



# Product Information Sheet

## MIRACOTE<sup>®</sup> MICRO-TOPPING

### Decorative Composition Cementitious Floor Traffic Coating System

#### 1. PRODUCT DESCRIPTION

##### A. Composition

Micro-Topping is a thin-section, decorative copolymer cementitious coating system, which gives the appearance of concrete but is flexible, resilient and easy to clean. It produces an extremely durable, low cost, yet attractive appearance. Typical thickness is approximately 3/32 inch (2.4 mm) and is light in weight and at approximately 1.2 lbs psf. It can be used in a wide range of climates and is offered in skid-resistant profiles. Micro-Topping basecoat material is MPC a two part (liquid and powder) material available in two natural cement colors, white and light gray. It is available in three textures: smooth, course and a blend of both. It can be integrally pigmented in a wide range of colors. The base coats can also be antiqued or chemical-stained producing coloration and texture options that provide depth, dimension and accent features unique to each application.

Micro-Topping will enhance retail stores, outlets, food and beverage service establishments, restrooms and floors in public areas, in hotels, theme parks, museums, schools and universities.

Micro-Topping is flexible and will accept a limited amount of deflection in the substrate. It can be installed over Miracote RM I and RM II underlayments over concrete when pre-smoothing or pitch is required; or over RM III, in conjunction with mechanically fastened galvanized metal lath to provide a suitable concrete-like surface over approved plywood substrates. The ability to install Micro-Topping over reinforced plywood substrate is a distinct advantage over traditional self-leveling decorative overlays.

Important characteristics of Micro-Topping are its extraordinary adhesion, coupled with its ability to withstand prolonged pedestrian and vehicular traffic. In these respects the material is far superior to conventional cementitious coatings used to resurface old or worn concrete.

Micro-Topping provides tough topcoats, which substantially reduces or prevents water penetration, freeze thaw, scaling and concrete carbonation. Each application of Micro-Topping is a unique expression of the installation contracting artist and is not a manufactured look, but rather a compilation of materials, color, skills and experience that combine to tailor an attractive architectural design accent to compliment any surrounding environment.

Mirathane APU (Aliphatic Polyester Urethane) and HD II Sealer finishcoats are available in clear or matte protective finishes. On exterior applications protected with Miracote HD II Sealer, since it is a "breathable" coating, which releases normal entrapped vapor without loosening or blistering and is suitable for an on-grade installation.

##### B. Typical Uses

- Designer Floor Surfacing
- Restoration
- Retail Stores
- Outlets
- Food and Beverage
- Restrooms
- Public Hotel Foyers
- Theme Parks
- Available for special applications over wood
- Museums
- Professional Offices
- Schools
- Universities
- Concrete Restorations
- Sidewalk Restorations
- Counter Tops

#### C. Advantages / Limitations

##### Advantages

1. Unlimited colors, design and texture
2. Variegated hues, concrete-like look
3. Excellent adhesion and weathering resistance
4. Long wearing under traffic
5. Conventional floor cleaning methods at a lower life cycle cost
6. Topping can be buff shined
7. Retards water and waterborne salt penetration
8. Resists ultra-violet degradation from long-term exposure to sunlight
9. Skid resistance underfoot
10. Moderate cost
11. Totally unique designs

##### Limitations

1. May reflect working concrete cracks.
2. Do not install in freezing weather.
3. Shade variations may occur with natural cement color material.
4. Not suitable for use in areas where acids are spilled unless specifically protected with a special acid resistant sealer.
5. Moisture vapor transmission (MVT) in excess of 4.5 lbs./1000 sq/ft/per 24 hr. period per ASTM F1869, may result in delamination, discoloration or improper curing. Use Miracote MVERS<sup>™</sup> Primer vapor control membrane over substrates, which have MVT emissions that exceed these limits. Consult with Crossfield prior to using MVERS Primer if moisture vapor transmission exceeds 15 lbs/1000 sq/ft/per 24 hr period per ASTM F1869.

