

RD-E DECK SPECIFICATION

WATERPROOFING BALCONIES, CONCRETE FLOORS, ETC.

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes surface preparation and coating of the following:

- New or existing concrete floors and walls.
- Concrete slabs and pedestals of mechanical equipment room floors, decks and balconies.

The work shall consist of the surface cleaning, priming and coating of concrete surfaces and appurtenances with RD-E Deck and other RD Coatings.

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 product data 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 color charts showing the full range of colors available for each type of finish-coat material indicated.
- E. Samples for Verification: Provide stepped Samples, defining each separate coat. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture is achieved. Provide a list of materials and applications for each coat of each sample. Label each sample for location and application.
- 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. Training: The contractor must be trained by the RD-E Deck system coating supplier, RD Coatings USA, Stratford, CT. A company representative of the Contractor (Officer or Superintendent), all foremen and applicators (painters) must attend a training session given by RD Coatings USA at the site. There is no fee or charge for the certification instruction for the first training session. The training requirement can be waved at the discretion of the Manufacturer if the contractor is experienced in the application of these types of acrylic coatings.
- C. 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 painter must use hoses for the airless spray equipment that are dedicated to spraying water-based paint.

1.05 SERVICES OF MANUFACTURER'S REPRESENTATIVE

- A. The Contractor shall purchase coatings from the accepted manufacturer. The manufacturer shall assign a local representative to periodically observe the application of the product. The manufacturer or local representative shall make a final inspection of the system 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

- A. 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
 - 2. Product description (generic classification or binder type).
 - 3. Manufacturer's stock number.
 - 4. Contents by volumes.
 - 5. Application instructions.
 - 6. Color name.
 - 7. VOC content.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 50° F (7° C). 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 coatings only when the surface temperature is 45° F minimum during application and for at least 48 hrs after application.
- B. Do not apply water-based coatings 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 painted 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 paint 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 paint materials in the quantities indicated below:
Note to Specifier: Include quantities as required by the Owner. Retain subpart below for projects that require only limited quantities of extra materials. If necessary, replace percentage with a specific number of gallons or cases and include an expanded description of the quantity of each material and color.

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 RD Coatings USA, Stratford, CT. Most RD Coatings are stocked in the facility in Stratford, CT.

- B. Full primer and first and second coat: waterproofing acrylic polymer coating shall be RD-E Deck as manufactured by RD Coatings. Finish shall be either RD-Monograft or RD-Mur Acryl or RD-Hydropox depending on job conditions and requirements, all products shall be as manufactured by RD Coatings. The coating shall be one part, acrylic, water borne, waterproofing, self-priming coating which can be applied either by brush, roller or spray equipment. The coating shall be dry fall. The coating shall form a seamless rubber and waterproof membrane. The coating shall not break down from exposure to ultra-violet radiation. Volatile organic compounds shall be 0% per gallon. A one-millimeter thickness of the coating applied on an elastic rubber plate or band shall stand an extension of 200% without showing cracks or tears. RD-E Deck is 67% solids by weight; 57% solids by volume.
- C. Reinforcing mesh such as RD-Woven Fleece or RD-Octagonal Fleece as necessary for all Surfaces.
- D. Caulk such as RD-Acrykit or RD MSP Caulk for joints or cracks as necessary.
- E. Performance Criteria: Included at end of section.

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. New or painted concrete: Pressure wash at 4000 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 over coated. The pressure washer shall be fitted with a 0° spinner tip and the metal surfaces cleaned at a distance of 6" to 8" from the substrate and the pressure washer held at a perpendicular angle to the surface being washed. Or ICRI CSP-3 lightly grind the surface.
- C. Power Tool Cleaning: All areas of exposed new or previously coated concrete shall be power tool cleaned to remove any lifted paint left from the pressure washing so the edges of all existing paint are tight and to roughen bare concrete. The results of cleaning by this method shall be a clean, roughened surface of tightly adhering coating and bare concrete. If any steel or other metal is discovered, it shall be clean, dry and at most have tight rust and be primed with RD-Elastometal. The purpose of the power tool cleaning is to augment the pressure washing to remove items not removed by the power washing. If pressure washing is not permitted, then use power and hand tool cleaning to prepare all surfaces.
- D. After power tool cleaning, remove any dust on the surface.

