



MiraPatch DP

Product Technical Data Sheet

MiraPatch DP is a single component, polymer-modified, cementitious, trowel-grade concrete surface repair mortar. Designed for horizontal and vertical applications, MiraPatch DP is light gray in color and can be applied from 1/8" up to 3/4" in thickness. With excellent workability and low slump consistency, MiraPatch DP can troweled, molded, shaped and shaved before reaching final set.

For applications greater than 3/4" in depth, extend MiraPatch DP with coarse 1/4" (3/4" to 1" depth) or 3/8" (>1" depth) clean SSD (saturated surface dry) aggregate to produce MiraPatch DP concrete and enhance dimensional stability in deeper applications.

WHERE TO USE

- Concrete repairs on grade, above and below grade.
- Horizontal, vertical & overhead surfaces.
- Interior and exterior service conditions.
- To level irregular concrete surfaces.
- Provide changes in pitch or slope of concrete slabs.
- Repair of surface voids, cavities and broken edges.
- Architectural repairs that require a sculpting mortar.

ADVANTAGES

- Low slump, trowel-grade consistency.
- Outstanding workability.
- Easy to trowel, mold, shape and shave after initial set.
- Ideal mortar for horizontal, vertical & overhead surfaces.
- Suitable for interior and exterior use.
- Excellent freeze/thaw resistance – long term durability.
- Single component – just add potable water to mix.
- Excellent physical properties for general repairs.
- Tenacious adhesion to prepared substrates.
- Extendable with clean coarse aggregate for repairs > 3/4".
- Can be molded, shaped, and shaved prior to final set.
- Zero VOC - contributes to LEED credits.

COVERAGE RATES

Theoretical coverage rate per unit:

MiraPatch DP	@ 25 lb. Aggregate Extension*
46.6 sq. ft. @ 1/8"	10.6 sq. ft. @ 3/4"
23.3 sq. ft. @ 1/4"	9.0 sq. ft. @ 7/8"
17.4 sq. ft. @ 3/8"	7.9 sq. ft. @ 1"
11.6 sq. ft. @ 1/2"	5.3 sq. ft. @ 1.5"

Approximate Yield/Unit: .48 CF (.66 CF Extended*)

Actual consumption rates are dependent on many factors including, but not limited to, substrate texture and porosity, variations in applied thickness and normal allowance for waste.

PACKAGING and COLORS

50-pound bag – Natural gray cement color.

MIX RATIO

Add 4-5 quarts of water to 50-pound bag.

SHELF LIFE AND STORAGE

One year from the date of manufacture as long as packaging remains unopened and material is stored in a protected environment free from moisture, excessive heat, freezing temperatures, and direct sunlight.

TYPICAL PHYSICAL PROPERTIES @ 75°F (24°C)

Water Demand.....	4 to 5 quarts/50 lbs
Working Time.....	15-20 minutes (temperature dependent)
Compressive Strength ASTM C579, Method A.....	4,100 psi
Flexural Strength ASTM C580.....	1,200 psi
Tensile Strength ASTM C307.....	465 psi
Open to Traffic.....	12 – 24 hours
Adhesion ASTM C932, Modified (No priming).....	200 psi
Impact Resistance MIL-D-3134, Para. 4.7.3.....	No cracking or detachment (2 lb. steel ball dropped from 8" height onto coated steel plate)
Freeze/Thaw.....	No scaling, peeling, flaking Coated concrete cylinders immersed 8 hrs. in Saltwater solution followed by 16 hrs. freezing, 50 cycles
Initial Set ASTM C266.....	2 hrs.
Final Set ASTM C266.....	6 hrs

OVERVIEW OF INSTALLATION STEPS

• **Surface Preparation** – All surfaces must be clean, sound, and free from bond inhibiting substances including, but not limited to, grease, oil and any other contaminants or loosely bonded materials. Follow ICRI Technical Guideline #310.2-1997 for detailed surface preparation requirements. A minimum surface profile of a CSP-4 or higher is required depending on overall substrate conditions and concrete repair requirements. Concrete and other porous or absorptive substrates should be **(SSD) saturated surface dry** with no standing water at the time of application.

