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

214 CIS EPOXY GROUT

TWO COMPONENT EPOXY GROUTING

PRODUCT CATEGORY: EPOXY GROUTING SYSTEM

PRODUCT DISCRIPTION

214 CIS Epoxy grout is used to inject cracks in concrete floors, because it provides penetration, shrink free , strong bonding inside the cracks and excellent resistance to honey combing & chemicals. 214 CIS Epoxy grout is two component epoxy injection material composed of very low viscous liquid epoxy base & a hardener component

ADVANTAGE

- Excellent bond to concrete substrate,brick substacte
- Low viscosity, Deep penetration,
- Chemical Resistant formula
- Suitable for damp surface and dry walls

AREA OF APPLICATION

- Permanent bonding solution for concrete cracks.
- Repair of crack concrete areas in floors, walls, tanks
- Injection in to cracks & honey combing in concrete & masonry.
- Anchoring

METHOD OF APPLICATION

SURFACE PREPARATION

- Surface must be strong, dry, clean & free from dust, oil, grease, curing compounds, coatings & other loose materials. For better performance sand blasting, high pressure water jet cleaning, hydrochloric acid etching, mechanical grinding (by pneumatic tools) & wire brushing may be done.wall or substracts free from acid. In case of acid etching, wash the surface till neutralization.
- Open the cracks & clean by blow of oil free air to ensure complete removal of dust & loose particles.

214 CIS EPOXY GROUT

TWO COMPONENT EPOXY GROUTING

PRODUCT CATEGORY: EPOXY GROUTING SYSTEM

FIXING OF NOZZLES

- Install injection port in case of Injection Packer, drilled hole larger than packer size & depth at least 1/3 of structural thickness
- Install injection port along the length of etch crack. The distance between each nipple will depend on width & depth of crack. spacing should be close enough to ensure that the resin penetrates along the cracks till the next point of injection. - In case of Injection packer, insert packer to the drill holes and fix tight to the hole - In case of Injection nipple, use CIS Epoxy grout to fix nipple to crack surface
- The surface of the cracks in between the nipples should be sealed with CIS Epoxy grout about 30 mm wide & 2-3 mm thick band. Incase the crack is through & through of a wall or slab, cracks at both the sides must be sealed in similar . First fix the nozzles in the front portion crack, then fix the nozzles at midway points of the front nozzles. This ensures complete filling of grout into crack & surrounding areas.
- The repaired work shall be allowed to cure for at least 10 hrs at 35 0C, at low temperature of 10-12 0C curing time is extended and the applicator must ensure that the surface sealant has adequately cured prior to continuing the work.
- One end of the injection hose shall be attached to the lowest nipple on vertical cracks or to either end of the horizontal cracks. Alternative methods of resin injection are currently in use, they include the system where injection nipples are bonded to the substrate.

MIXING

Thoroughly mix the entire hardener and base resin contents until the liquids become clear
Injection

- 214 CIS Epoxy grout should be used with standard injection equipment having closed containers. The injection pressure should be at least 0.2 N/mm2 (2 bar).
- Only mix sufficient resin that can be used within the pot life of the materials.
- After completion of the injection work, the injection system shall be allowed to cure for 24 hours and shall be left undisturbed for this time

PRECAUTIONS & LIMITATIONS

- Use the material within the pot life expiry period.
- Mix entire pack quantity.
- Do not dilute the material with solvents to reduce the viscosity.
- Ensure that nozzles are fixed properly without any air leakage.
- Do not add water or any solvent in material

STANDARD COMPLIANCE / SPECIFICATION

Meets the requirement of BS 6319 & ASTM C 881 standards

214 CIS EPOXY GROUT

TWO COMPONENT EPOXY GROUTING

PRODUCT CATEGORY: EPOXY GROUTING SYSTEM

SHELF LIFE & STORAGE

12 months from in unopened condition. store in a cool, dry place

SAFETY PRECAUTIONS

- As with all chemical products, caution should always be exercised. Protective clothings, such as gloves and goggles, should be worn.
- Treat any contact to the skin or eyes with fresh water immediately. should any of the products be accidentally swallowed, do not induce vomiting but call for medical assistance immediately.
- Reseal all containers after use and ensure product is stored as instructed.
- Do not smoke when handling this product.
- Do not inhale.

