

ARMOR[™] Finish

Section 09 94 00

Paints and Coatings - Decorative Finishes

Summary: Scuffmaster Armor is an exceptionally durable and cleanable multi-tone or tone-on-tone paint finish system for walls. Finish system components are formulated with cross-linked polyurethane coatings, resulting in a lower life cycle cost than standard acrylic latex paints because of less damage from abrasion and increased ease of cleaning. Scuffmaster Armor textured finish is known as The World's Toughest Paint because it will withstand more than 25,000 ASTM scrub test cycles (vs. only 3900 for the leading water-based textured competitor). All Scuffmaster finishes are created with water-based coatings for low VOCs and convenient low-odor application. In addition, all Scuffmaster finish products have a Class A or Type I fire rating.

Applicators: Refer potential bidders to MCT at 800-898-0219 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 Scuffmaster distributor (visit www.scuffmaster.com for a listing) or MCT at 800-898-0219 or fax 612-722-8853.

Drawing Coordination: Show extent of surfaces to receive Scuffmaster Armor 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 00

HIGH PERFORMANCE 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 high performance coatings as required for the complete performance of the work, and as shown on the Drawings and as herein specified.
 - 1. This product shall meet or exceed this criteria. Paint shall contain anti-microbial to inhibit the growth of mold, mildew, and bacterial from setting up on the dried paint film. The product shall meet or exceed the LEED standards and shall meet or exceed 25,000 scrub cycles on the ASTM D 2486 test.
- B. **Section Includes:** The work specified in this Section includes, but shall not be limited to, the following:
 - 1. Surface preparation.
 - 2. Water-based polyurethane/acrylic textured paint finish system.

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

- 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 1308, "Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes."
 - 2. ASTM D 2486, "Standard Test Method for Scrub Resistance of Interior Latex Flat Wall Paints."
 - 3. ASTM D 2794, "Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact)."

4. ASTM E 84, "Standard Test Method for Surface Burning Characteristics of Building Materials."
5. ASTM G 53, "Standard Practice for Operating Light- and Water-Exposure Apparatus (Fluorescent UV - Condensation Type) for Exposure of Non-Metallic 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 SYSTEM DESCRIPTION

A. **Performance:**

1. **VOC:** Coatings shall have less than 110 g/l of VOC's.
2. **Fire Rating:** Coatings shall be Type I or Class A fire-rated, ASTM E 84.
3. **Scrub Test:** Greater than 25,000 cycles, ASTM D 2486.
4. **Impact Resistance:** Greater than 160 in/lbs, ASTM D 2794.
5. **Chemical Resistance:** 10 (test maximum) for all chemicals tested, ASTM D 1308.
6. **QUV Accelerated Weathering:** Greater than 95 percent gloss retention after 500 hours, ASTM G 53.
7. **Stain Removal:** 8 to 10 (test maximum) for all stains tested, four-hour Open Spot Test.

1.05 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, manufacturer's product data and application instructions.

1. Submit written proof of approval by the manufacturer and written acknowledgement that equipment to be used is approved by finish system manufacturer.

C. **Finish Samples:**

1. **Sample Card:** Submit two sample cards indicating manufacturer's standard selection of finish colors.

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

2. **Samples:** Submit two 4 inch (102 mm) by 5 inch (127 mm) samples of cardboard with specified or selected finish colors.
3. **Control Samples:** Submit two samples of each finish color to ensure ability to reproduce selected finishes.

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.

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).

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.

1.06 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.
 - a. Manufacturer to certify they make all materials in this Section.
 - b. All materials within special coatings section including, but not limited to, finishes, and primers shall be supplied by one manufacturer.

Contact Scuffmaster or your local Scuffmaster representative for names of trained applicators in your Project area.

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.
 - a. Applicator shall certify in writing that technicians utilized for work in this Section have been trained by the manufacturer or its representative.
 - b. Applicator shall include in his certification that specialized equipment as required by the manufacturer shall be used for work in this Section.
- 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.
- 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.

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

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.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. See Section 01 60 00 - Product Requirements.
- B. Deliver materials in unopened containers with manufacturer's labels intact.
- C. Protect materials from freezing.
- D. Store between 50 degrees F (10 degrees C) and 80 degrees F (27 degrees C).

