



# MiraFlex Membrane C

## Product Technical Data Sheet



*MiraFlex Membrane C* is a state-of-the-art, two-component, polymer-modified, highly flexible, cementitious membrane for the waterproofing and protection of concrete, masonry and many other types of construction materials and substrates. Designed for exterior or interior applications, above or below grade, *MiraFlex Membrane C* can be used and applied to horizontal, vertical and overhead surfaces.

Applied by roller, trowel, spray apparatus or squeegee, *MiraFlex Membrane C* is ideal for use in waterproofing applications under tile and other composite flooring systems. It is also capable of stand-alone applications, and can remain exposed to mechanical wear and abrasion, impact, immersion in water, UV and normal climatic and environmental elements. For detailing and treatment of cracks and construction joints, it can be embedded with Miracote Poly Fabric for reinforcement and enhanced dimensional stability. With its cementitious backbone, *MiraFlex Membrane C* is compatible with other cementitious materials, thin-set mortars and most coatings and sealers.

### WHERE TO USE

- Interior and exterior – above and below grade.
- Below-grade positive side waterproofing.
- Planter box and foundation waterproofing.
- Plaza decks, balconies, pedestrian bridges, roof decks.
- Stadiums, arenas, and entertainment parks.
- Mechanical equipment and utility rooms.
- Fountains, pools, spillways, storage, and aquatic tanks.
- Secondary containment, elevator pits.
- Water and wastewater facility structures
- Crack isolation/waterproofing under Miracote flooring systems.
- Waterproofing under tile and other composition flooring.

### ADVANTAGES

- NSF-61 Certified for use in potable water.
- Permanent high flexibility – does not age harden.
- Carbon dioxide barrier – prevents concrete carbonation.
- Protects against de-icing salts, chlorides, sulfates.
- Vapor permeable membrane.
- Ideal for interior and exterior exposure.
- Suitable for application on moist or damp substrates.
- Crack isolation membrane – reduces reflective cracking.
- Compatible with cementitious thin-set mortars.
- Wide range of available colors when using white powder.
- Green technology – environmentally friendly, LEED-compliant.

### THEORETICAL COVERAGE RATES

One Coat Application	160 sq. ft. @ 1/32" (31.25 mils)
Two Coat Application	80 sq. ft. @ 1/16" (62.50 mils)
Three Coat Application	53 sq. ft. @ 3/32" (93.75 mils)

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

Membrane C Liquid	(2-gallon pail)
Membrane C Powder – Natural	(43 lb. bag)
Membrane C Powder – White*	(43 lb. bag)

\* Miracote Standard Colors – Requires white powder & ColorPax-W  
Dosage Rate: (1) unit of ColorPax-W to (4) units of Membrane C  
Factory pigmented liquid available subject to a minimum order.

### MIX RATIO

2-Gal Membrane C Liquid to 1 Bag - Membrane C Powder

### SHELF LIFE AND STORAGE

One year from the date of manufacture provided containers remain unopened and material is stored in a protected environment free from moisture, excessive heat, freezing temperatures, and direct sunlight.

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

<b>Working Life</b> .....	15-45 minutes (rate of evaporation dependent)
<b>Recoat Time</b> .....	2-4 hours or when dry
<b>Open to Traffic</b> .....	12 – 24 hours
<b>Waterproofness</b> ASTM D4068 modified .....	No passage of water Resistance to passage when subjected to 27.7" head of water (hydrostatic pressure of 1 lb./ft.) for one month.
<b>Elongation</b> ASTM D638 .....	43%
<b>Adhesion</b> ASTM D7234 .....	>200 psi
<b>Bacteria &amp; Fungus Resistance</b> ASTM G22 .....	No growth
<b>Moisture Vapor Transmission</b> ASTM E96.....	22.3g (Grams/sq. meter/24 hrs.)
<b>Crack –Bridging</b> ASTM E836 1/8" opening @ 77°F.....	Pass (No rupture)
<b>Hydrostatic Resistance</b> ASTM D751 Procedure B.....	Pass
<b>Permeability</b> ASTM E96 .....	2.7 perm/inches
<b>Cold Temperature Flexibility</b> May be folded double, maintains flexibility when removed from freezer.	

### NSF-61 CERTIFICATION PARAMETERS @ 70F (21C)

<b>Number of coats</b> .....	1 to 3
<b>Dry Film Thickness (DFT)</b> .....	78 mils maximum
<b>Recoat Time</b> .....	2 hours minimum
<b>Final Cure</b> .....	7 days minimum

### OVERVIEW OF INSTALLATION STEPS

- **Surface Preparation** – All surfaces must be clean, sound, and free from bug holes, pop outs, voids, discontinuities, mortar fins, and any bond inhibiting substances including, but not limited to, grease, oil and any other contaminants or loosely adhered materials. For concrete substrates, a minimum surface profile of a CSP-3 or higher is required depending on overall substrate conditions and coating requirements. Repair any existing concrete surface defects previously noted with the appropriate MiraPatch repair mortar. Concrete and other porous or absorptive substrates should be **(SSD) saturated surface dry** with no standing water at the time of application.
- **Mixing** – Membrane C 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. Pre-mix Membrane C liquid to re-disperse any polymer solids that may have settled on the bottom of the pail. When mixing Membrane C always pour the liquid component into the mixing pail first and gradually add the powder component while mixing. Thoroughly mix the complete unit for a minimum of three minutes or until a uniform consistency is achieved that is free of lumps and pockets of dry powder.

