

**MDC Ceramic**

**Section 09 96 16**

**Paints and Coatings - Special Coatings**

**Summary:** MDC Ceramic is an elegant eggshell finish available in virtually any color. It may be applied by brush, roller, or spray. It incorporates ceramic microsphere, nano technology enhanced for added performance. The product has a scrub test rating of over 3000 scrub cycles and it is LEED compliant. Products are manufactured for and distributed by:

MDC Wallcoverings  
1200 Arthur Avenue  
Elk Grove, Illinois 60007  
Phone: 847-437-4000  
Fax: 847-437-4017  
Toll Free: 800-621-4006

**Applicators:** Refer potential bidders to MDC at 800-621-4006 for information and the names of applicators in the project area.

**Design Assistance:** For complete product information and/or standard color samples, please contact your MDC distributor (visit [www.mdcwallfinishes.com](http://www.mdcwallfinishes.com) for a listing) or MDC at 800-621-4006 or fax 847-437-4017.

**Drawing Coordination:** Show extent of surfaces to receive MDC Ceramic finishes on the Drawings and/or Room Finish Schedule.

**Specification Coordination:** Add, delete, or modify language as required. Coordinate this Section with related sections and with Bidding and Contract requirements.

The following should be noted when using this guide specification:

- Optional text requiring a selection by the user is enclosed within brackets, e.g.: "Section [01 34 00]."
- Items requiring user input are enclosed within brackets, e.g.: "Section [\_\_\_\_\_ - \_\_\_\_\_]."
- Optional paragraphs are separated by an "OR" statement.

This guide specification is subject to change without notice.

**SECTION 09 96 16**  
**SPECIAL COATINGS**

**PART 1 GENERAL**

**1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General Conditions, Division 01 - General Requirements, and other applicable specification sections in the Project Manual apply to the work specified in this Section.

**1.02 SUMMARY**

- A. **Scope:** Provide labor, material, equipment, related services, and supervision required, including, but not limited to, manufacturing, fabrication, erection, and application for special coatings as required for the complete performance of the work, and as shown on the Drawings and as herein specified.
- B. **Section Includes:** The work specified in this Section includes, but shall not be limited to, the furnishing and application of a water-based, low VOC, eggshell wall coating system to vertical surfaces.

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Include sections specifying the work affecting finishes. Edit list according to project requirements.

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- C. **Related Sections:** Related sections include, but shall not be limited to, the following:
1. **Preparation of Substrates:** Section 03 30 00 - Cast-in-Place Concrete.
  2. **Preparation of Substrates:** Section 04 20 00 - Unit Masonry.
  3. **Preparation of Substrates:** Section 06 20 00 - Finish Carpentry.
  4. **Preparation of Substrates:** Section 06 40 00 - Architectural Woodwork.
  5. **Preparation of Substrates:** Section 09 29 00 - Gypsum Board.

**1.03 REFERENCES**

- A. **General:** The publications listed below form a part of this Specification to the extent referenced. The publications are referred to in the text by the basic designation only. The edition/revision of the referenced publications shall be the latest date as of the date of the Contract Documents, unless otherwise specified.
- B. **ASTM (ASTM)**
1. ASTM D 2486, "Standard Test Method for Scrub Resistance of Interior Latex Flat Wall Paints."
  2. ASTM E 84, "Standard Test Method for Surface Burning Characteristics of Building Materials."
- C. **Painting and Decorating Contractors of America (PDCA):**
1. PDCA P5, "Benchmark Sample Procedures for Paint and Other Decorative Coating Systems."
- D. **South Coast Air Quality Management District (SCAQMD):**
1. SCAQMD Rule #1168, "Adhesive and Sealant Applications," including most recent amendments.

