Section 09800 - Elastomeric Coating for Masonry Surfaces

PART 1 - GENERAL

1.00 DESCRIPTION

1. This specification describes installation of Elastomeric coating for masonry and masonry patch surfaces.

1.01 GENERAL

1. Whenever the words approved by, equivalent, or similar phrases are used in this specification, they shall be understood to mean that the material, process, or item referred to shall require the written approval of the Engineer and the coating manufacturer.

2. This specification shall be read in conjunction with project specifications and/or drawings indicating the precise extent of work and the use and location of specific materials.

1.02 WORK INCLUDED

1. Provide all labor, materials, equipment and services necessary to complete the following Elastomeric coating application work:

    (a) Preparation of all surfaces to receive Elastomeric coating. (Refer to Section 04901 Masonry Restoration with regard to cleaning and repair prior to Elastomeric coating.)

    (b) Protection of surfaces not to be treated, using polyethylene sheets or removable masking agent.

    (c) Application of Elastomeric coating materials by roller or airless spray. Application procedures and coverage rates to be employed in application of the treatment are dependent upon the condition of the substrate and the results of testing conducted at the jobsite prior to beginning general application.

1.03 RELATED WORK

Refer to specifications covering the following related work items:

(a) Repairs and cleaning of masonry surfaces. Section 04901.

(b) Repairs to expansion joints and application of joint sealants. Section 07900.

1.04 WEATHER CONDITIONS

1. The installation of, as well as the subsequent curing of all Elastomeric coating work shall be governed by the following:

    (a) No work shall commence if precipitation is expected. In case of unexpected precipitation, work shall cease immediately and all uncured work shall be covered with polyethylene tarps.

    (b) Normal Elastomeric coating application as outlined in this specification shall be carried out when ambient and subsurface temperatures during application and ultimate cure fall between 40 degrees F (4 degrees C) and 95 degrees F (35 degrees C), and when temperature is a minimum of 5 degrees F (3 degrees C) above the dew point.

    (c) If ambient or subsurface temperature is expected to rise above 95 degrees F (30 degrees C) during application and curing, the hot weather precautions outlined in item 3 of this section shall be followed.

    (d) If ambient or substrate temperatures are below 50 F (10 C), follow the cold weather precautions as outlined in Section 2, below.

    (e) Do not proceed with application over damp substrates. The surface should be dry to a maximum 4% moisture content; alternatively moisture content must be determined to be within the acceptable limits by performing an ASTM plastic sheet moisture test for no less than 24 hours.

2. Cold Weather Precautions

    (a) Store all materials in heated area or vehicle at 65 degrees F min. (15 C) until just prior to use.

    (c) Do not proceed with application if temperature is below 40 F (4 C) or if ice or frost are evident on the substrate.

3. Hot Weather Precautions

    (a) Store all materials in cool area, 75 degrees F max. (24 C) until just before use.

    (b) Do not work in direct sun at temperatures above 95 degrees F (35 C).

1.05 SUPERVISION

1. Applicator must present certification from the Manufacturer that he is a licensed Applicator for the Elastomeric coating specified. Supervision of the execution of all work under this specification, to the extent deemed necessary by the elastomeric coating manufacturer, shall be arranged and paid for by the Applicator in order to ensure that all work is carried out in strict accordance with this specification and is eligible for coverage under the Manufacturer's 5-Year Limited Warranty Program.

1.06 TESTING AND APPROVALS

1. Submit manufacturer's literature, specifications, safety data sheet, and application instructions for Elastomeric coating materials.

2. Testing will be conducted on each surface exposure in unobtrusive locations on representative surface conditions. Tests will employ the cleaning and other surface preparation techniques proposed for the overall project, followed by application of the specified treatment employing the proposed application procedures and equipment. General application shall not proceed until test areas are approved by the owner's representative.

1.07 Limited Warranty

1. Applicator shall be required to present a validated Certificate of Limited Warranty from the coating manufacturer, covering all defects in materials and materials performance for the five year period following installation. Applicator shall be required to execute the workmanship section of the warranty, providing five years free replacement of defective workmanship.

2. Warranty shall not include damages due to abuse, construction operations, structural settling or other latent defect in building design or construction, natural disasters such as earthquake or hurricane, or catastrophic events such as fire. Warranty shall include repair or replacement at no charge to Owner of any materials which lose effectiveness or adhesion during the five year limited warranty period.

PART 2 - MATERIALS

2.00 DESCRIPTION

This specification describes the materials used in, and in conjunction with Elastomeric coating treatment.

2.01 PERFORMANCE

1. All Elastomeric coating materials shall be produced by a single manufacturer, and shall be eligible for coverage under the Manufacturer's 5-Year Limited Warranty program. All materials shall be delivered to jobsite in unopened containers bearing manufacturers' original labels and markings. Elastomeric coating shall provide effective reduction in substrate water absorption, ability to bridge small working cracks up to 50 mils (.050") in width, shall maintain a minimum 100% elongation at 0 degrees F (-17 C) and 300% elongation at 75 degrees F (24 C), and shall have a high vapor permeability greater than 25 perms with 2 coats.

