



CONCRETE REPAIR

STEP-BY-STEP MANUAL





PERSONAL PROTECTION

It's always recommended to wear the appropriate Personal Protective Equipment (PPE) for the task at hand and follow your employer's safety policy. Commonly known PPE such as safety glasses, gloves, earplugs, respirators, etc, are recommended as needed.

For further information on OSHA requirements, visit <https://www.osha.gov/Publications/osha3151.pdf>

INSTRUCTIONS:

PREP

(For in-depth instructions, see Prep Manual)

- 1 Prep surface to be repaired by grinding/shot blasting/acid washing, etc...
- 2 Thoroughly clean surface

QUICK PATCH

- 1 Set up mix station
- 2 Pre-mix Part A and Part B by shaking the jugs vigorously
- 3 Mix together vigorously (1 Part A to 1 Part B)
- 4 (Optional) Add desired amount of CP Texture Mix (1-3 parts), mix vigorously for 20 sec.
- 5 Pour into spalling, cracks, holes, pops and chips to overflowing
- 6 Let dry
- 7 Using a 4"-7" grinder, grind the repair to an even, flush surface

PROTECTOR FLEX JOINT FILL

- 1 Set up mix station
- 2 Pre-Mix Part A and Part B
- 3 Mix together (1 Part A to 1 Part B)
- 4 (Optional) Add desired amount of CP Texture Mix (1-3 parts), mix until well blended
- 5 Pour into control joints until minimal overflowing, broadcast sand on repair
- 6 Let dry
- 7 Using a 4"-7" grinder or razor scraper, grind or scrape the repair to an even, flush surface



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MATCH PATCH PRO 80 FLEXIBLE JOINT FILL

Make sure caulk gun is always facing tip down throughout process

- 1 Set up Mix Station
- 2 Shake cartridge vigorously for 2 min.
- 3 Insert cartridge into dual caulk gun and twist on element static mixer
- 4 Tilting down, pump caulk gun until material is dispersed through the element static mixer
- 5 Place 5 pumpfulls of material into a container, discard
- 6 Pump into control joints/ cracks until overflowing
- 7 Let dry
- 8 Using a razor scraper, scrape the repair to an even, flush surface

*** If using a joint pump gun, follow the manufacturer's instructions

FLEXKRETE

- 1 Set up mix station
- 2 (Optional) FlexPrime: Mix 1 Part A and 1 Part B, apply extremely thin with brush
- 3 Pre-mix FlexKrete Resin
- 4 Mix measured amount of FlexKrete Resin and FlexKrete Catalyst for 30 sec.
- 5 Add desired amount of dry sand (1-3 parts) and/ or fumed silica (1-3 parts), mix for 60 sec.
- 6 Fill, pat, or trowel flush into void and sprinkle with dry sand
- 7 If necessary, using a 4"-7" grinder, grind repair to an even, flush surface

LRB/TAV

- 1 Set up mix station
- 2 Prime surface/sides of joints or cracks with PermaFlex
- 3 Let dry
- 4 Pre-mix LRB and TAV
- 5 Mix TAV and LRB (1 Part TAV to 2 Parts LRB) until blended
- 6 Fill in void by using a squeegee, trowel, or freezer bag
(if filling a wall/floor junction or wall/wall junction - forming a 1" diameter bead)
- 7 (Optional) Using a brush dipped in xylene, smooth out rough edges



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PRODUCTS & COVERAGE

SKU:	PRODUCT:	COVERAGE:	DRY TIME:
1 SI-1672--SI-5850	Quick Patch	See chart	*Dry Time = 2-10 min.
2 MPP-2003	Match Patch Pro 80 Flexible Joint Fill	See chart	*Dry Time = 10-30 min.
3 FK-705	FlexKrete Resin	See chart	*Dry Time = 2-4 hrs.
4 PFA-1002--PFA-1014	PermaFlex	Prime Coat 180-240 sq. ft. per gal.	*Dry Time = 2-6 hrs.
5 P-5826--P-5828	PermaFlex Catalyst	1.6 oz. per 1 gal.	
6 P-5820--P-5822	PermaFlex Accelerator	6.4 oz. per 1 gal. for slow set/ 12.8 oz. per gal. for fast set	
7 SI-5852--SI5860	TAV	See chart	*Dry Time = 4-8 hrs.
8 SI-1622--SI-5804	LRB	See chart	*Dry Time = 4-8 hrs.

* Coverages and dry times vary depending on application techniques and temperature. Estimations are based on 70 degrees, 30 percent relative humidity. For more information, refer to TDS sheets.