## 1.04 SUBMITTALS

- A. **General:** See Section 01 33 00 - Submittal Procedures.
- B. **Product Data:** Submit product data showing material proposed. Submit sufficient information to determine compliance with the Drawings and Specifications. Product data shall include, but shall not be limited to, the following:
1. Manufacturer's product data and application instructions.
  2. Manufacturer's literature, including, but not limited to, materials description and application instructions for each type of material specified or required.
  3. Manufacturer's published equipment checklist. Submit minimum equipment and supply requirements needed to apply the multi-color system specified.
  4. Copies of material safety data sheets for each product to be furnished.
  5. Copy of product warranty.
  6. Prior to commencement of painting, submit copies of a complete list of all materials, identified by manufacturer's name and product label or stock number. List shall be formatted to match coating systems specified in this Section.
- C. **Finish Samples:**
1. **Sample Card:** Submit two sample cards indicating manufacturer's standard selection of finish colors.

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Retain above if finishes are specified "to be selected." Retain below to verify specified or selected finish colors.

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2. **Samples:** Submit two 4 inch (102 mm) by 6 inch (152 mm) samples of each specified multi-color system pattern.
- D. **Quality Control Submittals:** Submit letter from manufacturer stating that applicator has completed manufacturer's training program.
- E. **LEED Submittals:** Submittals that are required to comply with requirements for LEED certification include, but shall not be limited to, the following:
1. **Regional Materials:** Provide product data for regional materials indicating location and distance from the Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Distance shall be within 500 miles (805 Km) of the Project Site. Include statement indicating cost for each regional material and, if applicable, the fraction by weight that is considered regional.

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Above applies to Credit MR 5.1 and MR 5.2. Below applies to Credits EQ 4.1 (Adhesives and Sealants) and EQ 4.2 (Paints and Coatings).

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2. **Low-Emitting Materials:** Submit certification by the manufacturer confirming that products (i.e., adhesives, sealants, paints, coatings, etc.) meet or exceed the volatile organic compound (VOC) limits set by specific agencies or other requirements as outlined in LEED Green Building Rating System. VOC limits shall be clearly stated in the submittal.

## 1.05 QUALITY ASSURANCE

- A. **Qualifications:**
1. **Manufacturer Qualifications:** Manufacturer shall be a firm engaged in the manufacture of decorative finishes of types and sizes required, and whose products have been in satisfactory use in similar service for a minimum of five years.

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Contact manufacturer's representative for names of trained applicators in your Project area.

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2. **Applicator Qualifications:** Applicator shall be a firm that shall have a minimum of three years of successful applications experience with projects utilizing decorative finishes similar in type and scope to that required for this Project and shall be approved by the manufacturer.
- B. **Regulatory Requirements:** Comply with applicable requirements of the laws, codes, ordinances, and regulations of Federal, State, and local authorities having jurisdiction. Obtain necessary approvals from such authorities.
  1. Comply with State and local regulations governing use of paint materials.
  2. Comply with OSHA guidelines for protective clothing, glasses, gloves, and respirators as required for Project conditions.
- C. **Mock-Ups (Benchmarks):** Prior to application of the work, fabricate and erect mock-ups for each type of finish and application required to verify selections made under sample submittals and to demonstrate aesthetic effects as well as qualities of materials and execution. Build mock-ups to comply with the following requirements, using materials indicated for final unit of work.

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Mock-ups are recommended so that full-size field samples can be approved for aesthetic control.

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1. Prepare a mock-up as per PDCA P5.
  2. Apply minimum 100 square foot (9.3 square meter) of finish system at location on the Project as directed by the Architect. Provide separate mock-up for each finish color.
  3. If accepted, mock-up shall demonstrate minimum standard for the work. Mock-up may remain as part of the work.
- D. **Pre-Application Conference:** Conduct pre-application conference in accordance with Section 01 31 19 - Project Meetings. Prior to commencing the application, meet at the Project site to review the material selections, application procedures, and coordination with other trades. Mock-ups shall be reviewed during the pre-application conference. Pre-application conference shall include, but shall not be limited to, the Contractor, the Applicator, manufacturer's representatives, and any trade that requires coordination with the work. Date and time of the pre-application conference shall be acceptable to the Owner and the Architect.
- E. **Materials:**
1. Provide materials only in factory-sealed and factory-labeled containers. Re-use of any containers for any reason shall be prohibited and shall result in work not being acceptable.
  2. Provide all coating materials and related primers from same manufacturer.
  3. Employ number of coats and undercoats for finishes pursuant to coating manufacturer's published instructions. If full coverage is not obtained with the specified number of coats, apply such additional coats as necessary to produce the required finish.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver coating materials to the job site in unopened, original containers with labels intact.
- B. Store materials on-site in tightly covered containers in an approved location. Maintain containers in storage, mixing and application of coating system in a clean condition, free of foreign materials and residue. Do not store in sunlight. Do not allow to freeze.
- C. Remove damaged or otherwise defective material from the job site.

