CIS PU INJECTION

THREE COMPONENT PU BASED INJECTION GROUT

PRODUCT CATEGORY: POLYURETHENE GROUTING SYSTEM

PRODUCT DISCRIPTION

CIS PU INJECTION is based on MDI (Methylene Diphenyl iso cyanate) polyurethane pre- polymer & accelerator. The system only reacts when it comes in contact with water, producing a relatively stiff & inert polyurathane foam. It is a 100% solid & solvent free polyurethane grout for quick temperrory closing & sealing of water bearing cracks, cavities and leaks under hydrostatic pressure. The systems foams to 30-40 times its volume in the presence of water & can be an effective means of arresting running water seepage.

AREAS OF APPLICATION

Water stop system for running water in Defective concrete – (crack & honeycomb)

- Concrete joints
- Drinking water tanks & reservoirs
- Waste water tank
- Sewers, manholes, utility boxes, etc
- Dams & canals
- Tunnels
- Brick / stone masonry
- Pipe intrusions
- Soil stabilization

FEATURES & BENEFITS

- Viscosity – Very low viscosity benefits penetration into hairline cracks
- Solids – 100% solid & solvent free composition helps in shrinkage free grout
- Foaming – On reaction with water foams around 30 times which benefits filling of wider cracks & honey combing of concrete structures (hydrophobic in nature)
- Bonding – Bonds strongly to dry & wet concrete, bricks & stones
- Hygiene - It is safe & suitable for drinking water contact
- Non-toxic – It is CFC & solvent free hence non-toxic

SURFACE PREPARATION

CIS PU Injection is a high quality, low viscous PU injection foam resin which on contact with water expands its volume & cures to very dense, rigid & flexible foam with a very fine cellulose structure

- Due to its high capillary penetration and activity in damp & water bearing structure, it seals the cracks of

more than 0.2 mm in built, hence the material is ideal for filling gaps & cavities at constant mixing stability On contact with water, the foam formation begins after approximately 15 seconds at ambient temperature.

- The reaction speed depends on temperature of the mixed material, building structure & contact water. Temperature more than 200C accelerates the foam formation & curing.
- Prior to injection procedure check the nature of building structure, type of cracks and hydrostatic conditions & water quality. Clean the cracks & crack edges so that the source of water leakage can be detected.
- Remove all spalled layers of plasters from the area of the injection level and patch all joints and defective brickwork with quick drying cement mortar. Drill holes taking into consideration the actual size (thickness) of the wall/concrete member and the size & length of injection packers to be used. The packers must be fixed tightly in the drill holes
- In the case of crack injections into brickwork and horizontal water stops, drill the holes into the bricks to ensure that the mechanical packers are fastened tightly. When tightening the packers, make sure that the injection hose rests comfortably on the zerk or button head fittings.

MIXING

Empty components A and B which are provided according to the required mixing ratio of 10:1 (parts by volume) or measured out in separate containers by the user - completely into a mixing vessel and mix homogeneously.

APPLICATION - INJECTION PROCEDURE

- CIS PU Injection resin is a low viscous material, to be injected by means of a single or two component injection pump.
- Mixed material must be used immediately because high air humidity may cause a skin formation over the material surface. In case skin is formed, remove the skin prior to use of the material otherwise the pump will get chocked.
- The workability of the mix is approximately 2–3 hours. Start injecting at a pressure depending upon the nature of the building structure, hydrodynamic & hydrostatic condition and the desired depth of penetration.
- Carry out the injection at intervals so that it can be concluded from the reaction of the material with moisture inside and decided whether to continue or stop the injection process.
- The material can be injected at temperature of more than 50C. The best results can be achieved between 15 to 250C. Higher initial temperatures accelerate the reaction. For durable & complete crack sealing, a secondary injection using CIS PU Injection is necessary depending on the object. The secondary crack injection usually is carried out through the same holes. In case the secondary injection is carried out much later then it may be necessary to install new packers in different position.

FINAL WORK

After the curing process of the injection resin (approx. 24 hours after the injection), remove the packers and close the drill holes with suitable mineral building materials (quick-binding cement, swelling mortar)

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PRECAUTIONS & LIMITATIONS

To achieve desired performance kindly mix the entire quantity in one go as it will ensure the consistency of the mix.

PACKING

5.5 KG