



# MiraFlex FRM

## System Technical Data Sheet

**MiraFlex FRM** (Fracture-Resistant Membrane) is a composite system consisting of a proprietary synthetic rubber emulsion waterproofing membrane with a fabric reinforced cementitious protection layer. Designed for use under tile, stone and other types of flooring, **MiraFlex FRM** can also be used for waterproofing concrete below grade, and split slab waterproofing applications.

The approximate thickness of the installed system will range between 3/32” (2.38 mm) and 1/8” (3.17 mm). In addition to concrete, **MiraFlex FRM** can be applied over wood, metal, and other types of substrates. Contact a local Miracote representative for technical assistance when installing over substrates other than concrete or for alternative protective topcoat product technologies.

### WHERE TO USE

- Sandwich membrane between slabs
- Raised access flooring in computer data centers
- Elevated floor slabs over occupied spaces
- Mechanical equipment rooms
- Under-tile waterproofing applications
- Waterproofing under seamless composition flooring
- Fitness centers, locker rooms and restroom facilities
- Cafeteria and food service facilities
- Hotels, hospitals and other medical buildings

### ADVANTAGES

- Provides positive side waterproofing
- Crack isolation – minimizes reflective cracking
- Thin section – minimal increase in floor elevation
- Ideal for application over new or existing floor surfaces
- Suitable for use over concrete, wood and other materials
- LEED-compliant, low odor and fast cure time.
- Meets USDA, FDA, OSHA standards.
- Fluid-applied membrane that conforms to irregular shapes
- Meets all Ceramic Tile Institute waterproofing test requirements

### SYSTEM COMPONENTS

- Membrane Option 1:** MiraFlex Membrane A (requires primer)
- Membrane Option 2:** MiraFlex Membrane C (no primer required)
- Reinforcement Mesh:** Miracote Poly-Fabric (1,000 SF/Roll)
- Protective Wear Course:** Miracote MPC

### THEORETICAL COVERAGE RATES\*

**MiraFlex Membrane A: (Membrane Layer Option 1)**  
 Primer Coat (50% dilution) .....400 sq. ft. per gal  
 1<sup>st</sup> Membrane Coat .....64 sq. ft. per gal  
 2<sup>nd</sup> Membrane Coat .....64 sq. ft. per gal

**MiraFlex Membrane C: (Membrane Layer Option 2)**  
 1<sup>st</sup> Membrane Coat .....160 sq. ft. per unit  
 2<sup>nd</sup> Membrane Coat .....160 sq. ft. per unit

**Miracote MPC: (Protective Wear Course)**  
 1<sup>st</sup> Coat (embed fabric) .....300 sq. ft. per unit  
 2<sup>nd</sup> Coat (encapsulate fabric) .....400 sq. ft. per unit

\*(Refer to individual PTDS and System Installation Guidelines)

### PACKAGING, COLORS AND MIX RATIO

Refer to individual PTDS for each system component.

### 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 and cold, and direct sunlight.

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

#### Waterproofness

Smith-Emery Laboratories Test procedure (Sample 18” diam. Subjected to 50 lbs. per inch water pressure for 60 mins. Test for amount of water forced through in grams)..... None

#### Tensile Strength & Elongation ASTM D1117

Elongation Dry .....	29.0%
Break load Dry .....	79 lbs. per inch
Elongation Wet .....	31.0%
Break load Wet .....	67 lbs. per inch

#### Strip Adhesion

Strip adhesion measured in per linear inch force required to pull up membrane. .... 19.2 tbs. per inch

#### Indentation Characteristics MIL-D-3134, Para. 4.7.4.2.1

(Steadily Applied Load)..... Less than 5% (2000 lbs. on 1” steel ram imposed for 30 mins)

#### Indentation Characteristics MIL-D-3134, Para 4.7.4

(Impacted Load)..... No cracking or Loosening (2 Steel ball dropped from 8 ft height)

#### Resistance to Elevated Temperatures

MIL-D-3134, Para. 4.7.5.1 .....No flow or slip

#### Slip-Resistance (Coefficient of Friction)

Varies depending upon surface texture selected

### OVERVIEW OF INSTALLATION STEPS

- **Surface Preparation** – All surfaces to receive **MiraFlex FRM** must be clean, sound, dry and free from any bond inhibiting substances including, but not limited to, dirt, grease, oil, and any contaminants or loosely adhered materials. For concrete substrates, a minimum surface profile of CSP-3 or higher is required depending on overall substrate conditions and coating requirements. For other substrate types, consult with a Miracote representative or Crossfield Products Corp. Technical Service Department.

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### OVERVIEW OF INSTALLATION STEPS (continued)

- **Mixing** – Prior to use, all fluid components must be pre-mixed mechanically using a low-speed drill (300-450 rpm) with a “Jiffy-type” or similar Miracote-approved mixing paddle until thoroughly blended. Refer to Installation Guidelines for each Miracote product component in the *MiraFlex FRM* system.
- **Application** –  
**Priming & Elastomeric Membrane Layer:** Refer to product technical data sheet and installation guideline for MiraFlex Membrane A (Option 1), or MiraFlex Membrane C (Option 2).  
**Cementitious Protective Wear Course:** Refer to product technical data sheet and installation guideline for Miracote MPC.

### 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 prior to use when necessary.
- Regularly check wet film thickness with mil gauge and monitor consumption to ensure correct application rates are maintained.
- The proper application of this product is the sole responsibility of the end user. Job site visits by Miracote representatives are only for observation and making recommendations, and do not assume any liability for supervision or quality control.
- Measure surface and ambient temperatures to ensure the material is only applied when temperatures are 50°F (10°C) and rising during placement and cure time.
- Pretreat concrete substrates with MiraPrime Aqua-Blok XL.

### LIMITATIONS

- *MiraFlex FRM* is not a decorative or aesthetic flooring system.
- Minimum ambient/substrate temperature of 50°F (10°C) and rising are required at the time of application.
- When using MiraFlex Membrane A for the waterproofing layer, the maximum allowable moisture vapor transmission (MVT) is 3.0 lbs./1000 sf./per 24 hr. period when tested in accordance with ASTM F1869 (CaCl Testing) or 78% RH as per ASTM F2170 (RH-Relative Humidity Testing).
- Use MiraPrime MVERS epoxy moisture mitigation primer over concrete substrates that have MVT emissions that exceed these limits prior to the application of MiraFlex Membrane A.

### 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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