 0.5 %
Dimensional Stability (80 °C)	≤ 1.5 %
Compressive Strength (foam core)	≥ 0.60 MPa
Foam Surface	No pulverization (no chalking)

Installation (Overview)

• Drill and install packers per injection plan; seal surface joints to control resin escape.
• Inject from low to high elevation until refusal/criteria met; monitor slab lift; keep within tolerances.
• Substrate temperature 5–35 °C recommended; wet/leaking substrates are acceptable.
• Clean equipment immediately with a compatible PU cleaner; do not allow resin to cure inside lines.

Packaging & Storage

• Supplied as matched A/B kits (e.g., 10–25 kg per component).
• Store unopened in a cool, dry, ventilated place at 5–30 °C; protect from moisture and sunlight.
• Shelf life: 12 months from manufacture when properly stored.

Safety & Limitations

• Contains isocyanates; for professional use only with appropriate PPE and ventilation.
• Not a traffic-wearing surface; for structural crack repair use a suitable epoxy system after waterproofing is achieved.
• Reaction times are temperature-dependent; adjust injection strategy accordingly.

Note: Values shown are typical, not for specification. Verify suitability by site trials and follow engineer-approved procedures, especially for airfield works.