

ECMAGROUT PU F 200

SINGLE COMPONENT, WATER-REACTIVE, HYDROPHOBIC POLYURETHANE INJECTION SYSTEM FORMING A RELATIVELY STIFF FOAM

Description

ECMAGROUT PU F 200 is a hydrophobic, single component, solvent and phthalate free, water-reactive polyurethane injection system. It will react only when it comes in contact with water and when in contact with water it forms a relatively stiff PU foam and stops the leak.

ECMAGROUT PU F 200 is a single component product with an additional catalyst making it possible to adjust the reaction time as per the practical situation.

As ECMAGROUT PU F 200 can be seen as a temporary seal to achieve a permanent seal an after injection should be done with the ECMAGROUT PU R 420 for an elastic seal or with the ECMAGROUT PU R 440 for a structural seal.

Advantages

- Suitable for hot and cold climates
- Good adhesion to substrate
- Withstands high hydrostatic pressures
- Stable foam when cured
- Application with electric or pneumatic injection pumps
- Cured resin is non toxic
- Suitable for use in contact with potable water.

Uses

- Rapid sealing of leaking cracks in concrete structures as a temporary water stop
- For heavy water leakages the systems can be catalyzed to achieve very short gel time to reduce the flow of water.

Reaction Times: depends on the product as well as on the temperature at the jobsite. It is recommended to conduct site trials in respect to the amount of catalyst F to establish the required reaction time.

Test Recipe:

100 grams of PU F 200
X grams of Catalyst F
20 grams of water

Cream time: is the time from the start of the mixing until the foaming starts.

Gel time: is the time from the start of mixing until the foam does not expand anymore.



Mix ratios and approx. foam times at 25°C and 50% R.H.

Percentage of Catalyst F	Cream time in seconds	Gel time in seconds
2%	25 - 30	100 - 110
4%	17 - 23	70 - 80
6%	15 - 18	50 - 60
8%	12 - 15	40 - 50
10%	10 - 13	35 - 45
20%	8 - 10	25 - 35
30%	5 - 7	20 - 30

Packaging

5.5 kg packs (Part A – 5 kg, Cat F – 0.5 kg)

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

Free Foam Expansion %	3000
Viscosity mPa.s	20 - 60
Elongation % (ASTM D638)	5 - 15
Intended Use	Temporary Water Stop
Recommended Temperature Range	5°C – 45°C

Installation Guidelines

- ECMAGROUT PU F 200 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.
- ECMAGROUT PU F 200 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

- Pour the content of the Part A into a CLEAN, DRY plastic bucket.
- Refer to the above table for cream and gel time and fix the amount of Cat F.
- Add the required amount of Cat F
- Mix thoroughly manually or with a slow speed mixer (stirrer fixed to a drilling machine) for about half a minute until the mix is homogeneous.

Injection Process

- The ECMAGROUT PU F 200 should be injected using a standard injection machine having a covered reservoir to avoid moisture coming into the mix.
- The injection pressure should be at least 4 bar.
- Only mix sufficient resin that is estimated to be used for a successful water stopping.
- Inject the packers sequentially; on a vertical crack start the injection from the lowest packer and continue to the next packer etc.

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.

ECMAS CONSTRUCTION CHEMICALS PVT. LTD

7-4-124 Gaganpahad,
International Airport Road
Hyderabad, India - 500 052
Phone: +91-40-24360014, 16, 17
email: ecmas@ecmas.co.in

