

Liquid Applied Concealed Flashing, Vapor and Air Barriers Specification

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes surface preparation and field coating of the following:

The work shall consist of the surface cleaning, application of acrylic coating and installation of reinforcing mesh on steel and cementitious surfaces and other adjacent surfaces behind the building finish and underside of exposed lintels for the purpose of providing a VAPOR barrier over porous surfaces and corrosion resistance for metals. RD-Elastometal is a Vapor barrier and corrosion resistant coating. RD-E Deck is a Vapor barrier. For projects where an Air Barrier is required over porous surfaces, RD-Elastowrap AB is used instead of RD-Elastometal and RD-E Deck. RD-Elastometal is still used on metals.

1.02 SUBMITTALS

- A. Material List: Provide an inclusive list of required coating materials. Indicate each material and cross-reference the specific coating, finish system, and application.
- B. Manufacturer's Information: Provide manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material proposed for use.
- C. Certification: Provide information that the manufacturer's products supplied for this project comply with specified VOC product content and local regulations controlling use of volatile organic compounds.
- D. Samples for Initial Selection: Provided the Manufacturer's specified products in stock and special colors approved for the project.
- F. Qualification Data: For firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.04 QUALITY ASSURANCE

- A. The Contractor shall give the Engineer a minimum of three days advance notice of the start of any field surface preparation work or coating application work.
- B. Approval: The contractor must be approved by the RD Coatings supplier. The contractor must provide detailed background information, and a completed questionnaire, one month prior to the start of work of the Project to facilitate the necessary licensing. A company representative (Officer or Superintendent), all foremen, and applicators (painters) must attend a training session given by RD Coatings representative at the site. There is no fee or charge for the training instruction.
- C. The training requirement can be waved at the discretion of the Manufacturer Representative if the painting contractor is experienced in the application of acrylic coatings.
- D. Equipment: All equipment for application of the coating and the completion of the work shall be furnished by the Contractor in first-class condition and shall comply with recommendations of the coating manufacturer. The Contractor must use hoses for the airless spray equipment that are dedicated to spraying water-based paint only.

1.05 SERVICES OF MANUFACTURER'S REPRESENTATIVE

- A. The Contractor shall purchase coatings from the accepted manufacturers representative. The manufacturer shall assign a local representative to periodically observe the application of the product. The manufacturer or national distributor shall arrange a final walk through of the product application.

1.06 SAFETY AND HEALTH REQUIREMENTS

- A. In accordance with requirements of OSHA Safety and Health Standards for Construction (29 CFR 1926) and the applicable requirements of regulatory agencies having jurisdiction, as well as manufacturer's printed instructions, technical bulletins, manuals, and material safety data sheets, the Contractor shall provide and require use of personal protective and safety equipment for persons working in or about the project site.

1.07 DELIVERY, STORAGE, AND HANDLING

- 1. Deliver materials to the Project Site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:
 - 1. Product name and Product MSDS sheets.
 - 2. Product description (generic classification or binder type).
 - 3. Manufacturer's stock number.
 - 4. Contents by volume, for pigment and vehicle constituents.
 - 5. Thinning instructions.
 - 6. Application instructions.
 - 7. Color name and number.
 - 8. VOC content.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at an ambient temperature of 50°F (7°C) minimum. Maintain containers used in storage in a clean condition, free of foreign materials and residue. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

1.08 PROJECT CONDITIONS

- A. Apply water-based paints only when the air temperature is 45°F min. for 48 hrs.
- B. Do not apply water-based paint in snow, rain, fog, or mist; or at temperatures less than 5°F (3°C) above the dew point; or to damp or wet surfaces.
- C. Coating may continue during inclement weather if surfaces and areas to be coated are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

1.09 EXTRA MATERIALS

- A. Furnish extra coating materials from the same production run as the materials applied in the quantities described below. Package coating materials in unopened, factory-sealed containers for storage and identify with labels describing contents. Deliver extra materials to the Owner.
- B. Quantity: Furnish the Owner with extra coating materials in the quantities indicated below:
 - 1. 1 Pail RD Elastometal, RD E Deck and/or RD Elastowrap AB.

