

INSTALLATION GUIDELINE: FastPatch DPR Kit

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Description:

FastPatch DPR kits are designed to be easy to apply in a variety of scenarios and is fully customizable to suit your specific application needs. FastPatch DPR kits create a durable, long lasting repair for distressed pavement. When outdated technologies like cementitious repair materials fail to perform, FastPatch DPR is an ideal option to fix all manner of spalls, holes, cracks, or other damaged areas.

Surface Preparation

1. Repair area must be structurally sound (200 psi or greater according to ASTM D7234), clean (ASTM D4258), and dry (less than 5%, ASTM E1907 or surface dry).
2. Repair area surfaces must be sound, dry, clean, free of dirt, moisture, loose particles, oil, asphalt, tar, paint, wax, rust, waterproofing and curing/parting compounds, membranes and other foreign matter. Laitance and efflorescence must be removed prior to installation. If necessary, remove loose materials using a digging bar, grinder, concrete saw, chipping hammer, abrasive blasting, or hand tooling.
3. Repair area must be sound and not hollow. Test by tapping with hammer and removing any areas that are dull or hollow sounding. Bonding surfaces must be dry and free of oil or other contamination.
4. Asphalt repair areas with soil in center must be compacted with a hand tamp, truck tire, or plate compactor/jumping jack. The quality of compaction will determine the longevity and effectiveness of the repair.
5. Clean the repair area with a high velocity and CFM blower (250 MPH / 700 CFM) blower or dry compressed air (120 CFM / 90 psi) at least 4-6 feet (1-2 meter) away from repair area.
6. If necessary, remove any remaining dried dirt and debris from all bonding surfaces with a steel wire brush. Repeat blower to remove dust and debris.
7. Ensure dryness. Damp areas must be dried. Use a heat lance or torch until bonding surfaces are completely dry.
8. Test repair area bonding surface cleanliness by wiping surface with a clean glove and no moisture, dust, or oil transfers to glove. Repeat preparation if material transfers to the glove.
9. Monitor dew point during operations to avoid applying over a damp surface.
10. Honor all joints or moving cracks with foam board or by sawcutting after installation. If necessary, protect surrounding surfaces of repair area and joint with tape.

Kit Handling

1. Store kit in cool location until time of use (65-75F) to maximize working time.
2. Wear personal protection (e.g., safety glasses and gloves).
3. Mix kit within 12 ft. (4 meters) of repair area.
4. Use an 'Eggbeater' style mixer. Do not use paint 'Spiral, Mortar, Fin' style mixer. **(OPTION 1)**
5. Open PART A over the mixing container by tearing at an angle the notched corner of the pouch.
6. Pour PART A in the center of the mixing container and roll the pouch from the bottom to the torn corner. Dispose of the empty rolled pouch in the plastic bag. **(OPTION 2 & 3)**
7. Place Eggbeater mixer at the bottom PART A mixture. Turn drill ON and slowly increase speed while moving mixer in the material to start blending material.
8. Mix at 300-500RPM for 1 to 2 minutes while scraping bottom and sides of container with mixer to prevent unmixed material. **(OPTION 4 & 5)**
9. Open PART B over the mixing container by tearing at an angle the notched corner of the pouch.
10. Pour PART B in the center of the mixing container and roll the pouch from the bottom to the torn corner. Dispose of the empty rolled pouch in the plastic bag. **(OPTION 6)**

11. Mix at 300-500RPM for about 1 to 2 minutes while scraping bottom and sides of container with mixer. At cold temperatures a slightly longer mix time can help maintain the rapid cure rate and ensure proper crosslinking. Do not under mix.
12. After mixing, set the mixer head on the pail lid while pouring material in repair area.
13. Immediately pour and spread repair material over area and up to the surrounding elevation. **(OPTION 7).**
14. Use a trowel, taping knife, or screed board and work the material toward the edges and level with the surrounding elevation.
15. Apply topping sand to refusal when sand slowly sinks and more than 50% stays on surface.
16. Place the mixer in the empty mixing container and spin extra material off of the mixing blade. Using a disposable towel, wipe off mixer until clean.
17. Repair area is ready for traffic when it is firm and doesn't deform under pressure.

Kit Customization Options

1. Increase Self-leveling / Flowability

- a. Remove 0.50-1.0 gal (1.5-3.0 liters) of Aggregate from kit before adding Part A. (Step 3)
- b. Continue with Step 4.

2. Faster Curing Time (useful for applications at colder temperatures)

- a. Pour PART A in the center of the mixing container and roll the pouch from the bottom to the torn corner. Dispose of the empty rolled pouch in the plastic bag. (Step 5).
- b. Add 1 bottle of Kicker to mixture after Part A and before mixing. Black Color is also added at this step (optional). Continue with Step 6.

