SHERWIN WILLIAMS® | HIGH PERFORMANCE FLOORING

CRACK TREATMENT GUIDELINES

Similar to joints, cracks can be classified as static or dynamic and should be addressed in a similar manner as joints. Before treating, it is important to note what type of crack it is.

DYNAMIC CRACKS

Dynamic cracks, or active cracks, are any cracks for which the mechanism causing the cracking is still at work; any cracks that are still moving. If there is known movement or visible heaving, please contact a structural engineer before attempting repairs.

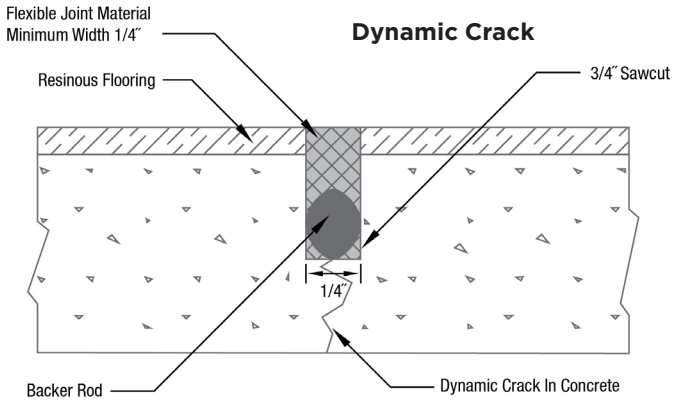
Examples of dynamic cracks are:

Settling/Structural Cracks may appear if the sub base of the slab shifts or settles after construction. These should be treated as moving joints and honored through the system.

Heaving Cracks are often a sign of continued movement of the slab or slabs.

Seismic Cracks can be caused by movement of the ground under or near a building. This can occur from natural seismic activity, or from man-made forces, such as nearby railroad tracks, etc. It is best to identify the cause of these and determine the best way to isolate the flooring from this movement if possible.

Prior to filling dynamic cracks, Sherwin-Williams High Performance Flooring recommends making a sawcut through the finished floor system to a depth of ¾" deep and a minimum width of ¼" with a diamond blade saw attached to a vacuum. Add a bond breaker such as a backer rod (closed cell) to the bottom. This will prevent three point adhesion.



STATIC CRACKS

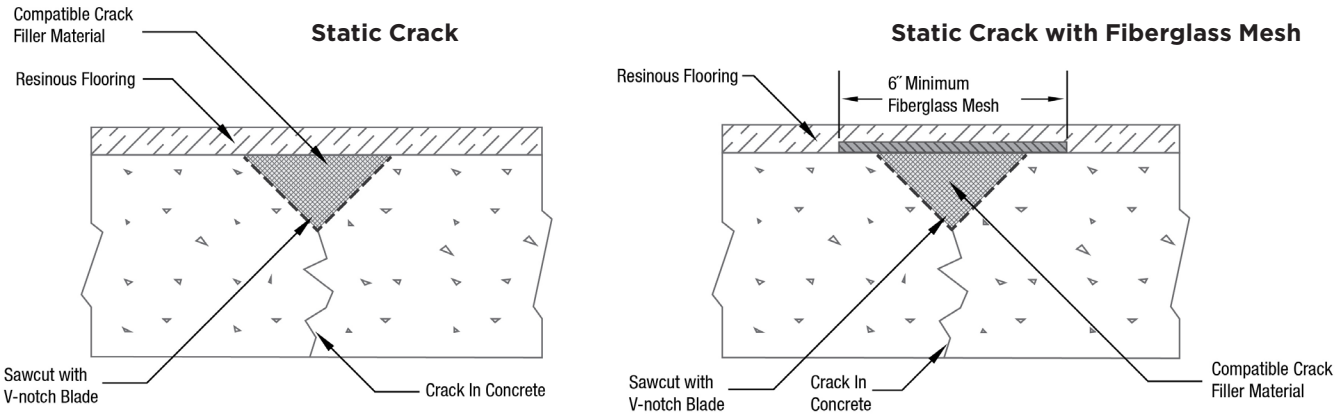
Static cracks, or dormant cracks, are any cracks that are not likely to become active in the future or whose movement is of such magnitude that a repair will not be affected.

Examples of static cracks are:

Craze Cracking refers to hairline cracks visible in the surface cream of the slab that typically do not extend very deep and are usually a result of rapid drying of the cream. Craze cracking usually does not require any special treatment and is usually mitigated in the prime coat.

Plastic Shrinkage Cracking is normal, non-structural cracking of the concrete that occurs as the slab cures. This can often be avoided by proper placement of control joints per ACI 302.1R-15.

- Plastic shrinkage cracks should be analyzed to ensure that they are static (not continuing to grow over time and do not show signs of heaving.)
- If plastic shrinkage cracks are observed prior to or during prep, they can be mitigated by patching the floor in the same method that would be used to treat a static joint.
- Plastic shrinkage cracks can also be treated using Resuflor 3555 or Resuflor EOC and fiberglass mesh to bridge the crack.



Prior to filling static cracks, be sure to prepare them by removing all laitance, debris and sealers. Make a sawcut with a V-notch blade attached to a vacuum.

Refer to the table below to determine which Crack Filler Material to use:

CRACKS	BOND BREAKER	REINFORCEMENT	CRACK FILLER MATERIAL (1/4 INCH WIDE)	CRACK FILLER MATERIAL (OVER 1/4 INCH WIDE)
Dynamic crack (moving)	Backer rod 1/8″ wider than joint	-	Flexible joint material (Resuflor 3580, Loxon [S1, SL2 & NS2] or equivalent)	Flexible joint material (Resuflor 3580, Loxon [S1, SL2 & NS2] or equivalent)
Static crack (non-moving)	-	Optional 6 inch minimum fiberglass mesh	• Epoxy flooring systems use Resuflor Glaze with Cab-O-Sil (No-Sag #2): Typical mix is 1 pint Resuflor Glaze hardener, 1 quart Resuflor Glaze resin, 3 quarts Cab-O-Sil (No-Sag #2) • Poly-Crete flooring systems use Poly-Crete SL or MD to fill joint • MMA flooring systems use MMA SL Filler Mix • Vent-E flooring systems use Resuflor 3580	• Epoxy flooring systems use Resuflor Glaze with Resuflor Screed III. • Poly-Crete flooring systems use Poly-Crete MD or WR • MMA flooring systems use MMA SL Filler Mix or Cryl-A-Tex • Vent-E flooring systems use Resuflor 3580

INSTALLATION TIMING

The American Concrete Institute (ACI) recommends that filling of industrial floor joints be deferred 60-90 days after floor slab pour or as long as possible. This is to allow control and construction joints time to open closer to their ultimate width through the concrete shrinkage process (In freezer/cooler areas, floor should be stabilized at ultimate operating temperature for 7 days prior to installation). We suggest the same for treating cracks.

Prior to treatment of crack, be sure to contact the facility's owner or manager to determine how long the concrete has cured as well as the location of moving and non-moving joints.

Note: Even with proper treatment, there is no guarantee against future cracking.

References:
International Concrete Repair Institute
ACI 224 "Joints in Concrete Construction"
ASTM Standards "C 1193 and C-920"
National Ready Mixed Concrete Association "Concrete in Practice"
AMPP

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