## 1.07 PROJECT CONDITIONS

- A. Environmental conditions shall be modified only if such requirements are a part of manufacturer's published application instructions.
  - 1. Apply coating materials only when surface and air temperatures are between 50 degrees F (10 degrees C) and 80 degrees F (27 degrees C) with a relative humidity less than 50 percent for 48 hours before, during, and after the coating application.
  - 2. Application area shall be free of airborne dust and debris.
- B. Maintain minimum lighting conditions on surfaces to be coated equal to 80 footcandles (861 lx). Do not apply coating in direct sunlight.
- C. Provide adequate fresh air and ventilation during application.

## 1.08 WARRANTY

- A. **General:** See Section 01 77 00 - Closeout Procedures.
- B. **Special Warranty:** The manufacturer shall warrant the work of this Section to be in accordance with the Contract Documents and free from faults and defects in materials for a period of five years from date of Substantial Completion. This special warranty shall extend the one year period of limitations contained in the General Conditions.
- C. **Additional Owner Rights:** The warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

## 1.09 MAINTENANCE MATERIALS

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Finishes are exceptionally durable, scrubable, and cleanable. However, walls may still become damaged. The manufacturer recommends that this Section include provisions for extra material from the same production lot as the original materials for future touch-up or spray repairs. Instructions may be specified here.

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- A. **Extra Stock:** Provide [1 gallon (3.8 l)] [5 gallons (18.9 l)] of each base coat color used and [1 gallon (3.8 l)] [5 gallons (18.9 l)] of each pattern coat color used. Provide in sealed, labeled containers.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

- A. **Basis of Design:** Products specified are those as manufactured by MDC Wallcoverings. Items specified are to establish a standard of quality for design, function, materials, and appearance. Equivalent products by listed manufacturers are acceptable. The Architect will be the sole judge of the basis of what is equivalent.

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Special coating substitutions require careful evaluation of performance and appearance, as well as coordination with affected work. Coordinate the following with Division 01 and bidding requirements.

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- B. **Substitutions:** See Section 01 60 00 - Product Requirements.

1. Submit proposed substitution to the Architect no fewer than 10 days before bid date. Acceptance will be by Addendum.
2. Submit finish samples to match color of specified finishes, product data, application instructions, test reports, etc. Clearly indicate discrepancies between specified product and proposed substitution.

## 2.02 MATERIALS, GENERAL

### A. LEED Requirements:

1. **Regional Materials:** Provide a minimum of [10 percent (based on cost)] [and an additional 10 percent beyond Credit MR 5.1 (total of 20 percent, based on cost)], of building materials that are regionally extracted, processed, and manufactured.

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Above applies to Credit MR 5.1 and MR 5.2. Retain first indicated option above for Credit MR 5.1, retain both options for Credit MR5.2. Below applies to Credits EQ 4.1 (Adhesives and Sealants) and EQ 4.2 (Paints and Coatings).

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2. **Low-Emitting Materials:** Use adhesives, sealants, paints, coatings, etc., that comply with the specified limits for VOC content when calculated according to SCAQMD Rule #1168. See LEED Green Building Rating System for VOC content limits.

## 2.03 COATING SYSTEM

### A. Product: "MDC Ceramic Enhanced Finish Coating" as distributed by MDC Wallcoverings.

1. System shall consist of a primer (if required), and a water-based, low VOC, eggshell finish coat.
2. Color and texture shall be as indicated on the Drawings and/or Color Schedule or, if not indicated, as selected by the Architect.