1.08 PROJECT CONDITIONS

- A. Apply coating under following conditions:
 - 1. Temperature of air and substrate is between 50 degrees F (10 degrees C) and 80 degrees F (27 degrees C). Relative humidity shall be less than 50 percent.
 - 2. Prevent wide temperature fluctuations that could cause moisture condensation on freshly coated surfaces.
 - 3. Application areas shall be free of excessive dust.
- B. Maintain minimum 80 footcandles (861 lx) on surfaces to be coated.
- C. Provide adequate fresh air and ventilation during application.

1.09 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.

1.10 MAINTENANCE MATERIALS

Scuffmaster textured 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.

- 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 Master Coating Technologies. 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.

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.

- 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

- 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.

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).

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.
- B. **Primer:** Provide primer recommended by manufacturer for substrate.
1. **Concrete and Masonry:** Suitable heavy-bodied latex vinyl acrylic block filler (if filling pores is desired). Provide manufacturer's recommended product if uniform base color with pores exposed is desired.
 - a. **Basis of Design:** "Primemaster Primer/Sealer," Master Coating Technologies.
 2. **Primed Metals:** No primer required.
 3. **Unprimed Metals:** In accordance with the manufacturer's recommendations.
 4. **New Gypsum Board:**
 - a. **Basis of Design:** "Primemaster Primer/Sealer," Master Coating Technologies.
 5. **Ceramic Tile and Glazed Block:**
 - a. **Basis of Design:** "Primemaster Bonding Primer," Master Coating Technologies.

For other substrates, contact the manufacturer for recommended primers. Submit sample of vinyl wall coverings or plastics for evaluation.

6. **Vinyl Wall Covering and Plastic:** In accordance with the manufacturer's recommendations.
- C. **Textured Finish System Components:**
1. **Base Coat:** Water-based polyurethane/acrylic base coat and cross-linker.
 - a. **Basis of Design:** "Scuffmaster PC200," Master Coating Technologies.

2. **Pattern Coat:** Water-based polyurethane/acrylic pattern coat and cross-linker.
 - a. **Basis of Design:** "Scuffmaster AC1200", "Scuffmaster AC1200", or "Scuffmaster AC1200M," Master Coating Technologies.
3. **Miscellaneous Materials:** Surface patching compounds and other materials necessary for application of finish system shall be of high quality and compatible with coating system.

2.03 EQUIPMENT

Proprietary equipment for spraying pattern coat materials is available from Scuffmaster distributors. Contact MCT at 800-898-0219 for information.

- A. Spray or roll primers and base coats in accordance with manufacturer's instructions.
- B. Spray pattern coats using manufacturer's proprietary spray equipment only. Contact local manufacturer representative or contact the manufacturer before bidding this work.

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. **Protection:** Mask adjacent surfaces to protect from overspray. Protect floors and other surfaces with drop cloths.
 1. Remove items which are not to be coated from surfaces that are to be coated. Tag and protect removed items and store until re-installation. Re-install items after completion of coating application. Items which are not to be coated include, but shall not be limited to, operating hardware, electrical device plates, and factory-finished items.
 2. Patch and repair substrates as specified in applicable specifications sections. Clean substrates. Remove dirt, grit, loose materials, grease, oil, temporary protective coatings, contamination, other foreign materials, etc. Sand with 100 grit or finer sand paper, spackle, putty, and caulk existing surfaces to produce smooth and uniform substrates. Spot-prime existing water-soluble stains with alcohol or oil-based stain killing primer. Touch-up painted or primed surfaces with compatible paint or specified primer.
- B. **Concrete:** Remove high spots, fill holes and clean surfaces as specified in Section 03 30 00 - Cast-In-Place Concrete. Allow new concrete to cure a minimum of 28 days prior to application of coatings.
- C. **Masonry:** Tool joints and clean surfaces as specified in Section 04 20 00 - Unit Masonry. Rinse off cleaning solutions and allow surface to dry. Allow new mortar to cure a minimum of 28 days prior to coating.

