

SECTION 09 91 23 - INTERIOR PAINTS AND COATINGS

Part 1 - GENERAL

1.1 SECTION INCLUDES

- A Interior paint and coatings systems

1.2 RELATED SECTIONS

- A. Section 09 93 00 - Stains and Transparent Finishes

1.3 REFERENCES

- A SSPC-SP 1 - Solvent Cleaning
- B SSPC-SP 2 - Hand Tool Cleaning
- C SSPC-SP 3 - Power Tool Cleaning
- D SSPC-SP 13 / Nace No. 6 Surface Preparation for Concrete
- E EPA-Method 24
- F GS-11, GC-03
- G LEED®-NC USGBC version 2.2 With Errata Second Edition, September 2006  
Posted 10/31/2007

1.4 SUBMITTALS

- A Submit under provisions of Section 01 33 00, Submittal Procedures.
- B Product Data: Manufacturer's data sheets on each paint and coating product should include:
  - 1 Product characteristics
  - 2 Surface preparation instructions and recommendations
  - 3 Primer requirements and finish specification
  - 4 Storage and handling requirements and recommendations
  - 5 Application methods
  - 6 Cautions, VOC's
- C Selection Samples: Submit a complete set of color chips that represent the full range of manufacturer's color samples available.
- D Verification Samples: For each finish product specified, submit samples that represent actual product, color, and sheen.

1.5 MOCK-UP

- A Finish surfaces for verification of products, colors, & sheens

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- B Finish area designated by Architect, 100 SF each color specified on plans
- C Provide samples that designate prime & finish coats of each color selected.
- D Do not proceed with remaining work until the Architect approves the mock-up samples

1.6 DELIVERY, STORAGE, AND HANDLING

- A Delivery: Deliver manufacturer's unopened containers to the work site. Packaging shall bear the manufacturer's name, label, and the following list of information:

- Product name, and type (description)
- Application & use instructions
- Surface preparation
- VOC content
- Environmental issues
- Batch date
- Color number/name

- B Storage: Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.
- C Handling: Maintain a clean, dry storage area, to prevent contamination or damage to the coatings.

1.7 PROJECT CONDITIONS

- A Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not apply coatings under environmental conditions outside manufacturer's absolute limits. This specification does not take into consideration wet areas or areas needing high performance coatings.

Part 2 - PRODUCTS

2.1 MANUFACTURERS

- A Acceptable Manufacturer:
  - 1. Dunn-Edwards
  - 2. The Sherwin-Williams Company
  - 3. Benjamin Moore
- B Substitutions: Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 Product Requirements. When submitting request for substitution, provide complete product data specified above under Submittals, for each substitute product.

2.2 SCHEDULE

- A. METAL - (Galvanized; Ceilings, Duct work)
  - 1. Dryfall Waterborne Systems

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- a. Egg-Shel Finish
  - 1st Coat: S-W Waterborne Acrylic Dry Fall, B42W2
  - 2nd Coat: S-W Waterborne Acrylic Dry Fall, B42W2
  - (11 mils wet, 4.5 mils dry)
  
- B. METAL - (Structural Steel Columns, Joists, Trusses, Beams, Miscellaneous & Ornamental Iron, Structural Iron, Ferrous Metal)
  - 1. Latex Systems
    - a. Flat Finish
      - LOWER ODOR/LOW VOC
      - 1st Coat: S-W Pro Industrial Pro-Cryl® Universal Primer, B66-310 Series
      - (5-10 mils wet, 2-4 mils dry)
      - 2nd Coat: S-W Harmony Low Odor Interior Latex Flat, B5 Series
      - 3rd Coat: S-W Harmony Low Odor Interior Latex Flat, B5 Series
      - (4 mils wet, 1.6 mils dry per coat)
  
- C. WOOD - (Walls, Ceilings, Doors, Trim,)
  - 1. Latex Systems
    - a. Egg-Shell / Satin Finish
      - 1st Coat: DE ENSO 00 (4 mils wet, 1.4 mils dry)
      - 2nd Coat: DE SpartaZero 30 (egg shell)
      - 3rd Coat: DE SpartaZero 30 (egg sheet) (4 mils wet, 1.6 mils dry per coat)
    - b. Flat Finish
      - 1st Coat: DE ENSO 00 (4 mils wet, 1.4 mils dry)
      - 2nd Coat: DE SpartaZero 30
      - 3rd Coat: DE SpartaZero 30
  - 2. Stain and Varnish System
    - a. Satin Finish
      - 1st Coat: S-W Minwax 250 VOC Stains
      - 2nd Coat: S-W WoodClassics Waterborne Polyurethane Varnish, A68 Series
      - 3rd Coat: S-W WoodClassics Waterborne Polyurethane Varnish, A68 Series
      - (4 mils wet, 1.0 mil dry per coat)
    - b. Flat Finish
      - 1st Coat: S-W Harmony Low Odor Interior Latex Primer, B11W900
      - (4 mils wet, 1.3 mils dry per coat)
      - 2nd Coat: S-W Duration Home Interior latex Matte, A96-100 Series
      - 3rd Coat: S-W Duration Home Interior latex Matte, A96-100 Series
      - (4 mils wet, 1.6 mils dry per coat)

2.3 MATERIALS - GENERAL REQUIREMENTS

A Paints and Coatings - General:

- 1 Unless otherwise indicated, provide factory-mixed coatings. When required, mix coatings to correct consistency in accordance with manufacturer's instructions before application. Do not reduce, thin, or dilute coatings or add materials to coatings unless such a procedure is specifically described in

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manufacturer's product instructions. VOC numbers used in this document need to be confirmed by using the products MSDS sheets.

