

# MICRO-TOP<sup>®</sup> by Bomanite<sup>®</sup>

## Suggested Guideline Specification

### Notes:

1) A specifier is within his rights to issue a proprietary specification that names only one brand. If in the informed and professional judgment of the specifier, his client's needs will be best served by naming a particular brand, then he has the responsibility to limit his specification to one source. This practice is even acceptable on publicly funded projects. This principle of proprietary specification has found legal support in the case of Whitten Corp. v. Paddock Pool Builders, Inc., a Federal District Court case from Massachusetts (376 F. Supp. 125). Further support came in 1975 when the U.S. Supreme Court rejected further appeal and review.

2) This specification applies only to Micro-Top. Bomanite is most often installed as a monolithic slab on grade with a thickness of 4" or greater (which is covered by separate specifications from these). Micro-Top offers the unique ability to thinly cover a variety of surfaces such as concrete, wood, metal, plastic and asphalt with a full spectrum of cementitious color choices.

### 1.00 GENERAL

**1.01 Description** - Micro-Top includes:

#### Applications:

- 1) Interior and exterior renovation projects requiring resurfacing of damaged concrete.
- 2) New construction surfaces where elaborate design and color choices require costly multiple forming and pouring phases.
  - a. Materials: Micro-Top Liquid and Micro-Top Powder
  - b. Substrate inspection and preparation
  - c. Sealer application

**1.02 References and Standards** - The licensed Bomanite Contractor is normally a subcontractor, and the Bomanite Micro-Top process is called out in a separate section from the balance of regular concrete work in Division 9. Depending on the project, the Micro-Top may also be included in Divisions 2 or 3. The contractor for this work shall be the following Bomanite licensed contractor who has been trained and equipped by Bomanite Corporation:

Name of Bomanite contractor Carolina Bomanite Corp.  
 Address \_\_\_\_\_  
 Telephone 1-800-522-6514 Contact: John Fletcher  
 Fax \_\_\_\_\_

**1.03 Definitions** - Micro-Top by Bomanite, a system that employs the use of a troweled-on integrally colored cementitious topping to resurface vertical and horizontal surfaces on both indoor and outdoor applications. Micro-Top is approximately 20 mils thick (about the thickness of a credit card) and utilizes a full spectrum of color choices that can incorporate simple or elaborate graphic design. The work is performed on the job site by trained and experienced technicians.

**1.04 Scope** - The work designated in this section shall be specified Micro-Top by Bomanite. The work shall include all labor, material, equipment and transportation required to install the Micro-Top. The contractor for this work shall be licensed, tooled and trained by Bomanite Corporation to use the materials and processes specified as Micro-Top. The contractor shall be required to provide a foreman or supervisor who has done at least three Micro-Top projects.

### 1.05 Quality Assurance

- a. All work shall be installed by a Licensed Bomanite Contractor who shall provide a foreman or supervisor who has experience with and knowledge of special processes used to install Micro-Top. Evidence that the Bomanite Contractor is qualified to complete the project as specified herein shall be submitted to, and subject to approval of, the Architect/Designer.
- b. The Licensed Bomanite Contractor shall provide a job-site sample (100 square feet or 9.3 square meters minimum) to be approved by the Architect prior to the start of the construction. Said sample shall be the standard for the balance of the work installed, and shall be protected against damage until final approval from the Architect. The cost for the construction and protection of the referee sample shall be borne by the owner/agent and shall be part of the contractor's bid.

### 2.00 PRODUCTS AND MATERIALS

#### 2.01 Concrete Mix Design

- a. (Optional) For new construction, the concrete shall have a minimum compressive strength of 3000 psi in non-freeze areas, 3500 psi in moderate freeze-thaw areas and 4000 psi in severe freeze-thaw areas. Portland cement shall conform to ASTM C 150 Type I, II, or V, depending on soil conditions. Aggregates shall conform to ASTM C 33. Mixing water shall be fresh, clean and potable. In freeze-thaw areas only, an air-entraining admixture complying to ASTM C 260 shall be used to achieve an entrained air content for the particular mix used in accordance with the published recommendations of the Portland Cement Association and the American Concrete Institute. No admixtures containing calcium chloride shall be permitted.

#### 2.02 Coloring, Application and Sealing Materials

- a. (Optional) Reinforcement for new construction: All slabs shall conform to the guidelines and recommendations of the American Concrete Institute for reinforcement of cast-in-place concrete slabs.
- b. (Optional) Curing for new construction: All slabs shall be cured properly using conventional 5-day water cures or using membrane-forming curing agents such as Bomanite's Cure & Seal. (Note: When membrane-forming curing agents are used, it is necessary to lightly abrade the surface with a 20-grit sanding disk prior to Micro-Top application.)
- c. A semi-rigid elastomeric crack filler, \_\_\_\_\_, manufactured by \_\_\_\_\_, shall be used to fill "working" cracks and construction joints.
- d. Micro-Top Color: The surface shall be colored with the following Micro-Top color(s): \_\_\_\_\_.
- e. Sealer: All Micro-Top surfaces shall be sealed in accordance with the manufacturer's recommendations.

