

ECMAGROUT PU F 240

A LOW VISCOUS, TWO COMPONENT, FAST CURING POLYURETHANE INJECTION FOAM TO RESTORE THE STRENGTH OF CONCRETE STRUCTURES, SUBSOIL

Description

ECMAGROUT PU F 240 is a low viscous, two component, solvent and phthalate free polyurethane injection system to forming a rigid foam.

Mixing ratio 1:1 by volume

When ECMAGROUT PU F 240 is injected in a leaking structure, quick after mixing it will form a rigid PU foam blocking the leak.

Advantages

- The cured material is a high strength PU foam
- Suitable for hot and cold climates
- No shrinkage, ensured complete surface contact and bond to dry or moist substrates also.
- Can withstands high hydrostatic pressures
- The cured material is stable after curing
- Application with electric or pneumatic injection pumps
- 100% MDI based and no TDI in it.
- The cured material is non toxic
- The system is suitable for use in contact with potable water
- Has a good adhesion to concrete, soil etc.
- To speed up the reaction 2 – 5% water can be added to the A-component

Uses

- Fast reacting, quick foaming injection for blocking high volume and pressure water leaks.
- Sealing and stabilizing of cracks & cavities in concrete, loose rock, mountain rocks etc.
- Sealing of sheet pilings, beams, slabs & columns etc.
- Soil stabilization.
- Consolidation of loose or unstable soil

Packaging

22 kg packs

ECMAGROUT PU F 240 (Part A) = 10 kg

ECMAGROUT PU F 240 (Part B) = 12 kg

Note: Large packaging can be provided for bulk requirements



Technical Specifications at 25°C and 50% R.H

Property	Typical Results
Mixing ratio p.b.v.	1:1
Mixing ratio p.b.w.	1:1.18
Viscosity of the Mix mPa.s	100
Cream time without water in seconds	20-40
Gel time without water in seconds	70-100
Cream time with water in seconds	15-25
Gel time with water in seconds	60-80
Compressive strength MPa	60-70
Tensile strength MPa	50-60
Elongation at break %	4-6
Shore D hardness	75-85
Intended use	Swelling fitted filling of cracks
Allowed min. width of the crack	0.1 mm
Moisture state of the crack	Dry, wet, moist or leaking cracks
Min and max use temperature	5°C -45°C
Adhesion by tensile bond str. MPa	>3
Adhesion by Slant Shear Str. MPa	Monolithic failure
Corrosion behavior	Deemed to have no corrosive effect

Installation Guidelines

- ECMAGROUT PU F 240 should be applied by experienced grouting crews.
- ECMAS provides detailed method of statements on all its products for use in various applications and must be referred to prior to starting the work.
- The information below is a summary intended for guidance only.
- Detailed information and guidance of pump and packer selection for specific requirements are available from ECMAS.
- ECMAGROUT PU F 240 is carried out through packers installed in holes drilled into the concrete.
- The holes should be drilled at 45 degree to the concrete surface and intercept at the mid-point of the estimated crack depth.

Mixing

- Due to the short reaction time ECMAGROUT PU F 240 can only be injected through a 2-component injection pump with a mixing ratio 1:1
- Both components are pre-weight
- After preparation the components can be injected simultaneously

Injection process

- The ECMAGROUT PU F 240 should be injected using an injection machine having a covered reservoir to avoid moisture coming into the A & B component.
- Large cracks should be sealed with the fast setting ECMAREP 504 prior to injection. Allow ECMAREP 504 to harden completely before injecting ECMAGROUT PU F 240
- ECMAGROUT PU F 240 is then injected into the holes with a high-pressure pump capable of reaching pressures up to 200 bar. This forces the ECMAGROUT PU F240 deep into the structure and allows penetration into the smallest cracks. Inject the packers sequentially; on a vertical crack start the injection from the lowest packer and continue to the next packer etc.

The injection work should be carried out with a twin piston pump, 1:1 ratio by volume. Consumption has to be estimated by the operator as it depending on the width and depth of the crack as well as the on the amount of water to be blocked.

Once the injection has to be stopped or is finished the mixing head should be cleaned by closing the valve for the B-component and flush the mixing head with the A-component or if the pump is equipped with a 3rd pump for flushing the mixing head.

Cleaning

Injection pumps should be flushed and tools cleaned immediately after use, before the resin sets, using ECMACLEAN. Once the resin has set, it can only be removed by mechanical means.

Precautions

- Avoid skin contact.
- Do not discard unmixed or partially mixed material into the water system. If any doubts arise concerning temperature, application or substrate conditions, consult the local ECMAS office.
- To avoid condensation drums should only be opened when the material in the drum has the same or slightly higher temperature than the temperature on the working place.

Shelf Life & Storage

The shelf life is 6 months when stored between 5°C and 35°C with a less than 50% RH in a dry store in original, unopened containers. Once a pack has been opened, use immediately. Purging a part pack with nitrogen is essential. Contact ECMAS for more details.

Health and Safety

- These products are for industrial use only by trained operatives.
- Products should be disposed-off according to the local legislation. Refer to the MSDS for general recommendations.
- All persons in contact with the materials (or in the neighborhood of the injection) should wear the appropriate protective clothing, gloves and safety glasses.
- In case of spills and accidents, refer to the MSDS of the products or when in doubt contact your local ECMAS representative.
- Always wear appropriate protective gear for the job at hand according to local guidelines and regulations.
- Protective goggles should always be worn when handling chemical products.
- Please refer to the MSDS for further recommendations prior to use these products.

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