PACKING

3.2 kg. Set (A+B)

CIS POLYSULPHIDE POLY +

TWO POLYSULPHIDE GROUTING

PRODUCT CATEGORY: POLYSULPHIDE GROUTING SYSTEM

PRODUCT DISCRIPTION

CIS POLYSULPHIDE POLY + , Pour Grade is a two component Polysulphide sealant. It is used for sealing expansion joints where large movement is anticipated in concrete construction and for joints between diverse construction materials. It is suitable for sealing joints subjected to vehicular traffic and is chemically resistant to water, fuels, oils and solvents

USES

- Wherever a permanently flexible seal is required, it is used in horizontal expansion joints in many types of buildings and civil engineering constructions such as
- Precast concrete elements
- Dams, Reservoirs and water treatment plants
- Residential & Commercial buildings
- Subways, bridges, culverts, tunnels Rigid pavements of highways, airport runways, aprons, etc

CHARACTERISTICS / ADVANTAGES

- Excellent adhesion with most common construction materials
- Resistant to UV and weathering in exposed conditions
- High movement accommodation
- Good chemical resistance
- Permanently elastic and forms watertight seal
- Flame and fuel resistant
- Easy to use
- Economical

SUBSTRATE PREPARATION

- All surfaces must be clean, dry and free from any loosely adhering particles.
- Check the joints edges for soundness and if found weak cut recess and fill up with suitable repair mortar (Consult CIS Technical services).

- Correct joint depth can be established by inserting polyethylene based Backer Materia,glass rod,etcl tightly into the joint. When the joints have been filled with fibre filled board, this must be raked back to the required depth. Use bond breaker tape over the backer material. Protect surfaces with masking tape.

MIXING

The two components are mixed in the ratio Comp A : Comp B = 92 : 8 by weight with a low speed mixer (300 - 600 rpm). Mix for approximately 8 - 10 minutes until a smooth, even consistency is achieved.

APPLICATION METHOD / TOOLS

If required, protect the surface with masking tape. Install the sealant into the joint without trapping air Tool off with a spatula to lightly concave profile Remove masking tape.

CLEANING OF TOOLS

Clean all tools and application equipment with Solvent immediately after use. Hardened / cured material can only be mechanically removed.

HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Safety Data Sheet (SDS) containing physical, ecological, toxicological and other safety-related data.

PACKING

5 KG

CIS SUPERBOND PU 267

PU BASED WATERPROOFING MEMBRANE

PRODUCT CATEGORY: WATERPROOF POLYURETHENE COATING

PRODUCT DISCRIPTION

Description CIS SUPERBOND PU 235 is liquid-applied, highly permanent elastic, cold applied and cold curing, one component polyurethane membrane used for long-lasting waterproofing. Solvent based with low VOCs properties. CIS SUPERBOND PU 235 is based on pure elastomeric hydrophobic polyurethane resins, which result in excellent mechanical, chemical, thermal and natural element resistance properties. CIS SUPERBOND PU 235 reacts with ground and air moisture to cure..

