

SECTION 09 90 00 - PAINTING AND COATING

PART 1: GENERAL

(Coordinate Paint Selection with UT Dallas Project Manager). For additional information, reference (UTD Material Color and Finish Key)

1.1 SECTION INCLUDES

- A. Interior paint and coating systems including surface preparation
- B. Exterior paint and coating systems including surface preparation

1.2 RELATED SECTIONS

****NOTE TO SPECIFIER: Delete any sections below not relevant to this project; add others as required.**

- A. Section 03 30 00 - Concrete: Surface coordination and curing provisions
- B. Section 05 50 00 - Metal Fabrications: Shop priming ferrous metal
- C. Section 06 40 23 – Interior Architectural Woodwork: Shop-applied stains and transparent finishes
- D. Section 15 05 00 - Basic Mechanical Materials and Methods: Mechanical identification
- E. Section 16 05 00 - Basic Electrical Materials and Methods: Mechanical identification

1.3 REFERENCES

****NOTE TO SPECIFIER: Delete references from the list below that are not actually required by the text of the edited section.**

- A. Steel Structures Painting Council (SSPC):
 - 1. SSPC-SP 1 - Solvent Cleaning
 - 2. SSPC-SP 2 - Hand Tool Cleaning
 - 3. SSPC-SP 3 - Power Tool Cleaning
 - 4. SSPC-SP5/NACE No. 1, White Metal Blast Cleaning
 - 5. SSPC-SP6/NACE No. 3, Commercial Blast Cleaning
 - 6. SSPC-SP7/NACE No. 4, Brush-Off Blast Cleaning
 - 7. SSPC-SP10/NACE No. 2, Near-White Blast Cleaning
 - 8. SSPC-SP11, Power Tool Cleaning to Bare Metal
 - 9. SSPC-SP12/NACE No. 5, Surface Preparation and Cleaning of metals by Water jetting prior to Recoating
 - 10. SSPC-SP 13/NACE No. 6 Surface Preparation for Concrete.
- B. Environmental Protection Agency (EPA): Method 24 - Determination of Volatile Matter Content, Water Content, Density, Volume Solids, and Weight Solids of Surface Coatings.
- C. South Coast Air Quality Management District (SCAQMD): Rule 113 - Architectural Coatings.

D. Green Seal, Inc.:

1. GS-11 Standard for Paints and Coatings.
2. GC-03 - Environmental Criteria for Anti-Corrosive Paints.

E. United States Green Building Council (USGBC): LEED-NC/CI/CS with addenda.

1.4 SUBMITTALS

A. Submit under provisions of Section 01 31 00.

B. Product Data: For each paint system indicated, including.

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 for storage, handling and installation

****NOTE TO SPECIFIER: Delete selection samples if colors have already been selected.**

C. Selection Samples: Submit a complete set of color chips that represent the full range of manufacturer's products, colors and sheens available.

D. Verification Samples: For each finish product specified, submit samples that represent actual product, color, and sheen.

1.5 QUALITY ASSURANCE

A. Installer Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.

B. Paint exposed surfaces: If a color finish or a surface is not specifically mentioned, Architect will select from standard products, colors and sheens available.

C. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels unless indicated.

****NOTE TO SPECIFIER: Include a mock-up if the project size and/or quality warrant taking such a precaution. The following is one example of how a mock-up on a large project might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.**

D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.

1. Finish surfaces for verification of products, colors and sheens
2. Finish area designated by Architect and UT Dallas Project Manager
3. Provide samples that designate primer and finish coats
4. Do not proceed with remaining work until the Architect and UT Dallas Project Manager approves the mock-up.

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.

1. Product name and type (description)
 2. Application and use instructions
 3. Surface preparation
 4. VOC content
 5. Environmental issues
 6. Batch date.
 7. Color number.
- 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.
- C. Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.
- D. 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 install products under environmental conditions outside manufacturer's absolute limits.

1.8 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied and in the quantities described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.
- B. Furnish Owner with an additional 1% of each material and color, but not less than 1 gal (3.8 l) or 1 case, as appropriate.
- C. Indicate final color schedule used in Operation and Maintenance Manuals.

PART 2: PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Sherwin-Williams
- B. Benjamin Moore
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 31 00.

