

ECMAGROUT PU M 620

TWO COMPONENT, LOW VISCIOUS, COMBINATION POLYURETHANE INJECTION SYSTEM TO STOP WATER LEAKAGE ALONG WITH PERMANENT & ELASTIC SEALING OF CRACKS

Description

ECMAGROUT PU M 620 is a two component, solvent and phthalate free, low viscosity, polyurethane injection system for the elastic sealing of cracks in concrete structures with a dual performance:

- a. In case water is present, it will form an elastic foam
- b. In case there is no water or the water has been reacted away, the material will form a flexible resin with the performance of a permanent sealing

Mixing ratio 2:1 in volume

To stop water leakage ECMAGROUT PU M 620 could be used as a premix and injected as a single component and a flexible foam will be formed. To create a permanent elastic seal, the structure can be re-injected with ECMAGROUT PU M 620 using the same material and the same pump and the same packer.

Advantages

- Dual function in one material – stopping small water leaks and a permanent sealing of cracks.
- Low viscosity allows full penetration in fine cracks and voids
- Suitable for hot and cold climates
- Good adhesion to dry, moist and wet concrete or masonry.
- Forms a flexible foam in contact with water
- Forms an elastic resin in the absence of water
- Can withstands high hydrostatic pressures as the cured resin is impermeable to water
- Can be pumped as a 1 component premix because of the long pot life; therefore, a single component injection pump can be used
- The cured material is non toxic
- The system is suitable for use in contact with potable water

Uses

- Sealing leaking cracks to create a permanent sealing of the crack with one material, machine and packer
- For injecting into leaking but also dry cracks in concrete or masonry.
- Leaking construction joints
- Water retaining structures
- Sewage treatment plants
- Substructure concrete constructions

Packaging

8 Kg packs

ECMAGROUT PU M 620 (Part A) = 5 kg

ECMAGROUT PU M 620 (Part B) = 3 kg

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

Property	Typical Results
Mixing ratio p.b.v.	2:1
Mixing ratio p.b.w.	100:60
Viscosity of the Mix mPa.s	150-200
Pot life without water contact	35-45 minutes
Gel time without water contact	60-80 minutes
Cream time with water contact	50-70 seconds
Gel time with water contact	200-300 seconds
Free foam expansion	1500% minimum
VOC	<50 g/L
Elongation at Break	85-95%
Intended use	Arresting water leakages & sealing cracks
Min. width of the crack in mm	0.1
Moisture state of the crack	Dry, wet, moist cracks
Min and max use temperature	5°C -45°C
Corrosion behavior	Deemed to have no corrosive effect

Installation Guidelines

- ECMAGROUT PU M 620 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 M 620 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.
- Large cracks should be sealed with the fast setting ECMAREP 504 prior to injection. Allow ECMAREP 504 to harden completely before injecting ECMAGROUT PU M 620
- Prior to injection the crack could be flushed with water to remove salt, dust etc. from the crack.

Mixing

- Due to the long pot life for the ECMAGROUT PU M 620 it can be pumped as a single component pre-mix
- Pour the content of the Part A into a CLEAN, DRY plastic bucket.
- Add the required amount of Part B
- 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

- Polyurethanes are water sensitive and to avoid pump and hose blockages they should be flushed with a suitable cleaning agent like ECMACLEAN prior to using the polyurethanes
- The ECMAGROUT PU M 620 should be injected using a injection machine having a covered reservoir to avoid moisture coming into the pre-mix.
- ECMAGROUT PU M 620 is then injected into the holes with a high-pressure pump capable of reaching pressures up to 200 bar. This forces the ECMAGROUT PU M 620 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.
- Once all the packers have been injected start the second injection from the first packer again with the same material, pump and packer
- Because of the long pot life for the ECMAGROUT PU M 620 will remain liquid inside the packer after the 1st injection and the packer will take a second injection or even a third injection.
- The 2nd injection should be done within 20 – 25 minutes.
- If a pure resin comes out of the front from the crack the crack is filled with elastic resin and will be permanently sealed.

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

