



ELASTOCOLOR COAT

100%-Acrylic Waterproof Coating for Above-Grade Concrete, Masonry, Stucco, EIFS and FRP Composite Systems

SECTION 09 97 23 CONCRETE AND MASONRY COATINGS

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Surface preparation and field application of exterior coating systems to new and previously painted items and surfaces scheduled.
 - 1) Concrete
 - 2) Concrete Masonry Units
 - 3) Brick Masonry
 - 4) Stucco
 - 5) Exterior Insulation Finish System (EIFS)

1.2 REFERENCES

- A. ASTM International (ASTM), www.astm.org
 - 1) ASTM D412, Tensile Properties for Thermoplastic Elastomers
 - 2) ASTM D3273, Resistance to Growth of Mold
 - 3) ASTM D6695, Xenon Arc Exposures of Paint and Related Coatings
 - 4) ASTM D1653, Water Vapor Transmission of Organic Coating Films
 - 5) ASTM D6904, Resistance to Wind-Driven Rain for Exterior Coatings
 - 6) ASTM D3359, Measuring Adhesion by Tape Test
 - 7) ASTM D2697, Volume of Nonvolatile Matter in Coatings
 - 8) ASTM D638, Tensile Properties of Plastics
- B. EPA Method 24 Determination of Volatile Matter Content, Water Content, Density, Volume Solids and Weight Solids of Surface Coatings
- C. South Coast Air Quality Management District, Rule 1113, Architectural Coatings

2. SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used. Include manufacturer's Material Safety Data Sheets.
- B. Color Samples: A sample of each color shall be applied to the building for color approval by the project owner's representative.

3. QUALITY ASSURANCE

- A. Manufacturer's Qualifications: The manufacturer shall be a company with at least twenty years of experience in manufacturing specialty coatings and regularly engaged in the manufacture and marketing of products specified herein. The manufacturer shall have an ISO 9001:2000 certified quality system.
- B. Installer's Qualifications: The contractor shall be qualified to perform the work specified by reason of experience. A list of project references should be submitted with company's proposal.
- C. Mock-ups: The contractor shall install a mock-up using proposed application means and methods to a wall area for evaluation and approval by the design professional, building owner or owner's representative/quality assurance agent. Mock-up shall be of sufficient size to adequately demonstrate proposed application means and methods.
- D. Conduct tests in accordance with ASTM D3359 on mock-ups to verify adhesion of the installed primer and topcoat to the prepared substrate. Allow the coatings a minimum of 7 days' curing prior to performing the test. Report results to the design professional, building owner or owner's representative/quality assurance agent.
- E. Conduct tests during coating installation as directed by the design professional, building owner or owner's representative/quality assurance agent to verify adhesion throughout the course of the installation.

4. PRE-BID CONFERENCE

- A. A pre-bid conference of all intended bidders, owner's representative(s), project specifiers and a MAPEI representative needs to review specifications, review the owner's final scope of work and establish project requirements of all parties involved.
- B. All bidding firms are required to attend the pre-bid conference.

5. DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45°F (7°C). Maintain storage containers in a clean condition, free of foreign materials and residue.
- C. Handle products in accordance with manufacturer's printed recommendations.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: MAPEI Corporation, 1144 E. Newport Center Drive, Deerfield Beach, Florida 33442.
- B. Substitutions: Any product substitutions must be in writing and approved by specifier. All substitutions must meet performance and physical properties of the specified product for consideration.

2.2 COATING MATERIALS – GENERAL

- A. Material Compatibility: Provide block fillers, primers and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- B. VOC Classification: Provide high-performance coating materials, including primers, undercoats and finish-coat materials, that meet the applicable local, state or federal VOC requirements.
- C. Color: Refer to Finish Schedule and Paint Legend for paint colors.

2.3 PRIMERS

MAPEI Elastocolor coatings have been developed to obtain satisfactory adhesion without the use of a primer. Depending on the condition of the substrate, a primer may be needed to promote adhesion. A field adhesion test should be conducted to determine whether a primer is needed.

- A. Primer: MAPEI Elastocolor Primer AR will be applied to new cementitious substrates with elevated pH or other porous cementitious substrates at a rate of 100 to 300 square feet per U.S. gallon (2.45 to 7.35 m² per L).
- B. Primer / Surface Conditioner: MAPEI Elastocolor Primer WB will be applied to all direct to weather surfaces that are displaying “chalky conditions” at the approximate rate of 300 to 400 square feet per U.S. gallon (7.35 to 9.8 m² per L).