### B. Primers:

1. **New Gypsum Board:**
  - a. **Basis of Design:** "PrimeSeal," as distributed by MDC Wallcoverings.
2. **Cured New Plaster:**
  - a. **Basis of Design:** "PrimeSeal," as distributed by MDC Wallcoverings.
3. **Painted Surfaces:** Primer may be desirable to extend coverage and/or provide a uniform sealed surface.
  - a. **Basis of Design:** "PrimeSeal," as distributed by MDC Wallcoverings.
4. **Painted Surfaces (Semi-Gloss/Gloss):** Primer be desirable to extend coverage and/or provide a uniform sealed surface.
  - a. **Basis of Design:** "SlickBond," as distributed by MDC Wallcoverings.
5. **Ceramic Tile/Glazed Block:**
  - a. **Basis of Design:** "SlickBond," as distributed by MDC Wallcoverings.
6. **Plastic Laminate:**
  - a. **Basis of Design:** "PrimeSeal," as distributed by MDC Wallcoverings.
7. **Fiberglass:**
  - a. **Basis of Design:** "SlickBond," as distributed by MDC Wallcoverings.
8. **Interior Ferrous Metal:**
  - a. **Basis of Design:** "SlickBond," as distributed by MDC Wallcoverings.
9. **Non-Ferrous Interior Metal:**
  - a. **Basis of Design:** "SlickBond," as distributed by MDC Wallcoverings.
10. **Cured Concrete/Masonry:**
  - a. **Basis of Design:** "PrimeSeal," as distributed by MDC Wallcoverings.
11. **Concrete Block:** High quality, commercial grade 100 percent latex acrylic block filler (if required to seal surface for better coverage).

12. **Wood:** Spot-prime knots and prime with one coat of a high quality, commercial grade suitable stain-blocking primer.

C. **Finish:**

1. **General:** Water-based, ceramic enhanced coating.
  - a. **Basis of Design:** "MDC Ceramic Enhanced Finish Coat," as distributed by MDC Wallcoverings.
2. **Characteristics:**
  - a. **VOC Content:** Less than 50 g/l minus water.
  - b. **Volume Solids:** 33 percent to 34 percent.
  - c. **Solids by Weight:** 47 percent to 48 percent.

D. **Optional Topcoat (Only as Indicated on the Drawings):** Water-based acrylic urethane clear coating (satin or gloss finish as indicated, or, if not indicated, as selected by the Architect).

1. **Basis of Design:** "Pearl-Protector," as distributed by MDC Wallcoverings.

E. **System Performance Criteria:**

1. **Fire:** ASTM E 84, Class A or Class I, flame spread of 15 and smoke developed of 5.
2. **Stain Resistance:** ASTM 2450, excellent.
3. **Scrub Resistance:** ASTM D 2486, exceeds 3000 scrub cycles.
4. **Finish:** Eggshell (6 percent to 8 percent gloss at 60 degrees).

## 2.04 APPLICATION EQUIPMENT

A. **Primer Coat:** Apply with one of the following depending on application methods:

1. **Spray:** Commercial grade sprayer equivalent to a "Graco 395" or larger with minimum tip size 0.015 with a minimum pressure of 2000 psi (13,790 kPa).
2. **Roller:** 1/4 inch (6 mm) to 3/8 inch (10 mm) synthetic roller.
3. **Brush:** Synthetic fiber brush.

B. **Finish Coat:**

1. **Spray (Preferred Method):** Commercial grade sprayer equivalent to a "Graco 395" or larger with minimum tip size 0.015 and minimum pressure of 2000 psi (13,790 kPa).
2. **Roller:** 1/4 inch (6 mm) to 3/8 inch (10 mm) synthetic roller.

C. **Clear Coat:**

1. **Spray:** Commercial grade four-stage HVLP equipment equivalent to a "CapSpray 9100" with a #3 nozzle or a "Graco 4900" with a #3 nozzle.

## PART 3 EXECUTION

### 3.01 EXAMINATION

- A. **Verification of Conditions:** Examine areas and conditions under which the work is to be applied, and notify the Contractor in writing, with a copy to the Owner and the Architect, of any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.
1. Verify that substrates are ready to receive work of this Section and are in accordance with coating manufacturer's requirements. Report any conditions that would adversely affect the appearance or performance of the coating systems.
  2. Beginning of the work shall indicate acceptance of the areas and conditions as satisfactory by the Applicator.