#### 2. TYPICAL PHYSICAL PROPERTIES at 75°F (24°C)

##### BASE COATS

##### A. Adhesion

ASTM C882, Type 1 515 psi

##### B. Absorption

Weight gain by 4" coated concrete cube after  
21 days water immersion < 2%  
Canadian Mortgage and Housing Corp. ME 8211-09230  
(2" material cube, immersion 48 hrs.) 8.79%  
ASTM C642, 1.61%; volume of permeable voids 5.07%

##### C. Freeze Thaw

Coated concrete cylinders immersed 8 hrs in salt water  
Followed by 16 hrs freezing 50 cycles  
No scaling,  
peeling or flaking

##### D. Weathering

ASTM G23 (Weatherometer) Method 1, 60 cycles no  
visible degradation

##### E. Resistance to Wind Driven Rain

Fed Spec. TT-C-565B At 5" water or dampness shows on back of  
concrete test panels.

##### F. Compressive Strength

ASTM C579 Method A 2,440 psi

##### G. Tensile Strength

ASTM C307 465 psi

##### H. Impact Resistance

MIL-D-3134, Para. 4.7.3 (2 lb. Steel ball dropped from 8' height  
onto coated steel plate) No cracking or detachment.

- I. **Water Vapor Permeability**  
ASTM E96 1.95 perms/Inches
- J. **Flammability**  
ASTM E84 Flame Spread 4  
Smoke Density 0

**II. TOP COAT-MIRATHANE AL CLEAR:**

- A. **Top Coat Thickness** 7-9 mils
- B. **Pencil Hardness**  
ASTM D3363 3H
- C. **Impact Resistance**  
ASTM D2794 Direct – 50 in/lbs  
Reverse – 10 in/lbs
- D. **Thermal Shock**  
ASTM D1211 Good
- E. **Flexibility**  
ASTM D1737, 180° Bend, 1.2” Mandrel Passes
- F. **Chemical Resistance**  
ASTM D1308
  - Gasoline No Effect
  - Skydrol No Effect
  - Kerosene No Effect
  - Isopropyl Alcohol No Effect
  - Toluene No Effect
  - Hydrogen Peroxide (50%) Slight Stain
  - Hydrochloric Acid (25%) No Effect
  - Jet Fuel No Effect
  - Oil No Effect

**3. INSTALLATION**

- A. Miracote Installation Guideline ICH 565 describes installation procedure, substrate preparation, tools, equipment and materials required or recommended.
- B. Primer – ML Primer
- C. MPC (Multipurpose Protective Coating) – Two to three coats – Troweled or textured, in selected Powder Blend: Natural, White, Fine Regular – 50/50 Blends
- D. Integral Pigments – LIP
- E. Stains: Mirastain I – Chemical Reactive or Mirastain II - Waterbased
- F. Epoxy Topcoat – CQ Matrix – Epoxy Clear or
- G. Finishcoat – Mirathane APU or Mirathane U/A

**4. PRODUCT AVAILABILITY**

Miracote Products/Systems are available from Authorized Miracote Distributors or from Crossfield Products Corp.

**5. MAINTENANCE**

For maximum sheen and cleanability, floor should be routinely treated with conventional maintenance finish followed by ordinary buffing.

**6. SPECIFICATION ASSISTANCE**

Consult Crossfield Products Corp. for specification assistance, detailing, etc. This consultation is highly recommended prior to specification.

**7. TESTING**

The technical data contained herein is the result of tests made in Crossfield’s laboratories or in independent laboratories using small scale equipment, following generally accepted trade practices. Although this information is believed to be true and accurate, the use of different equipment for testing under dissimilar conditions or the testing of samples produced under dissimilar conditions may develop substantially different results.

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**CAUTION: ALWAYS KEEP OUT OF THE REACH OF CHILDREN.**



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