- 2 Requirements: USGBC Version 2.2 LEED®-NC  
Paints and coatings used on the interior of the building (defined as inside of the weatherproofing system and applied on-site) shall comply with the following criteria:  
Architectural paints, coatings and primers applied to interior walls and ceilings: Do not exceed the VOC content limits established in Green Seal Standard GS-11, Paints, First Edition, May 20, 1993. Errata posted 10/31/2007 Second Edition, September 2006  
Under Requirements, add to the end of the first bullet point: "Primers must meet the VOC limit for non-flat paint."  
Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates: Do not exceed the VOC content limit of 250 g/L established in Green Seal Standard GC-03, Anti-Corrosive Paints, Second Edition, January 7, 1997.  
Clear wood finishes, floor coatings, stains, and shellacs applied to interior elements: Do not exceed the VOC content limits established in South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1,.....2004

Interior Coatings GS-11 VOC content limits:

<u>Coating Type</u>	<u>VOC weight in grams/liter of product minus water</u>
Non-flat	2
Flat	2

2.4 ACCESSORIES

- A Coating Application Accessories:
  - 1 Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required, per manufacturer's specifications.

PART 3 EXECUTION

3.1 EXAMINATION

- A Do not begin application of coatings until substrates have been properly prepared. Notify Architect of unsatisfactory conditions before proceeding.
- B If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C Proceed with work only after conditions have been corrected and approved by all parties, otherwise application of coatings will be considered as an acceptance of surface conditions.

### 3.2 SURFACE PREPARATION

- A Proper product selection, surface preparation, and application affect coating performance. Coating integrity and service life will be reduced because of improperly prepared surfaces. Selection and implementation of proper surface preparation ensures coating adhesion to the substrate and prolongs the service life of the coating system.
- B Selection of the proper method of surface preparation depends on the substrate, the environment, and the expected service life of the coating system. Economics, surface contamination, and the effect on the substrate will also influence the selection of surface preparation methods.
- C The surface must be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint or other contamination to ensure good adhesion.
- D Remove mildew before painting by washing with a solution of one (1) part liquid household bleach and three (3) parts of warm water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes; however, do not allow the solution to dry on the surface. Rinse thoroughly with clean water and allow the surface to dry 48 hours before painting. Wear protective glasses or goggles, waterproof gloves, and protective clothing. Quickly wash off any of the mixture that comes in contact with your skin. Do not add detergents or ammonia to the bleach/water solution.
- E No painting should take place when the interior temperature is below 50°F unless the specified product is designed for the marginal conditions.
- F Methods
  - 1 Aluminum  
Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP1, Solvent Cleaning.
  - 2 Block (Cinder and Concrete)  
Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement, and hardeners. Concrete and mortar must be cured at least 30 days at 75°F unless the manufactures products are designed for application prior to the 30-day period. The pH of the surface should be between 6 and 9, and moisture content must be 15% or lower. On tilt-up and poured-in-place concrete, commercial detergents and abrasive blasting may be necessary to prepare the surface. Fill bug holes, air pockets, and other voids with a cement patching compound. Masonry surfaces must be dry before priming.
  - 3 Concrete, SSPC-SP13 or NACE 6  
This standard gives requirements for surface preparation of concrete by mechanical, chemical, or thermal methods prior to the application of bonded protective coating or lining systems. The requirements of this standard are applicable to all types of cementitious surfaces including cast-in-place concrete floors and walls, precast slabs, masonry walls, and shotcrete surfaces. An acceptable prepared concrete surface should be free of contaminants, laitance, loosely adhering concrete, and dust, and should provide a sound, uniform substrate suitable for the application of protective coating or lining systems.
  - 4 Cement Composition Siding/Panels  
Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow to dry. Existing peeled or checked paint should be scraped and sanded to a sound surface. Pressure clean, if needed, with a minimum of 2100 psi pressure to remove all dirt, dust, grease, oil, loose particles, laitance, foreign material, and peeling or defective coatings. Allow the surface to dry thoroughly. The pH of the surface should be between 6 and 9, unless the products are designed to be used in high pH environments.

