



# Miracote Polymer Admix

## Product Technical Data Sheet

*Miracote Polymer Admix* is a synthetic polymer latex admixture concentrate that is designed for use as an integral cement paste adhesive to produce polymer-modified concrete, mortars and cementitious bond coats. The modification of field blended sand and cement mixes with *Miracote Polymer Admix* will significantly improve substrate adhesion, workability, abrasion and chemical resistance, freeze/thaw durability, resistance to moisture and chloride penetration, and provide overall enhancements to the physical properties of cementitious materials.

### WHERE TO USE

- Mortar beds, render mortars, thin sets, terrazzo and stucco.
- Concrete toppings, repair mortars, and bond coats.
- Latex-modified overlays and general construction use.
- Enhancement for floor slab underlayments.
- Concrete deck slabs for pedestrian/vehicular exposure.

### ADVANTAGES

- Significantly improves adhesion to underlying substrates.
- Increases compressive, flexural and tensile properties.
- Improves abrasion resistance of mortar and concrete.
- Functions as a water-reducing plasticizer.
- Increased durability against freeze-thaw cycles.
- Improves workability and troweling characteristics.
- Reduces shrinkage of sand & cement mortars.
- Enhances water retention for improved hydration.
- Reduces permeability and water absorption.
- Improves resistance to carbonation/chloride penetration.
- Complies with ASTM C-1059-86, Type II.
- Will not re-emulsify after cure.
- Convenient packaging for ease of use in the field.

### THEORETICAL COVERAGE/YIELD

Typical Mortar Mix Designs:	Mix A	Mix B
Miracote Polymer Admix	2 Gal.	1 Gal.
Potable Water	3 Gal.	3 Gal.
Portland Cement Type I or II	94 lbs.	94 lbs.
Graded Fine Aggregate	300 lbs.	250 lbs.
Approximate Yield @ 1/4"	210 SF	170 SF

### Typical Bond Coat Mix Design:

Miracote Polymer Admix	3 Gal.
Potable Water	5 Gal.
Portland Cement Type I or II	94 lbs.
Grades Fine Aggregate	150-180 lbs.
Approximate Yield (Volume)	800+ SF

\*Above mix designs and coverage rates are estimates only, and will likely need adjustments in the field, as needed, for suitability of project requirements, type of application methods, exposure conditions, concrete surface profile, and appropriate material consistency.

### PACKAGING and COLORS

Kit Size: 1 and 5 gallon pails - Color: White

### MIX RATIO

Single component – ready to use.

### SHELF LIFE AND STORAGE

One year from the date of manufacture 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)

Vehicle Type.....	Water-based liquid
Color .....	White
Compressive Strength (ASTM C109).....	3,610 psi
Tensile Strength (ASTM C109) .....	817 psi
Flexural Strength (ASTM C580) .....	1,425 psi
Adhesion (ACI 503.R).....	> 400 psi
Water Absorption (MIL-D-3134) .....	< 3.5%
Solids Content (Weight) .....	47 – 49%
Particle Size.....	0.24 microns

- Above reported properties are based on Mortar Mix B.

### OVERVIEW OF INSTALLATION STEPS

- **Surface Preparation:** Concrete surface must be clean, sound, and free from any bond-inhibiting substance including, but not limited to, laitance, dirt, grease, oil, curing compounds and other contaminants or loosely bonded materials. Follow ICRI Technical Guideline #310.2-1997 for detailed surface preparation requirements. A minimum Concrete Surface Profile (CSP) from CSP 4 - CSP 6 or higher is required depending on overall substrate conditions, type of application, exposure conditions and concrete repair requirements. Concrete and other absorptive substrates must be (SSD) **saturated surface dry** with no standing water at the time of application. **Note: Acid etching is not an acceptable means of surface preparation.**

- **Mixing – *Miracote Polymer Admix*** must be mechanically mixed with potable water, cement and aggregates to a uniform consistency in a clean mixing vessel. For small quantities that require 5 gallon pails or less, use a low-speed drill (300-450 rpm) and “Jiffy-type” or similar mixing paddle. Always pre-mix *Miracote Polymer Admix* when not using entire contents of the pail. Dispense the appropriate amount of *Miracote Polymer Admix* for given batch size into the mixing vessel with potable water and begin mixing. Then slowly add aggregate and cement. Thoroughly mix the entire batch for a minimum of two minutes. For desired consistency, add additional potable water or admix, and continue mixing for a minimum of one more minute until a uniform homogeneous consistency is achieved. Immediately place material as quickly as possible. It is not acceptable under any circumstance to re-temper mixed material with additional water or polymer once material begins to stiffen.

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- **Cementitious Bond Coat Applications** - Miracote does not recommend the use of *Miracote Polymer Admix* in neat form as a bonding agent. The product is designed for use with cement, or a blend of sand and cement to produce a bonding agent in the form of a slurry which is spread into the concrete surface with a stiff bristled broom or scrub brush to ensure intimate contact with concrete toppings and mortars. Be sure to coat the entire area including perimeter edges along transitions and penetrations. Once applied, immediately place topping materials and mortars onto the scrub coat while the slurry remains in a plastic state.
- **Cementitious Mortar Applications** – As with all trowel-grade repair mortars, *Miracote Polymer Admix* mortars 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 of bonding slurry 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.

### FOR BEST RESULTS

- Always install a minimum 4' x 4' on-site mock up to verify actual coverage rates, and for approval of acceptable color, texture, finish, adhesion, and any other critical requirement acceptable to the owner prior to proceeding with the installation. This
- Verify and download current versions of product technical data sheets (PTDS), material safety data sheets (MSDS), and installation guides (IG) at [www.miracote.com](http://www.miracote.com).
- Protect materials at all times from excessive heat and cold, and pre-condition to room temperature as necessary.
- Measure surface and ambient temperatures to ensure that material is only applied when both temperatures range between 40°F (4.5°C) and 90°F (32.2°C) during mixing, placement and time of application.
- 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, and do not assume any liability for supervision or quality control.

### 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 RM 1 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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