

ChemMasters

Installation Guidelines

ColorLastic is a pigmented, waterproof coating for concrete and masonry formulated with 100% elastomeric acrylic resins. It is internally plasticized for superior aging characteristics eliminating the causes of ruptures, cracks and delamination.

1.0 General

1.1 Scope

This specification covers the performance characteristics and application procedures for providing a pigmented, waterproof coating for concrete and masonry formulated with 100% elastomeric acrylic resins. It is internally plasticized for superior aging characteristics eliminating the causes of ruptures, cracks and delamination. ColorLastic bridges hairline cracks, withstands substrate movement and accommodates rapid changes in temperature.

1.2 Material Description

The material shall be a pigmented, waterproof coating for concrete and masonry formulated with 100% elastomeric acrylic resins which is internally plasticized. It should solidify to an exceptionally durable film to resist wind driven rain, mold, mildew and airborne dirt, provide excellent elongation and recovery properties, optimum water vapor permeability to eliminate cracking and peeling and withstand extremes in thermal cycling to maintain flexibility from season to season.

1.3 Typical Applications

- A. Exterior or interior, above grade, vertical and overhead concrete and masonry
- B. Poured in place, formed walls or precast members
- C. Block, brick, plaster or stucco
- D. Functional, yet decorative, waterproof sealer, may be used as top coat for ChemSeal and ChemSeal Trowel & Spray cementitious coatings
- E. Provides a uniform, matte color following repairs of deteriorated surfaces exposed to severe weathering.

1.4 Limitations

- A. Condition material to 60° F., (16° C.) before use.
- B. Do not apply when the surface or air temperature is or is expected to go below 40° F./5° C., within 8 hours of application.
- C. Temperature, ambient and surface, must be 5° F./3° C., higher than the dew point for eight hours after application.

- D. Wind should not exceed 10mph for 8 hours after application when applied below 50° F./10° C.
- E. Do not apply to wet, damp, frozen or frost-filled surfaces.
- F. Not for use below grade
- G. Do not apply any type of coating over ColorLastic. Topcoats impair the elastomeric characteristics and the vapor transmission capabilities of ColorLastic
- H. Consult ChemMasters technical services department for interior application recommendations.

1.5 Quality Assurance

The repair contractor shall have experience and proficiency specific to the repair type and shall be approved by the engineer and the material supplier. The material supplier shall provide job service as required to assure proper handling and installation of materials. The field representative shall instruct as needed to assure that handling, mixing, placing and finishing of materials are in accordance with specifications.

1.6 Delivery, Storage and Handling

The product shall be delivered in the original, unopened containers. It shall be labeled with the manufacturer's name, product name and lot number. Materials should be stored at the job site under dry conditions and at a temperature of 40° F., (5° C.) to 90° F. (32° C.). Condition material to 60° F., (16° C.) before use.

1.7 Environmental Requirements

All materials used for the repair work shall be VOC compliant. The manufacturer shall supply the appropriate material safety data sheets upon request.

1.8 Site Conditions

Coverage is dependent upon surface texture and porosity.

2.0 Materials

2.1 Approved Materials and Manufacturers

2.1.1 Product Standard

ColorLastic, as manufactured by ChemMasters, 300 Edwards Street, Madison, Ohio, 44057-3112, 1-800-486-7866, is considered to conform to the requirements of this specification and shall be the coating used. ColorLastic is a pigmented, waterproof coating for concrete and masonry formulated with 100% elastomeric acrylic resins. It is internally plasticized for superior aging characteristics eliminating the causes of ruptures, cracks and delamination. ColorLastic bridges hairline cracks, withstands substrate movement and accommodates rapid changes in temperature.

2.1.2 Substitutions

No submittals for substitutions will be accepted after the bid date. All submittals must be made in writing to the engineer with supporting technical data sheets and test data showing complete equivalent performance.

2.2 Packaging/Coverage/Estimating

2.2.1 Packaging

ColorLastic and Safe-Cure & Seal 309 are available in 5 U.S. gallon/18.9 Liter pails, shipped 36 per pallet shrink wrapped.

2.2.2 Coverage/Estimating

A. Coverage is dependent upon surface texture, density and per coat mil thickness desired. The following rates pertain to properly prepared concrete surfaces, heavily textured substrates will require additional material. Two coats of ColorLastic at a minimum 11 mils each are required to insure a waterproof film. To bridge cracks and maintain their water tightness, a minimum 15 dry mil thickness is required.

B. Optional Primer Safe-Cure & Seal 309 @ 200 Ft.²/gal 5 M²/L

2.2.3 Storage:

Keep from freezing. Store tightly sealed containers in warm, dry area on pallets above 40° F./5° C., and below 95° F./34° C. Shelf life of properly stored material is one year from date of manufacture.

2.3 Engineering Properties

The following engineering properties shall be typical of material performance when tested under laboratory conditions at 72°F (22.°C).