### 3.02 PREPARATION

- A. **Surface Preparation:** Perform surface preparation, including, but not limited to, cleaning procedures, pursuant to coating manufacturer's published instructions and as specified for each particular substrate and coating condition.
1. Remove fixtures and other items not scheduled to receive coating, or provide surface-applied protection prior to surface preparation and coating application. Upon completion of coating work in each area, re-install removed items.
  2. Surfaces shall be cured, sound, and clean prior to coating system application. Remove dust, dirt, mildew, form oils, and similar surface contaminants.
  3. Completely remove existing painted surfaces exhibiting loose, flaking, or oxidized paint. Use sand-blasting, water-blasting, electric-sanding, or wire-brushing for paint removal, and pursuant to coating manufacturer's published instructions.
  4. Fill large cracks, holes, and voids with an appropriate patching compound. Texture patched finish to match existing adjacent finish surface.
  5. Seal wall joint intersections with urethane-based sealant.
  6. Mask adjacent areas not scheduled to receive coating system.
  7. Remove wallpaper paste residue, grease, tar, nicotine, and similar surface contaminants. Clean with TSP solution or acceptable equivalent. Thoroughly rinse.
  8. Spot prime any remaining stains or marks with a high quality, commercial grade suitable stain-blocking primer.
- B. **Material Preparation:**
1. Mix and prepare coating system materials pursuant to coating manufacturer's published instructions.
  2. Store materials not in actual use in tightly covered containers. Maintain containers used in storage, mixing, and application of coatings in a clean condition, free of foreign materials and residue. Do not store in sunlight. Do not allow to freeze.
  3. Stir materials before application to produce a mixture of uniform density, and stir as required during application. Do not thin. Verify colors prior to starting work.

### 3.03 APPLICATION

- A. Apply coatings pursuant to manufacturer's published instructions. Use applicators and techniques best suited for substrate and type of material applied.
- B. Apply required primers pursuant to manufacturer's recommendations and instructions.
1. Apply as many coats as necessary to produce a uniform substrate condition.
  2. Re-prime as needed to correct suction or hot spots on substrate prior to applying finish coat.
  3. Over wood and gypsum board, sand primer with 100 grit or finer sand paper. Thoroughly remove dust from sanding with clean, damp rag.
  4. Permit primer to fully dry prior to application of finish coat.
- C. Apply ceramic finish coat over properly prepared substrate, including primer if required, at the manufacturer's specified coverage rate.
1. Primer (if required) shall be applied and cured under acceptable environmental conditions prior to finish coat application.
  2. Apply as a uniform, pinhole-free, continuous film at 4.0 mils (0.10 mm) wet. Estimate coverage rate shall be 400 square feet per gallon (9.6 square meters per liter) to 450 square feet per gallon (10.8 square meters per liter) on smooth surface.
- D. Apply clear coat (only as indicated on schedule) pursuant to manufacturer's published instructions.
1. Allow coating system to dry hard to the touch prior to application, but apply within 48 hours.

2. Apply as a uniform, pinhole-free, continuous film. Estimate coverage rate shall be 400 square feet per gallon (9.6 square meters per liter).

- E. Apply each coat to a natural break point such as an edge or corner without stopping.
- F. Finish shall match approved field mock-up samples and shall be free of sags, holidays, and excessive irregularities/unevenness.
- G. Stop immediately and contact the Architect and manufacturer's representative if any difficulties should occur during application.

### **3.04 FIELD QUALITY CONTROL**

- A. See Section 01 45 23 - Inspecting and Testing Services.
- B. Samples of materials being used on the job may be taken at any time at discretion of the Architect for compliance with specified requirements.

### **3.05 ADJUSTING AND CLEANING**

- A. Remove discarded coating materials, rubbish, cans, rags and similar construction waste from site at the end of each work day. Clean any areas that have received coating overspray or spillage.
- B. Protect work of other trades, whether to be coated or not, against damage by coating and finishing work. Correct any damage by cleaning, repairing and/or replacing, and re-coating as acceptable to the Architect.

### **3.06 PROTECTION**

- A. Provide final protection and maintain conditions in a manner acceptable to the Applicator, that shall ensure that the special coatings shall be without damage at time of Substantial Completion.

**END OF SECTION**