### 3.00 EXECUTION

#### 3.01 Installation Procedures

- a. (Optional) For new construction, concrete shall be installed in accordance with the standards and specifications of the American Concrete Institute (ACI).
- b. Concrete shall be tested in accordance with ASTM F 1869-98 and/or ASTM E 1907-97. (If concrete does not conform, call Bomanite Corporation for technical assistance.)

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- c. Interior Concrete: Concrete shall be tested for vapor emission levels in accordance with ASTM D 4263. If vapor emission levels exceed 5 lbs., Bomanite Con-Shield shall be applied according to manufacturer's recommendations.
- d. Exterior Concrete: Concrete cannot be effectively tested for vapor emission levels outdoors. If moisture problems are suspected, apply Bomanite Con-Shield following manufacturer's recommendations. Concrete subject to freeze/thaw conditions shall be treated with Bomanite Con-Shield according to manufacturer's recommendations.
- e. Concrete shall have a pH level between 7-9. (If concrete does not conform, call Bomanite Corporation for technical assistance.)
- f. Concrete shall not be soft/"dusty" due to poor curing or execution of the initial concrete installation. If found to be "dusty", apply Bomanite Con-Shield per manufacturer's recommendations.
- g. Concrete shall be a minimum temperature of 40 °F throughout application and during initial 24-hour cure.
- h. Construction joints shall be transferred through the finished surface by tooling them into the finished surface. (Optional) Construction joints may be filled using a semi-rigid elastomeric material in accordance with manufacturer's recommendations. Any working cracks should be anticipated to show through.
- i. If the surface is found to be "shiny" due to burnished concrete or high-shine type sealers, abrade the surface using a 20-grit sanding disk on a floor machine or shot blast as required.
- j. A single base-coat of Micro-Top shall be applied in accordance with the manufacturer's recommendations.
- k. After the first coat is dry to the touch, a second coat shall be applied to reach a thickness of 20 mils.
- l. A third application of Micro-Top finish coat is optional depending on desired finish and texture. This application is used primarily to achieve a smooth troweled finish.
- m. After the initial curing (10-12 hours), a sufficient build of a protective water-based acrylic sealer shall be applied to the surface.
- n. On exterior horizontal walking surfaces, a non-skid additive shall be used in the acrylic sealer.

**3.02 Protection and Maintenance** - Newly completed surfaces should be protected from water until sealed by the Bomanite Contractor. Water left on the surface before sealing could result in a white film. This will not affect the adhesion or durability and can be cleaned prior to sealing. Acids or solvent materials should not be used over the finished Micro-Top.

Regular cleaning and maintenance of interior floors shall be done in accordance with job requirements. This will vary depending on a number of factors including volume and intensity of traffic, UV exposure, geographical location and weather conditions. For instance, interior applications will require a different routine maintenance program than exterior products. Residential applications typically require less cleaning and maintenance than commercial and municipal projects. In large commercial applications, a qualified floor maintenance contractor is recommended for routine cleaning.

All Micro-Top installations should be professionally cleaned and resealed periodically by your local Bomanite contractor or a qualified floor maintenance contractor in order to maintain a top-quality appearance. In general, expect the need for professional maintenance to occur every 12-24 months. Protective maintenance coats of sealer shall be applied periodically to assure the base acrylic is protected and the desired level of gloss is maintained. Exterior Micro-Top surfaces should be resealed annually depending on traffic, especially in freeze-thaw locations.

Contact your local Bomanite contractor for the proper maintenance program in your area.

### LIMITATIONS

Micro-Top will bond tenaciously to foreign materials that are bonded to the substrate, such as cut-back adhesives, thinset grouts or high-performance coatings, but the ultimate bond strength of Micro-Top is dependent on the bond strength of the foreign material. Any questionable low-strength coatings such as release agents, bond breakers or gypsum-based material should be removed completely. When using Micro-Top over high-performance glossy coatings, the surface should be roughed up with a sanding disk. Though Micro-Top will bridge hairline cracks well and leave them less noticeable than they were originally, working cracks or control joints will reappear and should be filled with a semi-rigid elastomeric material prior to applying Micro-Top.

### CODES AND CERTIFICATION

All materials manufactured by Bomanite Corporation are warranted to be of uniform quality within manufacturing tolerances. Since control is not exercised over their use, no warranty, expressed or implied, is made as to the effects of such use. Bomanite Corporation's obligation under this warranty shall be limited to refunding the purchase price of that portion of the material proven to be defective. Please contact your local Bomanite contractor for available warranties on workmanship. Bomanite Corporation makes no warranty, expressed or implied, as to the quality of the workmanship by local Bomanite contractors.



## International Society

OVER 225 CONTRACTORS WORLDWIDE

The Bomanite International Society of licensed contractors is a worldwide network of specially trained and equipped professionals. Through constant exchange of new ideas, re-education and development programs, members of the Bomanite International Society continue to increase already high standards of quality and service.

The activities of the Bomanite International Society are coordinated by Bomanite Corporation. The Corporation also provides services and technical assistance to its member licensees, and to architects, designers and engineers specifying Bomanite products.

For more information, including a list of members of the Bomanite International Society, contact:

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