• **Mixing MiraPatch DP mortar** – MiraPatch DP must be mixed mechanically to a uniform consistency in a clean mixing vessel using a low-speed drill (300-450 rpm) with a “Jiffy-type” or similar Miracote-approved mixing paddle. Mixing water must be accurately measured using volumetric graduated containers or similar. Add 4 (four) quarts of potable water into the mixing vessel. When mixing always add the powder component gradually to the water. Thoroughly mix the complete unit for a minimum of two minutes. For desired consistency, add one more quart of water and continue mixing for an additional two minutes or until a uniform consistency is achieved that is free of lumps and pockets of dry powder.

• **Mixing MiraPatch DP concrete** – Coarse aggregates must be clean, well-graded, non-reactive, high in density and low in

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OVERVIEW OF INSTALLATION STEPS (continued)

water absorption. Coarse aggregate must be (SSD) saturated surface dry when incorporating into the MiraPatch DP mortar mix. Each unit of MiraPatch DP may be extended with 20 to 30 pounds maximum of 1/4" or 3/8" aggregate depending on applied thickness. Follow the same instructions as detailed for mixing MiraPatch DP mortar. After the initial two minutes of mixing, slowly add the desired quantity of measured aggregate to the MiraPatch DP mortar and continue mixing for one more minute. Up to one additional quart of water may be added while mixing to achieve a desired uniform consistency.

- **Application & Finish** – As with all trowel-grade repair mortars, MiraPatch DP must be applied to a saturated surface dry (SSD) substrate with no standing water. To ensure intimate contact with the concrete substrate, apply a scrub coat to fill all pores and voids, and place repair mortar immediately while scrub coat is still wet. Trowel the mortar against the perimeter of the repair and work the material toward the center. To complete the repair, finish surface with appropriate trowel or float as required depending on desired surface texture. Do not re-temper MiraPatch DP when it is no longer workable.

FOR BEST RESULTS

- Always install a minimum 4' by 4' test area or job site mock up for owner approval of acceptable color, texture, finish adhesion and any other critical requirements prior to proceeding with the installation.
- Verify that the most current versions of product technical data sheets (PTDS), color charts, material safety data sheets (MSDS), and installation guidelines (IG) are being utilized for project submittals and application reference.
- Protect materials at all times from excessive heat and cold, and pre-condition material as required in adverse conditions.
- As per ACI recommendations for Portland cement concrete, curing is required in order to meet published physical properties. Moist curing with burlap/polyethylene or burlene is the preferred method. A compatible water-based curing compound is also acceptable.
- The proper application of this product is the sole responsibility of the end user. Job site visits by Miracote representatives are only for the purpose of making recommendations. Supervision and quality control are the sole responsibility of the user.
- Measure surface and ambient temperatures to ensure that material is only applied when temperatures are 45° F (7° C) and rising during placement and time of application.

LIMITATIONS

- Concrete surface repair dimensions including overall length, width, depth and shape need careful consideration, and should be in conformance with ACI recommended standards of practice.
- Mechanical surface preparation methods may require additional testing to verify substrate tensile strength in accordance with ICRI Guideline No. 210.3R-2013 (Guide for Using In-Situ Tensile Pull-off Tests to Evaluate Bond of Concrete Surface Materials).
- Extension with coarse aggregates may alter the physical properties of MiraPatch DP as published.
- Do not use solvent based curing compounds.
- As with all cement based materials, avoid direct contact with aluminum to prevent an adverse chemical reaction. Refer to MiraPrime AL for an appropriate primer.

LIMITED WARRANTY

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CAUTION: ALWAYS KEEP OUT OF THE REACH OF CHILDREN.



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MIR.369
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4-4-2014