3.02 MOCK-UP

- A. The contractor must apply the specified system to a 10' x10' area and have it approved by the Architect/Engineer for color, texture, adhesion and overall appearance. Do not proceed with work until mock-up has been approved in writing.

3.03 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 a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
- D. The only thinner approved by paint manufacturer is water and only within recommended limits.

3.04 COATING APPLICATION

- A. Minimum surface and atmospheric conditions:
 - 1. All surfaces must be completely dry. If the surfaces have picked up atmospheric pollutants, dust or airborne contaminants since the surfaces were previously pressure washed, it may be necessary to rinse the surface again prior to coating application.
 - 2. Surface temperature must be 45° F. and rising during application and the temperature must remain above 45° F for 48 hours. 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 uniformly without 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 can be applied with spraying equipment where practical, only on the surfaces designated by the coating manufacturer. If spraying is not permissible and coating must be applied by brush and roller, then sufficient coats must be applied to achieve the specified dry film thickness. If the material has thickened or must be diluted for application by spray gun, each coat shall be built up to the same film thickness achieved with undiluted brushed-on material. Where thinning is necessary, only the products of the particular manufacturer furnishing the coatings shall be used; and all such thinning shall be done in strict accordance with the manufacturer's instructions, as well as with the full knowledge of the Engineer.
- D. Inspection between coats: Each field coat of prime, intermediate and finish shall be of a different color. 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 (if there is metal) and wet film thickness gages will be utilized for quality control.
- E. Special areas: Special attention shall be given to insure that edges, corners, crevices, welds and fasteners receive a film thickness equivalent to that of the adjacent coated surfaces.
- F. Coating Sequence for concrete floors, walls etc.: The following coating sequence must be followed in the application of the coating specified.

OPTION 1: (FULL MESH REINFORCEMENT)

- 1. Apply a detail coat of RD- Elastometal (10 mils wet (5 mils DFT) by brush to all areas of bare steel (if any exists) and to all joints, fasteners, rivet heads. Pay particular attention to force the coating into the interface edges where the existing paint remains next to bare metal. Detail hard to reach areas that spray painting will not completely cover.
 - 2. Apply a full coat of RD-E Deck as a primer over all surfaces at 7 wet mils (3 mils DFT). Thin the primer 10% with water.
 - 3. Detail any cracks greater than 1/16" using RD-Acrykit or RD-MSP caulk.
 - 4. After the primer has dried (1-6 hr.), lay reinforcing mesh on all surfaces as directed herein or on the drawings. Apply a uniform first coat of RD-E Deck by brush and roller, forcing the RD-E Deck through the dry mesh to embed and encapsulate the mesh, applied 16- 18 mils wet (8-10 mils DFT)
 - 5. After the first coat of RD-E Deck has dried (2-6hr), apply a coat of RD-E Deck Slurry by brush and roller to all surfaces to finish encapsulating the mesh, leaves a pinhole free non-skid surface. Apply RD-E Deck Slurry at 22-24 mils wet (18-20 mils DFT)
- Note:** To increase the abrasion resistance we recommend broadcasting 1/8- 1/2 lbs. 000 sand into the wet slurry. In some cases it may be necessary to apply 2 finish coats over sand broadcast to achieve a uniform finish.
- 6. After RD-E Deck Slurry coat has dried, apply finish coat of RD-Monograff, RD-Monoguard or RD-Hydropox in color and gloss approved by the Architect/Engineer, applied at 3-6 mils DFT.