2.3.1 Plastic Properties

2.3.1.1 V.O.C. Content : <50 gm/L

2.3.1.2 Solids: 56-62%

2.3.1.3 Water Vapor Transmission (ASTM E-96): 20 mil film 10.5 perms

2.3.1.4 Mandrel Bend (ASTM D-522). 0.125"/3.2mm

A. 75° F./24° C.: pass

B. 0° F./-17° C.: pass

C. -15° F./-26° C.: pass

2.3.1.5 Weatherometer (ASTM G-26): 5000 hours, no crazing, cracking, chipping, flaking

2.3.1.6 Wind Driven Rain Resistance (Fed.Spec.TT-C-555-B):

A. Water Penetration: none

B. Blister Density/Size: none

2.3.1.7 Freeze/Thaw Durability (ASTM C-666): 300 cycles 97.3%

2.3.1.8 Scaling Resistance (ASTM C-672): 25 cycles

A. Visual Rating: 1

B. Scaling Mass: 0

2.3.1.9 Salt Spray Resistance (ASTM C-412):

Kentucky Method: 300 hours/5% solution @ 90° F./32° C. no adhesion loss

2.3.1.10 Fungus Growth (Fed. Test 141, Method 6271): 28 days: none

2.3.1.11 Viscosity 4,500 – 7,000 cps

2.3.2 Hardness Properties

2.3.2.1 Tensile Strength (ASTM D-412 modified):

A. 75° F./24° C.: 200 psi 1.4 MPa

B. 0° F./-17° C.: 600 psi 4 MPa

2.3.2.2 Tensile Elongation (ASTM D-412):

A. 75° F./24° C.: 300%

B. 0° F./-17° C.: 115%

2.4 Accessory Materials as manufactured by ChemMasters, 300 Edwards Street, Madison, Ohio, 44057-3112, 1-800-486-7866, is considered to conform to the requirements of this specification.

3.0 Execution

3.1 References

A. Complies with National Volatile Organic Compound Emission Standards for Architectural Coatings, Federal EPA Regulation 40 CFR Part 59

B. Refer to ChemMasters MSDS and Technical Data Sheets

3.2 Surface Preparation

- A. All surfaces must be clean and free of soot, dirt, form release agents, grease, waxes, laitance, efflorescence, coatings, sealers and any other foreign matter.
- B. High pressure washing and/or the use of abrasive sand, shot or pellets normally results in a suitable surface.
- C. Any chalking, oxidation or other deterioration of the surface must be removed to a sound substrate.
- D. Repair all large holes, cracks or mortar joints with ChemPatch F/S and/or caulk with an acrylic joint sealant.
- E. Incidental metal and wood surfaces must be primed and sealed metal with a rust inhibiting primer and wood with a high quality primer sealer.
- F. Exceptionally rough surfaces may be smoothed with ChemSeal to reduce the quantity of ColorLastic required.
- G. If substrate exhibits chalking, powdery residue or efflorescence following cleaning operation, prime surface with Safe-Cure & Seal 309 prior to ColorLastic application.
- H. Allow Safe-Cure & Seal 309 to dry before proceeding.
- I. ChemSeal surfaces do not require a Safe-Cure & Seal 309 primer coat but must be fully cured, usually 7 days, prior to application of ColorLastic. ColorLastic bridges non-moving hairline cracks which are defined as no more than 1 /32 in./ 0.79 mm in width. Pretreat hairline cracks with a coat of ColorLastic and allow to dry.
- J. Wider cracks and any that have been determined to be moving must be repaired prior to applying ColorLastic.
- K. Gaps up to 0.25 in./6 mm can be cleaned and filled with an acrylic or urethane joint sealant. Follow sealant manufacturer's preparation and application directions and allow sealant to cure. Prime repaired areas with Safe-Cure & Seal 309 prior to application of ColorLastic.

3.3 Mixing:

- A. ColorLastic is packaged ready-to-use. Stir contents well before use with a paddle or mechanical mixer to insure proper pigment dispersion. Do not thin with water or solvent.

3.4 Application:

- A. Apply to thoroughly dry surfaces only. Do not apply if rain, dew, fog or relative humidity above 75% is expected within twenty-four hours of application.
- B. Apply using standard, airless sprayer equipped with a .031-.035 orifice nozzle, a brush or roller. Avoid buildup on roller ends to prevent lap marks.
- C. Apply using even strokes in a consistent horizontal or vertical direction to produce a uniform appearance. Work into a wet edge.
- D. End work at a natural breaking point such as a wall or corner. Allow initial coat to dry before applying second coat.
- e. Drying time at 70° F./21° C. with 50%relative humidity is 24 hours. Lower temperatures or higher humidity extends drying time.

3.5 Clean-up

Clean tools and equipment with warm water and soap or detergent before material dries and hardens.