

# CRACK REPAIR PROCEDURE – Narrower than 0.016in

Recommended for Crack widths less than 1/64" (0.016" or .40 mm)

## DUCTILCRETE

### TOOLS

1. 4" & 6" Right Angled Grinders.
  - Used with Finish Options 2 & 3.
2. 1/8" W X 3-1/2" Dia. smooth rim diamond blade.
  - Used with Finish Options 2 & 3.
3. Norton Blue Strip Disc
  - Removes excess Rapid Refloor and/or hardened 10 Minute Mender.
  - Will not burn up the existing concrete.
4. Vacuum with small nozzle.
5. Hammer Drill with 1/2" or 3/4" bit
  - Used where a crack intersects a saw cut or a CJ.
6. Squeeze Bottle
  - To apply Silica Sand into wide cracks (All wide cracks).
  - To apply colored grout and silica sand mixture into the top 1/4" of the repair (Finish Option 2).

Non available image: [https://dev-gcpat-com.pantheonsite.io/sites/default/files/media\\_image\\_upload/Crack-Repair-Concrete-505x350.jpg](https://dev-gcpat-com.pantheonsite.io/sites/default/files/media_image_upload/Crack-Repair-Concrete-505x350.jpg)

### MATERIALS

1. 10-Minute Gray Concrete Mender
  - Used with all of the 3 Finish Options.
2. Extra Needle tips for each cartridge
  - Small Diameter OD = 1/20" = 1.25 mm = 18 gauge
  - Large Diameter OD = 1/16" = 1.8 mm = 15 gauge
3. Rapid Refloor or other compatible tinted epoxy.
  - Use with Finish Option 3
  - Color samples of Rapid Refloor are available from MetzgerMcguire.com.
4. Silica Sand
  - Use with Finish Option 2.
  - Use as a binder in the 10 Minute Mender when filling wide cracks.
5. Charcoal Gray Sanded Grout for Tile
  - Available at Loews or Home Depot.
  - Use with Finish Option 2.
6. Tape and/or rubber weather stripping
  - Use to protect edges from staining.

## FINISH OPTIONS

NOTE: For best results [prepare color samples to ensure the best color match](#) is being used when repairing cracks.

### 1. Finish Option 1 – Gray Concrete Mender

- Install 10 Minute Mender.
- Sand flush with the existing concrete.

Non available image: [https://dev-gcpat-com.pantheonsite.io/sites/default/files/media\\_image\\_upload/Crack-Repair-concrete-Finish-Option-1-505x300.jpg](https://dev-gcpat-com.pantheonsite.io/sites/default/files/media_image_upload/Crack-Repair-concrete-Finish-Option-1-505x300.jpg)

### 2. Finish Option 2 – Silica Sand/color sanded grout

- Cap off the top ¼” of the repair using a sand mixture comprised of Charcoal Gray Sanded Grout for tile mixed with Silica Sand.
- Sprinkle the color mix into the wet 10 Minute Mender. Allow to cure then polish.

NOTE: A ratio of 2 parts silica sand to 1 part Charcoal Gray Sanded Grout, (Loews or Home Depot) when sprinkled into the 10 Minute Mender, allowed to harden, then sanded produces a gray color that is favorable to Ductilcrete. The shade can be adjusted by reducing or increasing the amount of Dark Gray Sanded Grout.

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### 3. Finish Option 3 – Rapid Refloor or other epoxy installed in the top layer

- Cap off the top ¼” of the repair with Rapid Refloor or other epoxy in a color that best matches the floor.
- DARKER COLOR IS ALWAYS BETTER THAN LIGHTER!

NOTE: For best results any color chip samples should sanded using the Blue Norton Strip Disk. They will lighten up in color.

Non available image: [https://dev-gcpat-com.pantheonsite.io/sites/default/files/media\\_image\\_upload/Option-3-505x300.jpg](https://dev-gcpat-com.pantheonsite.io/sites/default/files/media_image_upload/Option-3-505x300.jpg)

## REPAIR PROCEDURES

### 1. FILL THE BOTTLES WITH SAND

- Use as a binder when repairing wider cracks.
- Used to install the mixture of Silica Sand and Charcoal Gray Sanded Grout with Finish Option 2.

