Instructions

HyperFlex

Installation instructions

HyperFlex is pre-catalysed closed cell hydrophobic grout that does not shrink and highly expansive (20:1 expansion ratio). Quick and simple to apply with no mixing or guesswork required. It is is excellent for use in tunnels, manholes, car parks, bunds, ground stabilisation or anywhere else.

Step 1:
Using a 12mm masonry bit, drill at a 45° angle to intersect the leakpath about halfway through the thickness of the substrate. For example, a 15cm thick precast wall should be drilled so the leak path is intersected about 7.5cm back. Drill every 30-45cm along the length of the leaking area.

TIP: For uniform cracks such as cold joints, holes may all be drilled from the same angle. For non-uniform cracks, drill just on one side of the crack and then the other, to ensure the leak path is intersected.

Step 2:
Flush hole and crack with water to flush out debris. Attach 1.25cm nozzle to Hyperflex grout tube and push firmly into the pre-drilled holes.

Step 3:
Pump gun to inject Hyperflex. Cease pumping when you get a show of material coming out of the leaking area. Move to the next hole and repeat.

TIP: If it appears the Hyperflex is washing out of the crack prior to reacting, pack the void by using burlap or a similar material, pushing it into the crack using a putty knife or a screwdriver. This will keep the Hyperflex back in the crack system and give it time to react.

Step 4:
After material is fully reacted, either break or cut the nozzle ends flush to the substrate. Material will react out through the nozzle. This is normal.

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Additional Application Tips:

- If material is reacting very slowly, heat tubes to at least 20°C in a bucket of hot water prior to use.
- It is important that water be present for the reaction to take place. Make sure area to be grouted is wet.
- For fast flowing leaks where Hyperflex washes out, it may be necessary to use SealGuardII Dual Component Urethane.

SealGuard II compared with Hyperflex

1. What are the main differences between HyperFlex and SealGuard II?

The most visible difference is the appearance of the packaging. SealGuard II is a dual component material in side by side caulking tubes. The two components mix together in our patented mixer assembly and react with each other very quickly – in one to three seconds. SealGuard II is recommended for situations where there are very rapid or higher pressure inflows into the structure.

HyperFlex, on the other hand, is a single component, pre-catalyzed material. As the description implies, single component means it need not be mixed with anything else prior to use. All it needs is about 2% water to begin the reaction. HyperFlex reacts much more slowly than SealGuard II (30 seconds or so) and is designed to stop slower flowing, weeping cracks and joints. Since it reacts more slowly, HyperFlex has more time to flow through the entire leak path before reacting, giving a very complete watertight, hermetic seal.

2. What makes HyperFlex the only product of its type in the market?

We must first discuss the two main types of polyurethane grout. Hydrophilic grouts incorporate water into the foam they create upon reaction. This water helps to keep the foam inflated. When the water source goes away (such as in an extended dry spell) the grout dries out and shrinks. When the water returns the grout re-expands, but only to 85-95% of its former volume. As you can imagine, repeated dry – wet cycles and the associated shrinking and re-expansion will eventually lead to leaks.

Hydrophobic grouts do not incorporate water into the foam created upon reaction; they in fact expel it from the area. Since there is no water in the reacted material it will not shrink over time, allowing for the formation of a permanent non-shrinking watertight seal. All Hydrophobic materials require something to catalyze them and start the reactions. For dual component urethanes like SealGuard II, the act of mixing the two components together will begin the reaction.

For all competing single component hydrophobic materials, it is necessary to mix in a separate catalyst prior to use. This catalyst is expensive and very difficult, especially in the field, to mix evenly throughout the grout. This will lead to hot spots, where too much catalyst is present and cold spots which are under catalyzed. Hot and cold spots cause differential reaction, where not all of the grout reacts and cures at the same rate. The result of this is the creation of potential leak paths into the structure. In addition, once catalyst is added, all of the material must be used or disposed of as it cannot be re-used.

HyperFlex is a single component, Hydrophobic grout. What is different is that our proprietary formulation incorporates catalyst into the grout during its manufacture. All it needs to begin its reaction is a small amount of water (about 2%). There is no mixing of catalyst, no shrinking, and unused portions of a pail or tube may be re-used at a later time. In short, HyperFlex offers the best of all worlds, offering a true single component material requiring no mixing while offering a permanent, non-shrinking watertight seal.

(Continued)

SealGuard II compared with Hyperflex contd.

3. What kinds of situations would call for the use of HyperFlex, instead of a faster reacting material like SealGuard II?

HyperFlex can be used for crack injections in both walls and floors, leaking cold joints between poured concrete or pre-cast sections, water ingress between the wall and floor junctions in basements, swimming pools, septic tanks and just about any situation of water infiltration into a concrete or brick structure. As a single component material it is more cost effective than dual systems and also requires no special tools other than a standard caulking gun and a drill with a 13mm bit.

Example of Hyperflex Application: