

**MAPEI Elastocolor Flex**

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

**SECTION 09 96 53**

**ELASTOMERIC COATINGS**

**PART 1 - GENERAL**

1. **SUMMARY**
   1. Section includes substrate preparation and field application of exterior coating systems to items and surfaces scheduled.
   2. Concrete
   3. Concrete Masonry Unit
   4. Brick Masonry
   5. Stucco
   6. Exterior Insulation Finish System (EIFS)
2. **REFERENCES**
3. ASTM International (ASTM) www.astm.org
4. ASTM D 638, Tensile Properties for Plastics
5. ASTM D 522, Mandrel Bend Test of Attached Organic Coatings
6. ASTM D 3273, Resistance to Growth of Mold
7. ASTM D 638, Tensile Properties for Plastics (and Elongation at break)
8. ASTM D 6695, Xenon Arc Exposures of Paint and Related Coatings
9. ASTM E 96, Water Vapor Transmission of Materials
10. ASTM B 117, Operating Salt Spray Apparatus
11. ASTM D 6904, Resistance to Wind Driven Rain for Exterior Coatings
12. ASTM D 3359, Measuring Adhesion by Tape Test
13. EPA Method 24 Determination of Volatile Matter Content, Water Content, Density, Volume Solids and Wright Solids of Surface Coatings
14. South Coast Air Quality Management District, Rule 1113, Architectural Coatings
15. US Green Building Council (USGBC) www.usgbc.org

1. **SUBMITTALS**
2. Product Data: Submit manufacturer's product data and installation instructions for each material and product used. Include manufacturer's Material Safety Data Sheets.
3. Color Samples: A sample of each color shall be applied to the building for color approval by the project owner’s representative.
4. **QUALITY ASSURANCE**
5. 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 a ISO 9001:2000 certified quality system.
6. 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.
7. 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. Mockup shall be sufficient size to adequately demonstrate proposed application means and methods.
8. Conduct tests in accordance with ASTM D 3359 on mock-up to verify adhesion of installed primer and top coat to prepared substrate. Allow the coatings a minimum of 7 days curing prior to performing the test. Report results to design professional, building owner, or owner’s representative/quality assurance agent.
9. Conduct tests during coating installation as directed by design professional, building owner, or owner’s representative/quality assurance agent to verify adhesion throughout the course of the installation.
10. **PRE-BID CONFERENCE**
11. A pre-bid conference of all intended bidders, owner’s representative(s), project specifiers, and a MAPEI representative to review specifications, owner’s final scope of work, and establish project requirements of all parties involved.
12. All Bidding firms are required to attend Pre-Bid Conference.
13. **DELIVERY, STORAGE, AND HANDLING**
14. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label:
15. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg. F (7 deg. C). Maintain storage containers in a clean condition, free of foreign materials and residue.
16. Handle products in accordance with manufacturer’s printed recommendations.
17. **WARRANTY**
18. MAPEI Limited Material Warranty

Products sold or manufactured by MAPEI, when properly applied in strict accordance with MAPEI’s procedures and applicable specifications, shall be free from defects in manufacture for the period stated above from date of completion of application.

**PART 2 – PRODUCTS**

* 1. **MANUFACTURERS**

1. Acceptable Manufacturer: MAPEI Corporation, 1144 E. Newport Center Dr., Deerfield Beach, Florida, 33442.
2. 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.
   1. **COATING MATERIALS - GENERAL**

1. 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.
2. VOC Classification: Provide high-performance coating materials, including primers, undercoats, and finish-coat materials, that meet the applicable local, state or federal VOC requirements.
3. Color: Refer to Finish Schedule and Paint Legend for paint colors.
   1. **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 need to promote adhesion. A field adhesion test should be conducted to determine whether a primer is needed.

1. 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).
   1. **EXTERIOR COATING SYSTEMS**

Specifier: Delete system A or system B below as desired.

1. Finish Coating for vertical, above-grade stucco, concrete or masonry, or weathered previously acrylic coated masonry substrates on the exterior of the building.
2. Two finish coats MAPEI Elastocolor Flex over primer (where specified)
3. Performance and Physical Properties for top coat: must meet or exceed the following values for material cured at 73 degrees F (23 degrees C) and 50 percent relative humidity (unless otherwise specified):
4. Touch-dry: 6 hours, depending on ambient conditions.
5. Solids: 45.2 %, by volume
6. Application: spray, roller, or brush.
7. Water Vapor Permeability: 12.3 perms, tested at 5 dry mils applied in one coat, ASTM E 96.
8. Accelerated Weathering: no cracking, peeling, blistering, or other deleterious effects after 5,000 hours exposure, ASTM D 6695
9. Tensile Strength: 65 psi (0,45 MPa), minimum, ASTM D 638
10. Mold Resistance: no Mold Growth at 28 days, ASTM D 3273
11. Wind Driven Rain Resistance: PASS, no water penetration, ASTM D 6904
12. Elongation (at break): 825% ASTM D638
13. VOC: < 50 g/L, meets US EPA (40 CFR 59) emission standards for architectural coatings, complies with South Coast AQMD Rule 1113

OR

1. Finish Coating for vertical, above-grade stucco, concrete or masonry, or weathered previously acrylic coated masonry substrates on the exterior of the building.
2. Two intermediate coats MAPEI Elastocolor Flex over primer (where specified)
3. Performance and Physical Properties for top coat: must meet or exceed the following values for material cured at 73 degrees F (23 degrees C) and 50 percent relative humidity (unless otherwise specified):
4. Working Time: 10-20 minutes, depending on ambient conditions.
5. Solids: 45.2 %, by volume
6. Application: spray, roller, or brush.
7. Water Vapor Permeability: 12.3 perms, tested at 5 dry mils applied in one coat, ASTM E 96.
8. Accelerated Weathering: no cracking, peeling, blistering, or other deleterious effects after 5000 hours exposure, ASTM D 6695
9. Tensile Strength: 65 psi (0,45 MPa), minimum, ASTM D 638
10. Mold Resistance: no Mold Growth at 28 days, ASTM D 3273
11. Wind Driven Rain Resistance: PASS, no water penetration, ASTM D 6904
12. Elongation (at break): 825% ASTM D638
13. VOC: < 50 g/L, meets US EPA (40 CFR 59) emission standards for architectural coatings, complies with South Coast AQMD Rule 1113
14. One finish coat MAPEI Elastocolor Coat
15. Performance and Physical Properties for top coat: must meet or exceed the following values for material cured at 73 degrees F (23 degrees C) and 50 percent relative humidity (unless otherwise specified):
16. Working Time: 10-20 minutes, depending on ambient conditions.
17. Solids: 46.4 %, by volume
18. Application: spray, roller, or brush.
19. Water Vapor Permeability: 17.1 perms, tested at 5 dry mils applied in one coat, ASTM E 96.
20. Accelerated Weathering: no cracking, peeling, blistering, or other deleterious effects after 5000 hours exposure, ASTM D 6695
21. Tensile Strength: 130 psi (0,90 MPa), minimum, ASTM D 638
22. Mold Resistance: no Mold Growth at 28 days, ASTM D 3273
23. Wind Driven Rain Resistance: PASS, no water penetration, ASTM D 6904
24. Elongation (at break): 650% ASTM D638

VOC: <50 g/L, meets US EPA (40 CFR 59) emission standards for architectural coatings, complies with South Coast AQMD Rule 1113

* 1. **ACCESSORY MATERIALS**

1. MAPEI Mapeflex EMC-1 smooth brush-grade elastomeric patching compound
2. Other materials not specifically indicated but required to perform the scope of work specified must be of commercial quality.

**PART 3 - EXECUTION**

* 1. **PREPARATION**

1. General Surface Preparation
2. 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 may affect adhesion.
3. Use appropriate repair methods for the substrate to repair pitting, spalls, cracks, peeling, blistering, delamination, water damage, or other defects that may exist. Repair 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.
4. 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. Strike excess material flush and feather into existing texture of the surface.
5. 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.
6. Mold & 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.
7. 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.
   1. **CEMENTITIOUS SUBSTRATES**
8. Prepare concrete, brick, concrete masonry block, and cement plaster surfaces to be coated.
9. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods to prepare surfaces.
10. Use abrasive blast-cleaning methods if recommended by coating manufacturer.
11. 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 manufacturer's written instructions.
12. Clean and prepare surfaces to be coated according to manufacturer's written instructions for each particular substrate condition and as specified.
    1. **MIXING**
13. Mix for approximately 3 minutes using a slow-speed drill and paddle to a uniform consistency. Avoid entrapping air in the liquid during mixing.
    1. **APPLICATION**

Specifier: This section is to be amended to reflect the appropriate system selection in Section 2.03 and 2.04

1. Read all installations instructions thoroughly before installation. Contact MAPEI’s Technical Service Department for more detailed recommendations.
2. Surface Conditioner Application:
3. Apply MAPEI Elastocolor WB evenly with brush, roller or approved 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).
4. Finish Coating:
5. Apply One coat at 12 wet mils (5 mils DFT) of MAPEI Elastocolor Flex.
6. Apply Second coat at 12 wet mils (5 mils DFT) of MAPEI Elastocolor Flex
7. Final thickness of MAPEI Elastocolor Flex will be 5 dry mils per coat

OR

1. Finish Coating:
2. Apply two Intermediate coats at 12 wet mils (5 mils DFT) of MAPEI Elastocolor Flex.
3. Apply Finish coat at 12 wet mils (5 mils DFT) of MAPEI Elastocolor Flex
4. Final thickness of MAPEI Elastocolor Flex and Elastocolor Coat will be 5 dry mils per coat
   1. **GENERAL NOTES**
5. 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 droppings and over-spray from floors, glass, concrete and other surfaces not specified to be coated.
   1. **CONFLICT RESOLUTION**
6. 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

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