PART 2 - PRODUCTS

2.01 MATERIAL

- A. All coating materials shall be equal to those manufactured by RD Coatings, Assesse, Belgium and distributed locally by Righter Group, Inc. Most RD Coatings are stocked in the facility in Stratford, Ct.
- B. Vapor Barrier: Full primer shall be rust-preventing acrylic polymer coating, RD-Elastometal as manufactured by RD Coatings. 2nd and 3rd coats shall be either RD-Elastometal or RD-E Deck. Additional finish on architecturally exposed areas such as underside of lintel shall be RD-Monoguard depending on gloss and color requirements and shall be as manufactured by RD Coatings. The coatings shall be a one part, acrylic, water borne, which can be applied either by brush, roller or airless spray equipment. The coatings shall be dry fall. The primer/membrane coats shall form a seamless rubber anti-rust and

waterproof membrane. The coatings shall not break down from exposure to ultra-violet radiation. Volatile organic compounds shall be 8 g/l for RD-Elastometal and 7 g/l for RD-E Deck. A one-millimeter thickness of the primer/membrane coating applied on an elastic rubber plate or band shall stand an extension of 200% without showing cracks or tears. RD-Elastometal is 67% solids by weight; 57% solids by volume. RD-E Deck is 66% solids by weight and 56% solids by volume.

- C. Air Barrier: RD-Elastowrap AB on all cementitious or other porous surfaces. RD-Elastowrap AB shall be used as primer and 2nd and 3rd coat instead of RD-Elastometal or RD-E Deck. RD-Elastowrap AB can be used with or without RD-Reinforcing mesh as job conditions require. RD-Elastometal is still required as rust inhibitive primer on steel. RD-Elastowrap AB is 72% solids by weight and 58% solids by volume. Volatile organic compounds shall be 45 g/l/.
- D. Special primer: RD-Monoguard for new galvanizing, stainless etc
- E. Reinforcing mesh such as RD-Fleece Woven or RD-Fleece Octagonal as necessary for all Surfaces.
- F. Caulk such as RD-Acryl W for joints or cracks as necessary
- G. One-part Acrylic filler: RD-E Deck Filler as necessary to fill voids, holes and spalls in concrete/masonry.
- H. One-part Acrylic surfacer: RD-E Deck Surfacer as necessary to smooth rough surfaces and fill minor holes and joints.

PART 3 - EXECUTION

3.01 SURFACE PREPARATION

- A. General: Surfaces to be coated shall be cleaned as required by the coating manufacturer to properly receive prime and finish coats. No surface preparation method shall be used unless acceptable to the coating manufacturer and the Engineer.
- B. Pressure Washing previously painted steel: Pressure wash at 4,000 psi to remove all accumulated dirt, chalk, contamination and all loose rust and loosely adhered existing paint. All paint that remains after pressure washing can be overcoated. The pressure washer shall be fitted with a 0-degree spinner tip and the steel surfaces cleaned at a distance of 6" to 8" from the surface of the steel and the pressure washer held at a perpendicular angle to the surface being washed. Where pressure washing is not permissible, remove dirt and contamination with solvent or water and bristle brush. Then remove rust and paint as show in C below.
- C. Power Tool Cleaning: All areas of exposed layered rusted metal shall be power tool cleaned in accordance with SSPC-SP-3, or in difficult and otherwise inaccessible areas by hand tool cleaning in accordance with SSPC-SP-2. Remove any lifted paint left from the pressure washing so the edges of all existing paint are tight. The results of cleaning by this method shall be a clean surface of tightly adhering coating and bare steel with a "tight rust profile" at a minimum.
- D. After power tool cleaning, rinse the steel surfaces with 1500 psi to remove any dust on the surface. After the steel has completely dried, coating work can proceed. If 1500 psi is not possible, wipe with Acetone or Denatured alcohol.

Note: In most cases it is not practical to pressure wash, in these instances it is recommended to use hand and/or power tool cleaning followed by solvent wiping. The intent of the prep is to remove all contamination, all loose paint and all loose rust. Tight paint and tight rust can remain.

3.02 MATERIALS PREPARATION

- A. Materials Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
- B. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
- C. Stir material before application to produce mixture of uniform density. Stir as required during application. Do not stir film into material. If necessary, remove surface film and strain material before using.
- D. Thin only with water and only withing recommended limits.

