



EMECOLE, INC.

CARBON FIBER COUNTERSUNK STAPLES

THE BEST FOUNDATION WALL CRACK REPAIR AND STABILIZATION SYSTEM



Why use carbon fiber?

Very few crack repairs fail immediately. It is long-term creep and fatigue of concrete with the movement of foundation that causes concrete to crack. By cross-stitching crack repair with staples, this creep and fatigue is eliminated and improves long-term performance of repair material.

Carbon fiber has proven to be a safer and more effective product for structural reinforcement than steel. Carbon Fiber Countersunk Staples - when installed - lay flat against the wall, leaving the wall with no obstruction and is ready to paint. Countersunk Staples will not rust or deteriorate.

Crack repair materials

Understanding the type of cracking and the cause of cracking is crucial in a successful repair of concrete. All cracks move because they are allowed to move, but not necessarily because they need to move for concrete to function as designed.

The use of cross-stitching with Countersunk Staples has always made sense allowing the transference of load from crack and the surrounding concrete. However, it is still not widely used unless an engineer specifies it on large structural cracks.

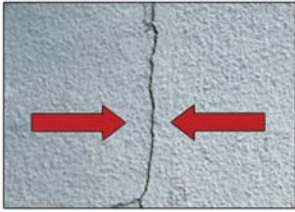
Repairing a crack in concrete and not reinforcing for tensile capacity is the same as pouring residential foundations without steel. The steel gives the foundation tensile that the concrete lacks.

The use of Carbon Fiber Countersunk Staples, with tensile strength in excess of 8000 PSI, is a better alternative to steel in tensile reinforcing of the area surrounding a crack.

THE CARBON FIBER COUNTERSUNK STAPLES

- Easy installation
- Flat, paintable surface
- Will not rust or deteriorate
- Adds little cost to overall crack repair for maximum strength
- 8,000 PSI tensile strength

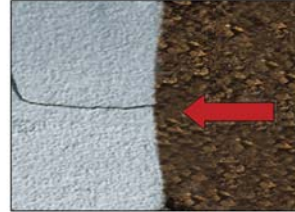
Possible directions of wall movement...



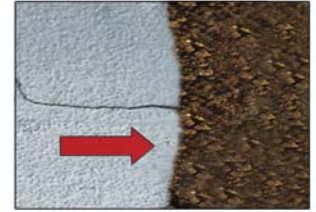
Thermal changes
(opening & closing)



Uneven loading and
settling of footing



Soil pressure



Soil shrinkage

or can be a combination of all the above

The permanent crack repair solution

There are many reasons a concrete foundation wall will crack, some of the most common reasons are:

- Soil pressure on the wall
- Thermal changes in soil and concrete
- Settling of footing
- Uneven loading of structure
- Drying and shrinkage
- Soil shrinkage in the dry season

Epoxies alone cannot guarantee that further movement of the wall is arrested. The crack may re-occur in the same area without further stabilization. By applying a countersunk staples across the face of the crack, the load is distributed away from glue line to the portion of the concrete that is not cracked. This prevents fatigue and re-cracking at the injection glue line.

With Carbon Fiber Countersunk Staples installed you can be confident the crack will not re-occur and the repair will last the life of your home. The wall is permanently stabilized in the area of the crack.

Suitable with both epoxy or urethane

With Carbon Fiber Staples, contractors may use either Emecole's line of epoxy or structural urethane for crack injection. Emecole 120 Structural Urethane expands up to six times its volume in one to two minutes, forming a rigid foam structure. When epoxy is the preferred injection material, Emecole 121's ability to rapidly thicken in the crack prevents leakage out of the back, ensuring the most efficient use of material. Which ever material is used, the crack will be properly repaired, and further stabilized with the use of Emecole's Carbon Fiber Countersunk Staples.

www.emecole.com



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QR Code