APPLICATION AREAS

- Waterproofing of Wet Areas in Bathrooms, Kitchens, Balconies
- Metal and asbestos roofs
- Swimming Pool, artificial lakes and ponds
- Roof gardens , Retaining wall and foundations
- Auxiliary Rooms , Roofs/ Metal/ Asbestos, Terraces and Podiums (to be protected with screed), etc.
- Can be coated only from positive side on substructure
- Cut and cover tunnels,

METHOD OF APPLICATION

SURFACE PREPARATION

Old & Fresh Concrete Surface

- Allow fresh concrete to cure 28 days.
- Concrete surface must clean, strong, free of all loose dirty materials, and dust free, oil stain, wax, liquid coating/paint, concrete curing agent, grease or other stains that would affect waterproof coating adhesion.
- Concrete surface where there laitance, algae, mould, remove them with grinding machine and clean surface afterwards.
- Prepare cement surface or mineral mix cement surface by cleaning by using grinding machine or chipping machine to remove all defect surfaces such as peel off surface, weak concrete, cavities, etc. Do not use water to clean surface to prevent accumulation of moisture. Use grinding machine or chipping machine to smoothen surface and remove all loose dirty materials, sweep off or use blower to blow off dirt or vacuum cleaner to suck in dirt.
- WARNING: Do not wash surface with water.

SURFACE LEVELLING

- Surface must be smooth, for laitance remove laitance surface by saw concrete or scrubbing down with wire brush.
- Adjust slope 1:100 on roof terrace application to allow water to drain.
- All surface area must be smooth and any defects concrete surface can be apply by use structure repair cementitious mortar CIS HYBRID POLYMER to fill in damage area, afterwards allow repair area to cure for 7 days prior to other work.
- WARNING: Do not wash surface with water.

REPAIR CRACKS & PLUG HOLES

- For concrete surface with, weak concrete, peel off surface, hollow sound check from knock at concrete condition remove by grinding machine or chipping machine till reaching strong concrete.
- For concrete surface with pinhole or honeycomb can be apply by using structural repair cementitious mortar CIS HYBRID POLYMER to fill in defects area, afterwards allow repair area to cure for 7 days prior to other work.
- For concrete surface with >3mm crack, groove U shape on crack area to big enough for apply PU Sealant to seal crack and allow to cure a day prior to working on area.
- Clean concrete expansion joints and control joints of dust, residue or other contamination. Widen and deepen joints (cut open) if necessary. The prepared movement joint should have a depth of 10-15 mm. The width: depth ratio of the movement joint should be at a rate of approx. 2:1. Fillet on joints wall and floor
- For concrete wall and floor should be made fillet/chamfer with PU Sealant. Allow sealant to cure for a day prior to other work.
- Any corners or angles should be cut.
- Apply a coat of CIS SUPERBOND PU 235 200 mm wide centered over all large cracks and while wet, cover with a correct cut stripe of the Geotextile Fabric. Press it to soak.
- Saturate the Geotextile Fabric with enough CIS SUPERBOND PU 235until it is fully covered.
- Allow 12 hours to cure.

MIXING

- CIS SUPERBOND PU 235 is premix product; stir content till a homogenous paste is form prior to applying.
- Do not add more water when mixing.

APPLICATION

Pour the CIS SUPERBOND PU 235 onto the primed surface and lay it out by roller or brush, until all surfaces is covered. You can use airless spray allowing a considerable saving of manpower. After 12-18 hours (not later than 48 hours) apply another layer of the CIS SUPERBOND PU 235

- For demanding applications, apply a third layer of CIS SUPERBOND PU 235. Reinforce always with the geotextile fabric at problem areas, like wall-floor connections, 90º angles, chimneys, pipes, waterspouts

(siphon), etc.
- In order to do that, apply on the still wet CIS SUPERBOND PU 235 a correct cut piece of geotextile fabric, press it to soak, and saturate again with enough CIS SUPERBOND PU 235

FINISHING

- Allow 1st coat to dry 1 to 2 hours prior to applying 2nd coat perpendicularly, do not add more water in mixture when applying
- When applying floor to wall joint apply top coat at least 30 cm height above floor level
- Allow top coat to cure 7 days after applying application steps above prior to opening to traffic

COVERAGE

1.2 – 1.5 kg/m2 total consumption when applied in two or three layers at 1 mm approximately dry film thickness

PACKAGING

CIS SUPERBOND PU 235 is supplied in 25 kg, Barrels. The CIS SUPERBOND PU 235 is supplied in white.