3.03 COATING APPLICATION

A. Minimum surface and atmospheric conditions:

All steel surfaces must be completely dry. If the surfaces have picked up atmospheric pollutants, dust or airborne contaminants since the steel was pressure washed, it may be necessary to rinse the surface prior to coating application. Rinsing can be with water or solvent wiping with acetone or denatured alcohol.

Temperature must be 45°F and rising for application to proceed and the temperature must remain above 45°F for 12-24 hours. At higher temperatures 2 coats can be applied on the same day as long as temperatures above 45°F can be expected continuously for 72 hours. The surface temperature of the steel must be above 45°F. If the relative humidity is above 85% and there is no air movement, consult the Manufacturer's representative before proceeding with any coating application.

- B. Coatings shall be applied without runs, snags, thin spots, or unacceptable marks. Coatings shall be applied at the rate specified by the coating manufacturer to achieve the minimum dry mil thickness required. Additional coats shall be applied, if necessary, to obtain thickness specified.
- C. Coatings shall normally be applied by brush and roller to achieve the specified dry film thickness per coat. Where thinning is necessary, use only water. All RD Coatings can be applied by spray. Where practical, especially on large areas, products such as RD-Elastometal and RD-E Deck can be applied by airless spray and either left as sprayed or backrolled. Backrolling normally is effective on porous concrete block. RD-Elastometal and RD-E Deck are "dry fall" products and therefore can be applied without getting wet overspray on adjacent surfaces.
- D. Examination between coats: Each field coat of prime and finish coats shall be viewed before the succeeding coat is applied. **The Contractor shall follow a system of using different colors so that no two coats on a given surface are exactly the same color.** Magnetic dry film thickness gages and wet film thickness gages shall be utilized for quality control.
- E. Special areas: Special attention shall be given to ensure that edges, corners, crevices, welds and fasteners receive a film thickness equivalent to that of the adjacent coated surfaces.
- F. Coating Sequence for Previously painted steel and new bare unprimed steel: The following coating sequence must be followed in the application of the coating specified for a Vapor Barrier.
1. Apply 1 coat of RD-Elastometal by brush and roller to all surfaces including bare steel, previously painted steel, concrete, cementitious parge, weathered galvanized steel, aluminum and copper and adjacent areas at 8 to 10 mils wet (5-6 mils DFT).
 2. After the prime coat has dried (2-12hrs), apply Reinforcing fleece and brush one coat of RD-Elastometal or RD-E Deck through the fleece (applied at 15-16 mils wet) approx. 10 mils dft to form a pinhole free membrane that completely encapsulates the mesh.
 3. Apply one additional coat of RD-Elastometal or RD-E Deck (applied at 8-10 mils wet, 5-6 mils dft) to complete the membrane, which must achieve a minimum thickness of 20 mils DFT. 2nd coat can have sand added at 10-15 lbs/gal for areas such as lintels and relieving angles

NOTE TO SPECIFIER: This is the basic system for using RD-Elastometal to flash at spandrels and on vertical walls. Depending on specific job conditions, reinforcing mesh may only be used at steel to back-up masonry and not on vertical walls. Other primers may be required depending on substrates. Sand can be applied into last coat of RD-Elastometal to resist penetration by tools, mortar, brick etc. RD-E Deck Surfacer can be used to replace last 2 coats of RD-Elastometal. When an Air Barrier is required use RD Elastowrap AB.

QUALITY WORKMANSHIP

- A. Coatings found defective shall be removed and recoated as required by the Engineer. Before final acceptance of the Work, damaged surfaces shall be cleaned and recoated as directed by the Engineer.

3.05 CLEANING

- A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

3.06 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by the Engineer.
- B. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.

END OF SECTION

Specifier Notes: This product selection guide is written according to the Construction Specifications Institute (CSI) Format, including *Master Format*, *Section Format* and *Page Format*, contained in the *CSI Manual of Practice*.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the drawings.

Delete all "Specifier Notes" when editing this section.

Specifier Notes: This section covers RD-Elastoflex high-performance coating systems for commercial facilities. This specification is only a guide listing various coating system options for various environments and should not be used as a final specification. Additional coating systems not listed in this specification are available, and may be more appropriate for your coating application. To finalize this specification, please contact

www.rdcoatingsusa.com

Many coatings contain organic solvents. Consult RD Coatings USA for compliance to local VOC regulations.

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