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- 5 Drywall—Interior  
Must be clean and dry. All nail heads must be set and spackled. Joints must be taped and covered with a joint compound. Spackled nail heads and tape joints must be sanded smooth and all dust removed prior to painting.
- 6 Galvanized Metal  
Clean per SSPC-SP1 using detergent and water or a degreasing cleaner to remove greases and oils. Apply a test area, priming as required. Allow the coating to dry at least one week before testing. If adhesion is poor, Brush Blast per SSPC-SP7 is necessary to remove these treatments.
- 7 Plaster  
Must be allowed to dry thoroughly for at least 30 days before painting, unless the manufactures products are designed for application prior to the 30-day period. Room must be ventilated while drying; in cold, damp weather, rooms must be heated. Damaged areas must be repaired with an appropriate patching material. Bare plaster must be cured and hard. Textured, soft, porous, or powdery plaster should be treated with a solution of 1-pint household vinegar to 1 gallon of water. Repeat until the surface is hard, rinse with clear water and allow to dry.
- 8 Steel: Structural, Plate, etc.  
Should be cleaned by one or more of the surface preparations described below. These methods are used throughout the world for describing methods for cleaning structural steel. Visual standards are available through the Society of Protective Coatings. A brief description of these standards together with numbers by which they can be specified follow.
- 9 Solvent Cleaning, SSPC-SP1  
Solvent cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants. Solvent cleaning does not remove rust or mill scale. Change rags and cleaning solution frequently so that deposits of oil and grease are not spread over additional areas in the cleaning process. Be sure to allow adequate ventilation.
- 10 Hand Tool Cleaning, SSPC-SP2  
Hand Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before hand tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1 or other agreed upon methods
- 11 Power Tool Cleaning, SSPC-SP3  
Power Tool Cleaning removes all loose mill scale, loose rust, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Before power tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1 or other agreed upon methods.
- 12 Commercial Blast Cleaning, SSPC-SP6 or NACE 3  
A Commercial Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxides, corrosion products, and other foreign matter, except for staining. Staining shall be limited to no more than 33 percent (33%) of each square inch of surface area and may consist of light shadows, slight streaks, or minor discoloration caused by stains of rust, stains of mill scale, or stains of previously applied paint. Before blast cleaning, visible deposits of oil or grease shall be removed by any of the methods specified in SSPC-SP1 or other agreed upon methods.
- 13 Power Tool Cleaning to Bare Metal, SSPC-SP11  
Metallic surfaces that are prepared according to this specification, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, mill scale, rust, paint, oxide corrosion products, and other foreign matter. Slight residues of rust and paint may be left in the lower portions of pits if the

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original surface is pitted. Prior to power tool surface preparation, remove visible deposits of oil or grease by any of the methods specified in SSPC-SP1, Solvent Cleaning, or other agreed upon methods.

- 14 Water Blasting, NACE Standard RP-01-72  
Removal of oil grease dirt, loose rust, loose mill scale, and loose paint by water at pressures of 2,000 to 2,500 psi at a flow of 4 to 14 gallons per minute.
- 15 Vinyl Siding, Clean the surface thoroughly by scrubbing with warm, soapy water. Rinse thoroughly. Do not paint vinyl siding with any color darker than the original color, unless the product and color are designed for such use. Painting with darker colors may cause the siding to warp.
- 16 Wood  
Must be clean and dry. Prime and paint as soon as possible. Knots and pitch streaks must be scraped, sanded, and spot primed before a full priming coat is applied. Patch all nail holes and imperfections with a wood filler or putty and sand smooth.

WARNING! Removal of old paint by sanding, scraping or other means may generate dust or fumes that contain lead. Exposure to lead dust or fumes may cause brain damage or other adverse health effects, especially in children or pregnant women. Controlling exposure to lead or other hazardous substances requires the use of proper protective equipment, such as a properly fitted respirator (NIOSH approved) and proper containment and cleanup. For more information, call the National Lead Information Center at 1-800-424-LEAD (in US) or contact your local health authority.

### 3.3 INSTALLATION

- A Apply all coatings and materials with manufacturer's specifications in mind. Mix and thin coatings according to manufacturer's recommendation.
- B Do not apply to wet or damp surfaces.
  - 1 Wait at least 30 days before applying to new concrete or masonry. Or follow manufacturer's procedures to apply appropriate coatings prior to 30 days.
  - 2 Test new concrete for moisture content.
  - 3 Wait until wood is fully dry after rain or morning fog or dew.
- C Apply coatings using methods recommended by manufacturer.
- D Uniformly apply coatings without runs, drips, or sags, without brush marks, and with consistent sheen.
- E Apply coatings at spreading rate required to achieve the manufacturer's recommended dry film thickness.
- F Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.
- G Inspection: The coated surface must be inspected and approved by the Architect or Engineer just prior to each coat.

### 3.4 PROTECTION

- A Protect finished coatings from damage until completion of project.
- B Touch-up damaged coatings after substantial completion, following manufacture's recommendation for touch up or repair of damaged coatings. Repair any defects that will hinder the performance of the coatings.

END OF SECTION 099123