2.4 EXTERIOR COATING SYSTEMS

- A. Finish Coating for vertical, above-grade stucco, concrete or masonry, or weathered previously acrylic-coated masonry substrates on the exterior of the building.
 - 1) Two finish coats of MAPEI Elastocolor Coat over primer (where specified)
 - a) Performance and physical properties for topcoat: Must meet or exceed the following values for material cured at 73°F (23°C) and 50% relative humidity (unless otherwise specified):
 - b) Touch-dry: 3 to 5 hours, depending on ambient conditions
 - c) Solids: 44.9% by volume, per ASTM D2697
 - d) Application: Spray, roller or brush
 - e) Water vapor permeability: 22.7 perms, tested at 10 dry mils applied in 2 coats per ASTM D1653
 - f) Accelerated weathering: No cracking, peeling, blistering or other deleterious effects after 10,000 hours of exposure, per ASTM D 6695
 - g) Tensile strength: 130 psi (0.90 MPa) minimum per ASTM D638, or 388 psi (2.68 MPa) per ASTM D412
 - h) Mold resistance: No mold growth at 28 days, per ASTM D3273
 - i) Wind-driven rain resistance: PASS, no weight gain, per ASTM D6904
 - j) Elongation (at break): 650% per ASTM D638, or 242% per ASTM D412
 - k) VOCs: ≤ 50 g/L, meets U.S. EPA (40 CFR 59) emission standards for architectural coatings, complies with SCAQMD Rule 1113

2.5 ACCESSORY MATERIALS

- A. MAPEI Mapeflex EMC-1 smooth, brush-grade, elastomeric patching compound

- B. Other materials not specifically indicated but required to perform the scope of work specified must be of commercial quality.

PART 3 – EXECUTION

3.1 PREPARATION

- A. General Surface Preparation
 - 1) All surfaces must be clean, dry, sound, and free of frost and contamination such as mildew, dirt, grease, oils, salts, efflorescence and any other contamination that might affect adhesion.
 - 2) Use appropriate repair methods for the substrate to repair pitting, spalls, cracks, peeling, blistering, delamination, water damage or other defects that may exist. Repair any defects in the structure such as failed or omitted sealants, absence of flashing or coping, leaky windows, or other conditions that could allow water to enter into or behind the substrate.
 - 3) Hairline cracks up to 1/16 inch (1.5 mm) can be repaired with Mapeflex EMC-1 elastomeric patching compound. Prepare surfaces and apply elastomeric crack filler in accordance with manufacturer's written instructions. Remove excess material and feather into existing texture of the surface.
 - 4) Remove any loose, scaling, cracked or peeling coating from previously coated surfaces by chemical or mechanical means. Pressure washing is recommended. Follow necessary safety precautions and adjust pressure to avoid damage to the underlying substrate.
 - 5) Mold and mildew: Surface areas affected by mold and mildew should be treated with a commercial mildew removal and/or wash product carefully, following manufacturer's application and safety directions. Rinse thoroughly with clean water and allow a minimum of 24 hours to dry thoroughly.
 - 6) Coordinate installation with adjacent work to ensure proper sequence of construction. Protect adjacent areas and landscaping from contact due to mixing, handling and installation of materials.

3.2 CEMENTITIOUS SUBSTRATES

- A. Prepare concrete, brick, concrete masonry block and cement plaster surfaces to be coated.
- B. Remove efflorescence, chalk, dust, dirt, grease, oils and form-release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods to prepare surfaces.
- C. Use abrasive blast-cleaning methods if recommended by coating manufacturer.
- D. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish coating to blister and burn, correct this condition before application. Do not coat surfaces if moisture content exceeds that permitted in the manufacturer's written instructions.
- E. Clean and prepare surfaces to be coated according to manufacturer's written instructions for each particular substrate condition and as specified.

3.3 MIXING

- A Mix for approximately 3 minutes using a slow-speed drill and paddle to a uniform consistency. Avoid entrapping air in the liquid during mixing.

3.4 APPLICATION

- A. Read all installations instructions thoroughly before installation. Contact MAPEI's Technical Service Department for more detailed recommendations.

Specifier: This section is to be amended to reflect the appropriate system selection in Section 2.03
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- 1) Apply Elastocolor Primer AR evenly with brush, roller or proper spray equipment to properly prepared previously painted or new cementitious substrates or other porous cementitious substrates at a rate of 100 to 300 square feet per U.S. gallon (2.45 to 7.35 m² per L).
- 2) Apply Elastocolor Primer WB evenly with brush, roller or proper spray equipment to properly prepared mildly chalking substrates at the approximate rate of 300 to 400 square feet per U.S. gallon (7.35 to 9.8 m² per L).
- 3) Finish Coating:
 - Apply one coat at 12 wet mils (5 mils DFT) of MAPEI Elastocolor Coat.
 - Apply second coat at 12 wet mils (5 mils DFT) of MAPEI Elastocolor Coat.
 - Final thickness of MAPEI Elastocolor Coat will be 5 dry mils per coat.

3.5 GENERAL NOTES

- A. Contractor shall protect his/her work at all times and shall protect all adjacent work and materials by suitable covering or other methods during progress of work. The contractor will protect all adjacent areas not to be coated by taking appropriate measures. Areas to be protected are windows, brick, surrounding lawn, trees, shrubbery, floor and steps. Upon completion of work, he/she shall remove all over-spray from floors, glass, concrete and other surfaces not specified to be coated.

3.6 CONFLICT RESOLUTION

- A. Contractor shall be responsible for requesting prompt clarification when instructions are lacking, when conflicts occur in the specifications and/or coating manufacturer's literature, or the procedures specified are not clearly understood. Any questions concerning these specifications should be clarified prior to commencing the job. Small sample areas of each phase work shall be completed and checked by the owner's representative. This will serve, upon acceptance, as the job standard for the remainder of that phase of work.

END OF SECTION