- D. **Ferrous Metals:** Remove rust and mill scale. Wire brush or sand damaged or rusted areas to bright metal. Remove grease and other foreign materials with mineral spirits. Touch-up damaged areas of shop primer.
- E. **Aluminum:** Thoroughly degrease using non-hydrocarbon solvent cleaner. Etching is recommended before priming if possible. As an alternative, use a wash primer prior to the paint application.
- F. **Non-Ferrous Metals:** Clean with lacquer thinner.
- G. **Wood:** Sand smooth and free of marks as specified in Section 06 20 00 - Finish Carpentry. Wash sap spots and knots with mineral spirits. When dry, cover spots and knots with two coats of shellac.
- H. **Plaster:** Allow new plaster to cure a minimum of 28 days prior to coating.
- I. **Gypsum Board:** Apply joint tape and compound to joints, fastener heads, dents, and surface flaws as specified in Section 09 29 00 - Gypsum Board. Sand smooth and flush with adjacent surfaces. Thoroughly clean sanded areas of dust with a clean damp rag.
- J. **Ceramic Tile and Glazed Block:** Thoroughly clean off oil, wax, grease, and other residues. De-gloss with either mechanical abrasion or chemical etch. Remove sanding dust with a clean, wet rag.
- K. **Vinyl Wall Covering:** Comply with manufacturer's written recommendations.
- L. **Previously Painted Surfaces:** De-gloss (if necessary) and re-prime previously painted substrates with manufacturer's recommended primer.

For other substrates, contact the manufacturer for preparation recommendations. Scuffmaster finishes are not recommended for shower stalls, floors, other horizontal surfaces or areas subject to extremely heavy abuse. String patterns may not be possible to apply on ceilings.

3.03 APPLICATION

- A. Applicator shall apply coatings in accordance with manufacturer's written instructions and using manufacturer-approved equipment.
 - 1. Closets and storage areas shall be finished inside in the same manner as adjoining rooms.
 - 2. Finish HVAC registers and grilles and other items located in surfaces to receive coatings.
- B. Apply as many primer coats as necessary to produce a uniform substrate appearance. Do not exceed manufacturer's recommended coverage rate. Allow to dry prior to application of subsequent coats.
- C. Re-prime suction and hot spots on substrate prior to applying base coatings.
- D. Over wood and gypsum board, sand primer with 100 grit or finer sand paper. Thoroughly remove dust from sanding with a clean, wet rag.
- E. Apply textured finish system in two steps.
 - 1. Spray or roll base coats to completely cover primer and according to manufacturer's written instructions. Apply in a continuous even film at manufacturer's specified coverage rate.
 - 2. Spray pattern coat using manufacturer's proprietary spray equipment. Adjust spray tip size and air pressure for specified finish according to manufacturer's written instructions. Apply

pattern coat uniformly to match approved finish standard and at manufacturer-specified coverage rates. Slight variations in particle size, shape, and density shall be normal for textured coatings.

- F. Apply each coat to a natural break point such as an edge or corner without stopping.
- G. Finishes shall match approved benchmark samples and shall be free of runs, sags, holidays, and excessive irregularity/unevenness of pattern coat. Transitions between colors and/or other materials shall be sharp, clean and without overlaps.

3.04 INSPECTION

- A. Request acceptance of each coat before applying succeeding coats.
- B. Touch-up and repair unacceptable work.
- C. Protect finished areas from damage.

3.05 CLEANING

- A. Clean overspray and spills. Remove masking.
- B. Repair damage to coatings and surfaces caused by clean-up activities.

3.06 PROTECTION

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

3.07 COATING SCHEDULE

- A. **General:** Scheduled number of coats is in addition to surface preparation specified above.

Refer to coating schedule included in manufacturer's Finish Data for the type of finish being specified. Edit the following paragraph to include only those surfaces applicable to the project.

- B. **Substrate Type:** [_____].
 - a. **Primer:** See manufacturer's Finish Data Sheet.
 - b. **Base Coat:** "Scuffmaster PC200," Master Coating Technologies.
 - c. **Pattern Coat:** "Scuffmaster AC1200M," Master Coating Technologies.

3.08 FINISH STYLE/COLOR SCHEDULE

Utilize the Section to specify styles and colors if not indicated on drawings or in the room finish schedule.

- A. **Color/Finish Number, Surface No. [_____]:** "Scuffmaster Armor, Color No. [_____]," Master Coating Technologies.
- B. **Color/Finish Number, Surface No. [_____]:** "Scuffmaster Armor, Color No. [_____]," Master Coating Technologies.

- C. **Color/Finish Number, Surface No. []:** “Scuffmaster Armor, Color No. [],” Master Coating Technologies.

END OF SECTION