Non available image: [https://dev-gcpat-com.pantheonsite.io/sites/default/files/media\\_image\\_upload/Crack-Repair-Concrete-bottle-505x350.jpg](https://dev-gcpat-com.pantheonsite.io/sites/default/files/media_image_upload/Crack-Repair-Concrete-bottle-505x350.jpg)

## 2. DRILL HOLES IF REQUIRED

- Prevents run-off into adjacent joints.
- Drill ½" – ¾" diameter hole, full slab depth, at the ends of the crack.
- Fill the drilled holes with a fast setting epoxy or 10 Minute Mender + sand binder.

Non available image: [https://dev-gcpat-com.pantheonsite.io/sites/default/files/media\\_image\\_upload/Crack-Repair-concrete-Graph-505x350.jpg](https://dev-gcpat-com.pantheonsite.io/sites/default/files/media_image_upload/Crack-Repair-concrete-Graph-505x350.jpg)

## 3. SELECT NEEDLE SIZE

- There are 2 static mixing needle tips available for use with the 10 Minute Mender cartridges. Listed below are their outside diameters.
- 18 gauge = 1.25mm = 1/20th"
- 15 gauge = 1.8mm = 1/16th"

Non available image: [https://dev-gcpat-com.pantheonsite.io/sites/default/files/media\\_image\\_upload/Crack-Repair-Concrete-Needle-505x350.jpg](https://dev-gcpat-com.pantheonsite.io/sites/default/files/media_image_upload/Crack-Repair-Concrete-Needle-505x350.jpg)

## 4. PREPERATION

- If the crack is tighter than 1.25mm it is recommended to wait until the crack widens to a width that the 18 gauge / 1.25 mm tip can be inserted into the crack.
- If the crack must be repaired before it naturally widens to a width of 1.25 mm.
  - Chase the crack using a maximum 1/8" wide X 3 ½" Dia. smooth rim diamond blade.
  - Chase the crack using a "V" Blade Crack Chaser to a maximum width of 3/8"- 0.375".
  - Use the weather stripping to create a reservoir.
  - Inject the crack using the procedure found on the Concrete Mender Website. The link to the video is below.
- Remove unsound concrete using a blade or chisel.



10 Minute Mender Crack Injection Video

## 5. PROTECT, VACUUM, INSTALL MATERIAL

- Install tape, weather stripping or other along the crack.
- Vacuum.
- Make multiple passes filling the crack until refusal.
  - NOTE: For best results prevent the 10 Minute Mender from staining the existing floor.

Non available image: [https://dev-gcpat-com.pantheonsite.io/sites/default/files/media\\_image\\_upload/Crack-Repair-concrete-injection-505x300.jpg](https://dev-gcpat-com.pantheonsite.io/sites/default/files/media_image_upload/Crack-Repair-concrete-injection-505x300.jpg)

## FINISH OPTIONS

### Finish Option 1 – Gray Concrete Mender

1. Fill the crack to refusal leaving the Mender slightly high.
2. Scrape with razor or sand flush using a Blue Norton Strip Disc or other.
3. Install a light application of densifier that was used on the existing floor.

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### Finish Option 2 – Silica Sand / Sanded Grout

1. Fill the crack to refusal leaving the Mender slightly low.
  - When the sand mixture is installed at the surface of the repair the 10 Minute Mender will raise up.
2. Sprinkle the blended sand/grout mixture onto the wet 10 Minute Mender leaving it mounded slightly high.
  - Ensure the sand mix is saturated with mender.
3. Allow the Mender to cure (hard cure).
4. Sand down the repair using a 80 Grit Flapper Wheel.
  - Do not hold the sanding disc flat or sand the adjacent floor. If after sanding the repair the repair material is low (concave) in the crack allow to cure longer.
5. Install a light application of densifier that was used on the existing floor.

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Finish Option 3 – Cap-off the repair using a tinted repair product.

1. Fill the crack to refusal but leaving the 10 Minute Mender 1/8" – 1/4" below the top of the existing floor.
2. Allow the Mender to Harden.
3. Re-Chase the crack or use a hand tool to remove any excess 10 Minute Mender along the bottom and sides of the repair. (Ensure a minimum depth of ¼" for installing the Rapid Refloor).
4. Install the Rapid Refloor leaving it slightly high.
5. Sand down the Rapid Refloor using a blue Norton Strip Disc.
6. Install a light application of densifier that was used on the existing floor. Back drag using a micro fiber mop to remove excess.

Non available image: [https://dev-gcpat-com.pantheonsite.io/sites/default/files/media\\_image\\_upload/Option-3-505x300.jpg](https://dev-gcpat-com.pantheonsite.io/sites/default/files/media_image_upload/Option-3-505x300.jpg)

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