



Insignia™ Hydrophilic End Seals FAQ

Q: Why doesn't Cured-in-Place pipe lining seal the collection system watertight?

A: It is presumed that the resins used in the CIPP lining bonds to the host pipe, thus creating an effective watertight seal after cure. The truth is that all resins shrink due to polymerization, some more than others, leaving behind an annular space between the liner and the host pipe allowing infiltration to migrate behind the new lining and re-enter into the collection system at lateral connections and manhole penetrations. The only way to effectively and completely seal a collection system is by use of gasket sealing technology at manhole and lateral penetrations.

Q: What gasket seal does LMK offer for a manhole penetration?

A: The Insignia™ End Seal Sleeve is used at manhole penetrations. LMK also offers other Insignia™ products (the Insignia™ Connection Hat and the Insignia™ O-Rings) which fulfill the purpose of sealing the lateral connections as well as overlapping CIPP Liners for a total sealed system.

Q: What is the Insignia™ End Seal Sleeve?

A: The Insignia™ End Seal Sleeve is a hydrophilic compression gasket sealing technology made of neoprene rubber, which is engineered to absorb water. This material is capable of swelling seven to ten times its original size when subjected to water in a 24 to 48 hour period. These end seals should be used in conjunction with all full length liners including CIPP, UV cured, and fold-in-form to not only reduce infiltration, but to eliminate it.

Q: How is Insignia™ End Seal Sleeve installed?

A: An Insignia™ End Seal Sleeve is positioned within the host pipe prior to lining by use of a spring loaded retaining ring. The full length liner is then installed, thus embedding the end seal between the liner and the host pipe. As water tracks behind the full length liner and reaches the Insignia™ End Seal Sleeve, it will begin to swell seven to ten times their original size within a 24 to 48 hour period, creating a 100% compression gasket seal around the cylinder of the full length liner which prevents water from migrating back into the collection system.

Q: How does the Insignia™ End Seal Sleeve differ from hydrophilic grout/paste or flat rope which has been used for years?

A: Sealing with a flat rope or hydrophilic grout prior to lining will not produce the same results as the Insignia™ End Seal Sleeve because of certain design deficiencies in those products. The hydrophilic grout is not a molded gasket but rather a type of paste that is applied by using a caulk gun. This fluent and high viscous material does not keep its uniformity once the full- length liner is fully pressurized.

Hydrophilic flat ropes differ because they are not molded as one piece. They are installed by creating an overlap or a butt seam which could produce a weak point. The flat ropes are also more of a difficult installation for the technicians versus a cylindrical gasket.

Q: What is the estimated life of an End Seal?

A: 50 plus years.

Q: Have the Insignia™ End Seal Sleeves been tested?

A: Third party testing of the base material which comprises of the End Seal Sleeve has been performed for both physical properties and chemical resistance. The test results prove to be positive and sufficient for its intended purposes.