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### OVERVIEW OF INSTALLATION STEPS (continued)

**Application** – Membrane C can be applied using a roller, brush, broom, trowel, magic trowel, squeegee, or spray equipment. Apply only on properly prepared substrates, and be sure that all bug holes, pop outs, and other surface discontinuities have been rendered with appropriate MiraPatch mortar. Apply Membrane C at a rate of 160 sq. ft. per unit or approximately 31 mils per coat which presumes a relatively smooth surface profile. For waterproofing applications, a minimum of two coats is required. A third coat may be required where high water infiltration can be anticipated.

**For Reinforcement with Poly Fabric** – Apply the first coat of Membrane C at the rate of 160 sq. ft. per unit and turn up 6" at all vertical transitions. Immediately embed Miracote Poly Fabric while Membrane C remains in a wet condition ensuring that the fabric thoroughly settles into and is saturated by the wet Membrane C. Smooth out any wrinkles in the fabric carefully with a stainless-steel trowel or other suitable tool. After approximately 2 hours or longer, apply a second coat of Membrane C at a rate of 160 sq. ft. per unit over the Miracote Poly Fabric to encapsulate and weld all three layers together.

### FOR BEST RESULTS

- Always install a minimum 4' by 4' test area site mock-up for approval of acceptable color, texture, finish, adhesion, and any other critical requirement acceptable to the owner prior to proceeding with the installation.
- 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).
- Always protect materials from excessive heat and cold, and pre-condition to room temperature as necessary.
- Regularly check wet film thickness with mil gauge and monitor consumption to ensure correct application rates are obtained.
- The proper application of this product is the sole responsibility of the end user. Job site visits by Miracote representatives are only for observing and making recommendations, and do not assume any liability for supervision, application, or quality control.
- Measure surface and ambient temperatures to ensure the material is only applied when both temperatures range between 40°F (7°C) and 90°F (32.2°C) during mixing and time of application.
- Natural gray and pigmented cementitious coatings may exhibit color variegation due to fluctuating evaporation rates during cure.
- Allow to cure for three days prior to full water immersion service.
- For required NSF-61 Certification Use: Allow to cure for seven days prior to full water immersion service.
- For enhanced color stability and performance under UV exposure service conditions, apply one or two finish coats of *Miracote MPC* or *MiraTop UCS*. Consult local sales representative or technical service.

### LIMITATIONS

- Not an aesthetic coating. *MiraFlex Membrane C* will not remain colorfast when subjected to UV exposure.
- Do not exceed wet mil thickness application rate, as stated herein.
- Avoid application when rain is anticipated, or immediately after long periods of heavy rain. Allow concrete to dry thoroughly. Perform plastic sheet test to verify, if necessary.
- Minimum and maximum ambient/substrate temperatures of 40°F (4.5°C) and rising, and 90°F (32.2°C) and falling, respectively.
- Do not apply on exterior, on-grade concrete substrates subject to potential osmotic pressures without the prior use of *MiraPrime Aqua-Blok XL*.
- Concrete structures or elements containing hydrophobic crystalline admixtures may result in substrates that will be difficult to produce acceptable adhesion. Perform in-situ pull-off testing to verify suitable and measurable tensile bond strengths.
- Use extreme caution when resurfacing scaled concrete surfaces in freeze-thaw zones due to the potential for insufficient air-entrainment. These types of unsound surfaces may continue to scale at the bond line due to migration of ground moisture freeze/thaw cycles.
- As with all cementitious products and materials, do not allow contact with aluminum surfaces to avoid adverse chemical reactions.
- Allow *MiraFlex Membrane C* to cure for a minimum of 3 days prior to performing leak testing via water methods.
- Always maintain balanced and safe water chemistry and conduct water testing on a regular basis. Chemically aggressive water may attack, and compromise the stability and performance of *MiraFlex Membrane C*. For enhanced chemical resistance apply one or two finish coats of *MiraTop UCS*.

### LIMITED WARRANTY

NO WARRANTY SHALL BE EFFECTIVE UNTIL THE TERMS AND CONDITIONS OF SALE SET FORTH IN CROSSFIELD PRODUCTS CORP. INVOICES ARE MET.

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CAUTION: ALWAYS KEEP OUT OF THE REACH OF CHILDREN



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