2. The elastomeric coating shall be a pigmented, one component proprietary acrylic elastomer product formulated for application to vertical and horizontal masonry surfaces, and shall comply with local V.O.C. regulations.

2.02 ACCEPTABLE PRODUCTS AND MANUFACTURERS:

a. Cleaning products: Non-Ionic, detergent based building wash.
E-Wash 30, by Edison Coatings, Inc., Plainville, CT, (860)-747-2220

b. Elastomeric coating:
Elastowall 351, as manufactured by Edison Coatings, Inc., Plainville, CT (860)747-2220.

c. Elastomeric Crack filler:
Elasto-Mastic 352, as manufactured by Edison Coatings, Inc., Plainville, CT (860)747-2220.

d. Elastomeric Crack filler:
Elasto-Fill 354, as manufactured by Edison Coatings, Inc., Plainville, CT (860)747-2220.

e. Flexible epoxy crack sealant
Flexi-Seal 510, as manufactured by Edison Coatings, Inc., Plainville, CT (860)747-2220.

f. Polyurethane sealant:
Formulated to comply with ASTM C920 at the appropriate conditions.

2.03 STORAGE & HANDLING

1. Store all components at room temperature, off the floor, dry.

2. Observe all safety and handling information as shown on the Safety Data Sheets supplied by the Manufacturer.

PART 3: EXECUTION

3.00 DESCRIPTION

This specification describes the preparation required for various surfaces which are to receive elastomeric coating, and the application of same.

3.01 GENERAL

1. Prior to the application of elastomeric coating all surfaces must be prepared in accordance with this section of the specifications.

2. The result of this preparation shall render a surface clean, meaning having complete exposure of sound, rough surface without any deposits of contaminants, coatings, compounds, laitance, foreign matter or loose material which could affect the bond between the surface and elastomeric coating materials.

3. Scaled or delaminated surfaces shall be repaired or resurfaced in accordance with specifications for masonry repair, Section 04901.

4. Surfaces to receive elastomeric coating must be surface dry prior to coating.

5. All caulking, patching, crack repair materials and joint sealants should be installed prior to application of the elastomeric coating. New patching materials shall be through-dry.

3.02 CLEANING EXISTING MASONRY AND STONE

1. Proceed with cleaning in an orderly manner, work from top to bottom of each staging area and from one end of each elevation to the other.

2. Use only those cleaning methods indicated for each masonry material and location.

3. Perform each cleaning method indicated in a manner which results in uniform coverage of all surfaces, including corners, moldings, interstices and which produces an even effect without streaking or damage to masonry surfaces.

4. Rinse off chemical residue and soil working upwards from bottom to top of each treated area at each stage or scaffold setting.

3.03 CRACK REPAIRS

1. All surface cracks wider than .008" (0.2mm) shall be repaired in accordance with this section of the specifications.

2. Cracks less than 1/16" (1.5 mm) wide shall be sealed after cleaning has been performed using a heavy application of Elastowall 351. Work the coating into the crack opening, depositing sufficient material to visually fill the crack.

3. Cracks 1/16" to 1/8" wide shall be detailed using elastomeric crack filler. Crack shall be cleared of all loose debris and dirt and widened slightly at the surface to accommodate crack filler application. Apply crack sealant by knifing into the crack or gunning over the crack surface, followed by tooling to match adjacent surface profile, pressing the sealant into the crack cavity to fill completely.

4. Cracks over 1/8" wide shall be routed to a 1/2" by 1" groove, backer rod shall be installed, groove walls shall be primed with sealant primer and groove shall be caulked with 2 part polyurethane sealant. Fill grooves flush with adjacent surfaces.

5. Allow sufficient curing time for all sealants to dry through before proceeding with elastomeric coating application. At least 24 hours are required.

3.04 INSTALLATION

1. If primer has been selected for use, apply primer to clean, dry or damp surfaces using airless spray. The primer acts as a sealer and surface chalk consolidant for porous surfaces, and should be applied in such a manner as to saturate the surface, but to avoid excessive rundown. Apply primer from the bottom up, avoiding heavy runs. Allow primer to dry tack-free prior to top coating.

2. Elastomeric coating shall be applied to dry surfaces by phenolic core roller or airless spray at a rate of 100-125 sq. ft. per gallon. Product shall be applied as evenly as possible at 14 - 16 mils wet film thickness.

3. Allow the first coat to dry-through completely prior to second coat application. Through-dry coating will be seen as tough, firm material which does not extrude or appear to be "skinned over".

4. Protect all uncured surfaces from rain, dirt, traffic, and wind-blown debris for at least 24 hours after application. For horizontal/traffic bearing surfaces, coating should be tack-free and through-cured before subjecting to traffic or immersion. Cure rate is affected by temperature and other application parameters.