QUICK PATCH PRODUCTS & TOOLS

SKU:	TOOL:
1 ESI-1672--SI-5850	Quick Patch
2 DM-3913	Concrete Protector Texture Mix
3 TL-7235	Mixing Tarps
4 TL-7361-- TL-7365	Assorted Mixing Containers and Cups
5 ET-7323	Gloves
6 DCW-8731--DCW-8755	T-Cup Wheel
7 PB-7169	Hum-B Grinder
8	Stir Sticks

PROTECTORFLEX JOINT FILL PRODUCTS & TOOLS

SKU:	TOOL:
1 EM-6018	Protector Flex Joint Fill
2 TL-7235	Mixing Tarps
3 TL-7361-- TL-7365	Assorted Mixing Containers and Cups
4 ET-7323	Gloves
5 DCW-8731--DCW- 8755	T-Cup Wheel
6 PB-7169	Hum-B Grinder
7 TL-7127	Mixing Paddle
8	Dry Sand
9	Variable Speed Drill

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MATCH PATCH PRO 80 FLEXIBLE JOINT FILL PRODUCTS & TOOLS

SKU:
TOOL:

- | | |
|------------|--|
| 1 MPP-2003 | Match Patch Pro 80 Flexible Joint Fill |
| 2 TL-7299 | Dual Caulk Gun |
| 3 MPP-2002 | Element Static Mixer |

FLEXKRETE PRODUCTS & TOOLS

SKU:
TOOL:

- | | |
|---------------------|-----------------------------------|
| 1 TL-7235 | Mixing Tarps |
| 2 TL-7361-- TL-7365 | Assorted Mixing Containers & Cups |
| 3 ET-7323 | Gloves |
| 4 FK-705 | FlexKrete Resin |
| 5 FK-701 | FlexKrete Catalyst |
| 6 FK-711 | FlexPrime |
| 7 FK-717 | Fumed Silica |
| 8 TL-7127 | Mixing Paddle |
| 9 CT-1013--CT-1035 | Solvent (for cleaning) |
| 10 | Variable Speed Drill |
| 11 | Dry Sand |
| 12 | Metal Hand Trowel |
| 13 | Putty Knife |

LRB/TAV PRODUCTS & TOOLS

SKU:
TOOL:

- | | |
|----------------------|-----------------------------------|
| 1 TL-7235 | Mixing Tarps |
| 2 TL-7361-- TL-7365 | Assorted Mixing Containers & Cups |
| 3 ET-7323 | Gloves |
| 4 CT-1035 | Xylene for Cleaning |
| 5 PFA-1002--PFA-1014 | PermaFlex |
| 6 P-5826--P-5828 | PermaFlex Catalyst |
| 7 P-5820--P-5822 | PermaFlex Accelerator |
| 8 CT-1013--CT-1035 | Solvent |
| 9 SI-5852--SI5860 | TAV |
| 10 SI-1622--SI-5804 | LRB |
| 11 RL-4343 | 2" Paint Brushes |
| 12 RL- 4323 | 4" Roller Cover □" Nap |
| 13 RL- 4325 | 4" Roller Frame |
| 14 | Mixing Paddle |
| 15 | Variable Speed Drill |

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QUICK PATCH BENEFITS & FEATURES

- 1 Tensile Strength = 2200 psi
- 2 Compressive Strength = 4750 psi
- 3 Pot Life = 1-5 min.
- 4 Dry Time = 5-10 min.

World of Concrete's Most Innovative Product for 2016

Quick Patch is used for repairing spalling, cracks, holes, pops and chips in a concrete surface. This product can be applied under most interior and exterior coatings.

PROTECTORFLEX JOINT FILL BENEFITS & FEATURES

- 1 Meets or Exceeds VOC Standards
- 2 Elongation = 70%-85%
- 3 100% Solids
- 4 Meets USDA Standards for Federally Inspected Facilities
- 5 Temperature Range = 50-99 degrees F

ProtectorFlex is used for filling control joints or cracks for interior applications. This product is best used under most epoxies and urethanes.

MATCH PATCH PRO 80 FLEXIBLE JOINT FILL BENEFITS & FEATURES

- 1 Temperature Range = 20-135 degrees F
- 2 Dry Time = 10-30 min.
- 3 Elongation = 250%
- 4 Tensile Strength = 2000 psi
- 5 Tear Strength = 250 pli

World of Concrete's Most Innovative Product for 2019

Match Patch Pro 80 Flexible Joint Fill is used for filling joints and cracks during the concrete polishing process. This product can be applied under most coatings.

FLEXCRETE BENEFITS & FEATURES

- 1 Tensile Strength = 3530 lb/in²
- 2 Compressive Strength = 10,000 psi
- 3 Can easily be applied vertically
- 4 Great for bridge and street repair
- 5 Can be used as a "stand alone" product

FlexKrete is used for repairing extensive damage on concrete surfaces, as well as rebuilding broken edges and curbs. This product can be applied under most coatings.

