



Product Technical Data Sheet

MIRACOTE[®] MICRO-TOPPING Decorative Composition Cementitious Floor Coating System

1.) PRODUCT DESCRIPTION

A) Composition

Micro-Topping is a thin-section, composition decorative coating system, which gives the appearance of concrete but is flexible, resilient and easy to clean. Micro-Topping produces an extremely durable, low cost, yet attractive appearance. Typical thickness is approximately 3/32 of an inch (2.4 mm) and is light in weight and at approximately 1.2 lbs. per square foot. It can be used in the widest ranges of climates and is offered in slip-resistant profiles. Micro-Topping basecoat material, Miracote Protective Coating, a two component mixed material available in two natural colors, white and light gray, and available in smooth, coarse or a blend of both can also be integrally pigmented in a wide range of additional colors. The Micro-Topping 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. Miracote Mirathane AL polyurethane topcoat in clear matte or stain protects and provides the Micro-topping wear surface.

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 wave deflection in the substrate. Micro-Topping can be installed over Miracote RM I and RM II underlayments over concrete when pre-smoothing or pitch is required; or over RM Type III, in conjunction with mechanically fastened metal lath to provide a suitable concrete-like surface over most wooden substrates. The ability to install Micro-Topping over a wood substrate is a distinct advantage over traditional self-leveling decorative overlays such as SLF-D, a white colored self-leveling overlay product.

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 a tough retardant coating, which substantially reduces or prevents water penetration, freeze thaw, scaling and concrete carbonation. On exterior applications protected with the optional Miracote HD II Sealer, Miracote is a "breathable" coating, which releases normal entrapped vapor without loosening or blistering and is suitable for an on-grade installation.

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.

B) Typical Uses

- Designer Floor Surfacing
- Restoration
- Retail Stores
- Outlets
- Food and Beverage

- Restrooms
- Public Hotel Foyers
- Theme Parks
- Museums
- Professional Offices
- Schools
- Universities
- Concrete Restorations
- Sidewalk Restorations
- Counter Tops
- Available for special applications over wood

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 salt penetration.
8. Resists ultra-violet degradation from long-term exposure to sunlight.
9. Slip 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.

2.) PHYSICAL CHARACTERISTICS & TECHNICAL DATA

BASE COATS

- A) Adhesion** (ASTM C-882, Type 1).....515 p.s.i.
- 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 C-642 1.61%; volume of permeable voids 5.07%
- C) Freeze – Thaw** Coated concrete cylinders immersed 8 hrs. in salt water solution followed by 16 hrs. freezing, 50 cycles no scaling, peeling, flaking
- D) Weathering** (ASTM G23) (Weatherometer) Method 1 procedure 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 p.s.i.
- G) Tensile Strength** (ASTM C307).....465 p.s.i.
- H) Shore Hardness** (ASTM D-2440) Durometer "A" 82

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

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 ins./lbs.
Reverse – 10 ins./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

G) Installation

As each application is a unique expression of the installation contractor, kindly refer to Miracote Application Specification NO.250, which outlines the basic steps required to install Miracote Micro-Topping systems. Basic installation steps consist of the following over concrete:

- A. Primer – ML Primer
- B. Miracote Concrete Protective Coating – Two to three coats – Troweled or textured, in selected Powder Blend: Natural, White, Fine Regular – 50/50 Blends
- C. Integral Pigments – LIP or DIP
- D. Stains: Mirastain I – Chemical Reactive
Mirastain II – Water Topical
- E. Sealers- Base Epoxy ML Primer
- F. Intermediate Sealer – CQ Matrix
Epoxy Clear (OPT)
- G. Topcoat – Mirathane

3. PRODUCT AVAILABILITY

Crossfield Products Corp. maintains offices and/or factories at all addresses listed below. Factory Trained Contractors are established in all major trading areas in the United States, Canada and various European, Latin American and Far East nations.

4. MAINTENANCE

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

5. SPECIFICATION ASSISTANCE

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

6. 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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