3. Black Color (instead of standard gray)

- a. Pour PART A in the center of the mixing container and roll the pouch from the bottom to the torn corner. Dispose of the empty rolled pouch in the plastic bag. (Step 5).
- b. Open Black Color pouch over the mixing container by tearing open pouch at notch. Squeeze into center of the material. Kicker is also added at this step (if needed). Continue with Step 6.

4. Increase Kit Yield

- a. Extending before pouring into repair area.
 1. Mix PART A and Aggregate according to instructions above. (Step 7)
 2. Add FastPatch Gravel (Clean, Dry, Rounded 3/8" 10mm) at 0.50-1.0 gal (1.5-3 liters) into mixture. Mix for 1 minute before adding Part B.
- b. [OR] Extending after pouring into repair area.
 1. If material is below surrounding elevation by 0.25-0.50 inch (7-13 mm), immediately add FastPatch Gravel (Clean, Dry, Rounded 3/8" 10mm) until level with surrounding elevation.
 2. Immediately mix gravel into material with a trowel to fully encapsulate gravel and before material sets. Apply topping sand according to above instructions.

5. Slower Curing Time (useful for applications at hotter temperatures)

- a. Store kit in cool location until time of use (65-75F) to maximize working time. Mix kit close to repair area to minimize time between mixing PART B and pouring into repair area.
- b. When kits are very warm, limit mix time of PART B to about 1 minute at 300-500RPM while scraping bottom and sides of container with mixer. Make sure entire kit is thoroughly mixed before pouring into repair area.

6. Decrease Flowability to Give Slope Grade / Trowel Grade Consistency

- a. Create a slope grade material to transition to different elevations (1.0 – 2.0 inches or 25-50mm).
- b. Mix PART A and Aggregate according to instructions above. (Step 7)
- c. Add FastPatch Gravel 0.50-1.0 gal (1.5-3 liters) into mixture.
- d. Add ½ bag of Topping Sand (3 lbs, 1.4kg) into mixture.
- e. Mix for 1 minute before adding Part B.

7. Use Multiple Kits in Same Repair Area

- a. Start at one end of the repair area with the first kit and fill up to surrounding elevation. Continue pouring material toward the other end of the repair area.
- b. Taper the last 0.5-1.0 ft. (150-300 mm) of the first kit material.
- c. Pour the next kit over the tapered material and up to the surrounding elevation and taper again for the following kit. Repeat until entire repair area is filled.

Troubleshooting

➤ Cures too fast

Cause:

- Kit material, aggregate or liquids, is too warm. Set time is 7 minutes at 110F (40C) and 30 minutes at 75F (21C).
- Part B mix time is too long or left too long in the bucket.

Corrective Action:

- Store kits in a cool (65-75F), dry, shaded area for at least 24 hours before use.
- While working, keep kits in cool location until needed to maximize working time.
- Make sure mix time of PART B is 1- 2 minutes and kit is used immediately.

➤ Cures too slowly.

Cause:

- Kit material is cold and repair area is cold. Store kits in a dry area at 65-75F.
- Center of the repair area will cure faster than the sides in cooler conditions.

Corrective Action:

- Use the KICKER in cooler conditions. Set time at 40F (10C) is 40 minutes with a KICKER and 80 minutes without a KICKER.
- Warm repair area with a heating source.

➤ Color is 'greenish', not gray or black.

Cause:

- Poor mixing of the aggregate and liquids.
- Not scraping sides and bottom of bucket while mixing.

Corrective Action:

- Use "Eggbeater" mixer to mix kit. Scrape sides and bottom while mixing. Other mixer styles, "Mortar Mixer or Blade/Fin Mixers" will result in poor mixing and unmixed material that will not cure.
- Make sure mix times are followed (2 minutes). Scrape sides and bottom while mixing.

➤ Not curing or hardening after several hours.

Cause:

- Poor mixing of the aggregate and liquids.
- Not scraping sides and bottom of bucket while mixing.
- Wrong style of mixer was used.
- Entire amount of liquids in kit was not used.

Corrective Action:

- Use "Eggbeater" mixer to mix kit. Scrape sides and bottom while mixing. Other mixer styles, "Mortar Mixer or Blade/Fin Mixers" will result in poor mixing and unmixed material.
- Use the entire kit. Do not divide liquids.

➤ Repair area cracked.

Cause:

- Repair area had an existing crack or joint that is moving after being repaired.

Corrective Action:

- Honor active cracks or joints by installing a foam board during installation of repair material or saw cut the active crack/joint after repairing. Install a joint sealant material in moving crack/joint to seal area.



Figure 1: KICKER



Figure 2: Eggbeater mixer.

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