LRB/TAV BENEFITS & FEATURES

- 1 Tensile Strength = 3200 psi
- 2 Elongation = 600%
- 3 Can be applied at any thickness
- 4 Great for waterproofing applications
- 5 Can be used for wooden decks and swimming pools

LRB/TAV mixture is used to patch, fill, profile, and create a flexible seal wherever a primed crack, joint, seam, hole on any horizontal, vertical, or inverted damaged area. This product is designed to be applied under PermaFlex.



TIPS & TRICKS

1 **QUICK PATCH:** Only mix up small amounts of Quick Patch at a time (typically measure out 4 oz of Part A and mix with 4 oz of Part B) but quickly and thoroughly. Mix no more material than can be used within one minute (Quick Patch will cure quickly).

2 **PROTECTORFLEX JOINT FILL:** Unlike Quick Patch, this product is very slow. It is recommended to use Protectorflex Joint Fill after prep is done and you are not coating until the next day (the colder the slab, the slower the set).

If removing overfilled Protectorflex Joint Fill with a grinder (the next day), it is advised to “seed” the wet joint fill with sand to make it easier to grind.

3 **MATCH PATCH PRO 80 JOINT FILL:** Carry extra rags to catch and clean up any drips. Make sure caulk gun is always facing tip down throughout process.

4 **FLEXKRETE:** You have to mix in the Flexkrete catalyst BEFORE adding sand/aggregate, failing to do this will result in the product not setting. The sand/aggregate MUST BE DRY AND FREE OF MOISTURE (use kiln-dried sand and NOT PLAY SAND), failing to follow this will result in the product not setting.

Moisture in the repair area will have the same results as adding wet sand, so it may be advised to torch the repair area to drive away any moisture.

Flexkrete may be sticky to trowel but misting your trowel with acetone will make troweling much easier.

5 **LRB/TAV:** Never mix in more TAV than 1 part TAV to 2 parts LRB (you can add less TAV for a thinner mix if desired).

Be aware the LRB/TAV mixture will shrink slightly in a few days during curing and any joints, cracks, pits may show a slight concave look.

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MATERIAL COVERAGE RATE

* Coverages and dry times vary depending on application techniques and temperature. Estimations are based on 70 degrees, 30 percent relative humidity. For more information, refer to TDS sheets.

Narrow Joints and Cracks

1/8" x 3/4" = 200 lf/gal	3/16" x 3/4" = 135 lf/gal	1/4" x 3/4" = 100 lf/gal
1/8" x 1" = 150 lf/gal	3/16" x 1" = 100 lf/gal	1/4" x 1" = 80 lf/gal
1/8" x 1-1/4" = 125 lf/gal	3/16" x 1-1/4" = 85 lf/gal	1/4" x 1-1/4" = 60 lf/gal
1/8" x 1-1/2" = 100 lf/gal	3/16" x 1-1/2" = 70 lf/gal	1/4" x 1-1/2" = 50 lf/gal
1/8" x 1-3/4" = 85 lf/gal	3/16" x 1-3/4" = 60 lf/gal	1/4" x 1-3/4" = 45 lf/gal
1/8" x 2" = 75 lf/gal	3/16" x 2" = 50 lf/gal	1/4" x 2" = 40 lf/gal

Wider Joints and Cracks

3/8" x 3/8" = 135 lf/gal	3/4" x 1/2" = 50 lf/gal	1" x 3/4" = 25 lf/gal
3/8" x 1/2" = 100 lf/gal	3/4" x 3/4" = 35 lf/gal	1" x 1" = 30 lf/gal
1/2" x 1/2" = 80 lf/gal	1" x 1/2" = 40 lf/gal	1" x 2" = 10 lf/gal

Converting Gallon Coverage Rates for Cartridge Units

To determine coverage rates for cartridge units divide the gallon rates listed above by the following factors:

450 ML Divide Gal Yield by 8

900 ML Divide Gal Yield by 4

600 ML Divide Gal Yield by 6

1500 ML Divide Gal Yield by 2.5

Sand Modification Yields

Defect Repair Yields

Liquid Epoxy + Silica Sand = Mortar Yield

Standard Material Kit and Cartridge Units

GAL EPOXY + GALS. SAND = GALS. MORTAR

UNIT SIZE MET MATERIAL YIELD

1 1 1.6

450 ML UNIT = 28.75 cubic inches

1 1.5 1.9

600 ML UNIT = 28.34 cubic inches

1 2 2.2

900 ML UNIT = 57.50 cubic inches

1 3 2.8

GALLON UNIT = 230.00 cubic inches

Note: The above figures are appropriate and for estimating purposes only. The rates above do not allow for excessive waste, overfill, etc. Results may vary due to factors including material loss at joint base, grade of silica used, etc. The Concrete Protector assumes no liability for results from using these figures.