



Product Information Sheet

MIRACOTE® MPC (MULTIPURPOSE PROTECTIVE COATING)

1. PRODUCT DESCRIPTION

A. COMPOSITION

MPC (Multipurpose Protective Coating) is a polymerized cementitious protective coating. It consists of a unique rubber-like polymer liquid mixed at the time of application with a cement aggregate blend. The material is applied in multiple coats by brush, roller, trowel or spray to a typical thickness of 3/32" (2,4mm). It can be applied over almost any clean, sound surface (concrete, block, tile, metal, masonry, wood, etc.) for a number of different floor, wall and roof uses.

Important characteristics of MPC 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.

MPC provides a tough water-retardant coating which substantially reduces or prevents water penetration, freeze-thaw scaling and concrete carbonation. It is a "breathable" coating which releases normal entrapped vapor without loosening or blistering. MPC is available in two basic colors – white and natural cement. A compatible acrylic topcoat, an optional application, is available in eighteen additional colors; plus black, white and custom matched colors. Available in three aggregate grades of texture: smooth, regular and coarse.

B. TYPICAL USES

- Concrete exterior restoration
- Parking structure protection
- Sidewalk resurfacing
- Wall refinishing and installation coating
- Stadium renovation
- Swimming pool walkways
- Balcony deck surfacing
- Concrete and masonry water tank linings

C. ADVANTAGES AND LIMITATIONS

ADVANTAGES:

1. Excellent adhesion and weathering resistance.
2. Long wearing under traffic.
3. Retards water and salt penetration.
4. Resists ultraviolet degradation from long-term exposure to sunlight.
5. Environmentally Safe – entirely water-based.
6. Skid resistant underfoot.
7. Moderate cost

LIMITATIONS:

1. May reflect working concrete cracks.
2. Do not install in freezing weather.
3. Minor shade variation may occur with natural cement color material.
4. Not suitable for us in areas where acids are spilled.

5. Efflorescence can develop as a result of the migration of water and can result in the failure of substrate or bond or discoloration of the surface.
6. Moisture vapor transmission (MVT) in excess of 6.0 lbs./1000 sq/ft/per 24 hr. period per ASTM F1869, may result in delamination, discoloration or improper curing. Use Miracote MVERS™ 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)

A. Adhesion

ACI Committee 503 > 400 psi
100% Failure in Concrete

B. Absorption

Weight gain by 4" coated concrete cube after <2%
21 days water immersion
Canadian Mortgage & Housing Corp. 8.79%
ME 8211-09230 (2" material cube, immersion 48hrs)

C. Freeze-Thaw Resistance – 50 Cycles

Coated concrete cylinder immersed No Scaling, Peeling
6 hours in salt water solution, or Flaking
followed by 16 hours freezing.

D. Weathering

ASTM G23 (Weatherometer)
Method 1 procedure, 60 cycles. No visible degradation

E. Hydrocarbon Substances Resistance

ASTM D1308 (Spot Open Test) 21 days repeated re-
application of gasoline, motor oil SAE-10, jet fuel
No softening or attack

F. Resistance to Wind-Driven Rain

Fed. Spec. TT-C-558 (8hrs) & TT-P-0035 (24hrs)
At 5" water pressure and 60 gal/hr water flow
No water or dampness noted on back of test panels

G. Compressive Strength

ASTM C109 2,440 psi

H. Tensile Strength

ASTM C190 450 psi

I. Impact Resistance

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

J. Water Vapor Permeability

E96 1.96 perms/inches

K. Flammable Properties

ASTM E84 (Steiner Tunnel Test) Flame Spread – 4
Smoke Density – 0

L. Potable Water Compatibility

Approved - U.S. Environmental Protection Agency Criteria and Standards Division office of Drinking Water (Complies with NSF/ANSI 61)

M. Fire Resistance

UL790 Complies as Class A

3. INSTALLATION

- A. Miracote Installation Guideline ICH 561 describes installation procedure, substrate preparation, tools, equipment and materials required or recommended.
- B. Prepare surfaces by removal of dirt, foreign matter plus patching in accordance with manufacturer's recommendations.
- C. Apply first coat of Miracote.
- D. Apply following coats (one or two depending on service conditions/requirements) by broom, roller, brush or spray. Finish to specified texture.
- E. Color Finish (optional) – apply acrylic color finish, when specified, in two coats by roller, brush or spray.

CAUTION: Do not install Miracote in cold weather (i.e. below 50°F/10°C) or when rainfall can be expected prior to material setting.

4. PRODUCT AVAILABILITY

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

5. CLEANING

Cleaning and disinfecting compounds and cleaning techniques can affect the color, gloss, texture and performance of the system. As a precautionary step, Crossfield recommends that the end-user test their cleaning and disinfecting compounds on a sample or on a small, out of the way finished area, utilizing the intended cleaning technique prior to cleaning the entire surface area. If no deleterious effects are observed, the procedure can be continued. If the cleaning and disinfecting compounds or cleaning techniques damage the system, modification of the cleaning material or techniques will be required. Contact your Representative for additional information.

6. MAINTENANCE

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

7. SPECIFICATION ASSISTANCE

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

8. 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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