OPTION 2: (LOCAL MESH REINFORCEMENT)

1. Apply a detail coat of RD-Elastometal (10 mils wet (5 mils DFT) by brush to all areas of bare steel (if any exists) and to all joints, fasteners, rivet heads. Pay particular attention to force the coating into the interface edges where the existing paint remains next to bare metal. Detail hard to reach areas that spray painting will not completely cover.
 2. Apply a full coat of RD-E Deck as a primer over all surfaces at 10 mils wet (5 mils DFT). Thin the primer 10% with water.
 3. Detail any cracks greater than 1/16" using RD-Acrykit or RD-MSP caulk.
 4. After the primer has dried (1-6 hr.), cut and lay reinforcing mesh on all existing cracks as directed herein or on the drawings. Apply a uniform first coat of RD-E Deck by brush and roller, forcing the RD-E Deck through the mesh to embed and encapsulate the mesh, applied 16 –18 mils wet (8-10 mils DFT)
 5. After the first coat of RD-E Deck has dried (2-6hr), apply a coat of RD-E Deck Slurry by brush and roller to all surfaces to finish encapsulating the mesh, leaves a pinhole free surface, plus a non-skid surface. Apply RD-E Deck Slurry at 22-24 mils wet (18-20 mils DFT)
- Note:** To increase the abrasion resistance we recommend broadcasting 1/8 – 1/2 lbs 000 sand into the wet slurry. In some cases it may be necessary to apply 2 finish coats over sand broadcast to achieve a uniform finish.
6. After RD-E Deck Slurry coat has dried, apply finish coat of RD-Monograff, RD-Hydropox or RD-Mur Acryl in color and gloss approved by the Architect/Engineer, applied at 3-6 mils DFT.

OPTION 3: (UNREINFORCED SYSTEM)

1. Apply a detail coat of RD-Elastometal (10 mils wet (5 mils DFT) by brush to all areas of bare steel (if any exists) and to all joints, fasteners, rivet heads. Pay particular attention to force the coating into the interface edges where the existing paint remains next to bare metal. Detail hard to reach areas that spray painting will not completely cover.
 2. Apply a full coat of RD-E Deck as a primer over all surfaces at 10 mils wet (5 mils DFT). Thin the primer 10% with water.
 3. Detail any cracks greater than 1/16" using RD-Acrykit or RD-MSP caulk. Followed by a coat of RD E Deck applied at 8-10 mils wet (4-6 mils DFT)
 4. After the first coat of RD-E Deck has dried (2-6hr), apply a coat of RD-E Deck Slurry by brush and roller to all surfaces leaving a pinhole free surface, plus a non-skid surface. Apply RD-E Deck Slurry at 22-24 mils wet (18-20 mils DFT)
- Note:** To increase the abrasion resistance we recommend broadcasting 1/8 – 1/2 lbs 000 sand into the wet slurry. In some cases it may be necessary to apply 2 finish coats over sand broadcast to achieve a uniform finish.
5. After RD-E Deck Slurry coat has dried, apply finish coat of RD-Monograff, RD Monoguard or RD-Hydropox in color and gloss approved by the Architect/Engineer, applied at 3-6 mils DFT.
- Note to Specifier:** With this basic system for using RD-E Deck to protect and waterproof concrete etc. Job conditions such as quality of existing paint systems, time of year, color, gloss, abrasion resistance, degree of clean-ability, Etc. will influence number of coats and finish. A choice must be made to reinforce all surfaces or just cracks and joints Etc!
- G. If coating cannot be applied by spray, then use brush and roller as necessary to achieve the specified dry film thickness. It is recommended to use a loop roller to apply RD- E Deck Slurry.

- H. Completed Work: Match approved samples for color and coverage. Remove, refinish or repaint work not complying with requirements.

3.05 QUALITY WORKMANSHIP

- A. The Contractor shall be responsible for the cleanliness of his coating operations and shall use covers and masking tape to protect the new and existing material not intended to be coated whenever such covering is necessary, or if so requested by the Owner. Any coatings identified for removal shall be carefully removed without damage to any finished coatings or surface. If damage does occur, the entire surface, adjacent to and including the damaged area, shall be recoated without visible lap marks and without additional cost to the Owner.
- B. 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.

3.06 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.

3.07 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.

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-E Deck** 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.

RD Coatings USA

November 2016

167 Avon Street

Stratford, CT 06615

Phone: (203) 380-9477 Fax: (203) 380-9488