2.2 APPLICATIONS/SCOPE

- A. Interior Paints and Coatings:
1. Concrete: Poured, precast, tilt-up, cast-in-place, cement board, plaster
 2. Masonry: Concrete masonry units, including split-face, scored, and smooth block
 3. Metal: Aluminum, galvanized steel
 4. Metal: Structural steel, joists, trusses, beams, partitions and similar items
 5. Wood: Walls, ceilings, doors, trim and similar items
 6. Wallboard: Gypsum drywall
- B. Exterior Paints and Coatings:
1. Concrete: Concrete Floors, Patios, Porches, Steps and Platforms
 2. Metal: Aluminum, Galvanized

3. Metal: Misc. Iron, Ornamental Iron, Ferrous Metal
4. Wood: Siding, Trim, Shutters, Sash, and Misc. Hardboard

2.3 PAINT MATERIALS - GENERAL

A. Paints and Coatings.

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 procedure is specifically described in manufacturer's product instructions.
2. For opaque finishes, tint each coat including primer coat and intermediate coats, ½ shade lighter than succeeding coat, with final finish coat as base color. Or follow manufacturer's product instructions for optimal color conformance.
3. On ALL interior renovation projects use Low Odor/Low VOC version of paint specified herein.

B. Primers: Where the manufacturer offers options on primers for a particular substrate, use primer categorized as "best" by the manufacturer.

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

D. Color: Refer to Finish Schedule for paint colors, and as selected.

2.4 INTERIOR PAINT SYSTEMS

A. CONCRETE: (Walls and Ceilings, Poured Concrete, Precast Concrete, Unglazed Brick, Cement Board, Tilt-Up, Cast-In-Place).

1. Latex Systems:

a. Eg-Shel/Satin Finish:

- 1). 1st Coat: S-W Loxon Acrylic Masonry Primer, A24W8300 (8 mils wet, 3.2 mils dry)
- 2). 2nd Coat: S-W ProMar 200 Latex Eg-Shel Enamel, B20-2200 Series
- 3). 3rd Coat: S-W ProMar 200 Latex Eg-Shel Enamel, B20-2200 Series (4 mils wet, 1.3 mils dry per coat)

b. Eg-Shel/Satin Finish (Low Odor - Zero VOC Finish):

- 1). 1st Coat: S-W Loxon Acrylic Masonry Primer, A24W8300 (8 mils wet, 3.2 mils dry)
- 2). 2nd Coat: S-W ProMar 200 Zero VOC Latex Eg-Shel, B20-2600 Series
- 3). 3rd Coat: S-W ProMar 200 Zero VOC Latex Eg-Shel, B20-2600 Series (4 mils wet, 1.6 mils dry per coat)

B. MASONRY: CMU - Concrete, Split, Scored, Smooth, Fluted.

1. Latex Systems:

a. Eg-Shel/Satin Finish:

- 1). 1st Coat: S-W PrepRite Block Filler, B25W25 (75-125 sq. ft. /gal)
- 2). 2nd Coat: S-W ProMar 200 Latex Eg-Shel, B20-2200 Series
- 3). 3rd Coat: S-W ProMar 200 Latex Eg-Shel, B20-2200 Series (4 mils wet, 1.6 mils dry per coat)

b. Eg-Shel/Satin Finish (Low Odor - Low VOC):

- 1). 1st Coat: S-W PrepRite Block Filler, B25W25 (75-125 sq. ft. /gal)
- 2). 2nd Coat: S-W ProGreen 200 Interior Latex Eg-Shel, B20W651
- 3). 3rd Coat: S-W ProGreen 200 Interior Latex Eg-Shel, B20W651 (4 mils wet, 1.6 mils dry per coat)

C. METAL: Aluminum, Galvanized.

1. Latex Systems:

a. Semi-Gloss Finish:

- 1). 1st Coat: S-W Pro Industrial Pro-Cryl Primer, B66-310 Series (2-4 mils dry)
- 2). 2nd Coat: S-W ProMar 200 Latex Semi-Gloss, B31-2200 Series
- 3). 3rd Coat: S-W ProMar 200 Latex Semi-Gloss, B31-2200 Series (4 mils wet, 1.3 mils dry per coat)

b. Semi-Gloss (Low Odor/Lower VOC):

- 1). 1st Coat: S-W Pro Industrial Pro-Cryl Primer, B66-310 Series (2-4 mils dry)
- 2). 2nd Coat: S-W ProGreen 200 Interior Latex Semi-Gloss, B31-600 Series
- 3). 3rd Coat: S-W ProGreen 200 Interior Latex Semi-Gloss, B31-600 Series (4 mils wet, 1.6 mils dry per coat)

2. Dryfall Waterborne Topcoats:

a. Semi-Gloss Finish:

- 1). 1st Coat: S-W Low VOC Waterborne Acrylic Dryfall, B42W83
- 2). 2nd Coat: S-W Low VOC Waterborne Acrylic Dryfall, B42W83 (11 mils wet, 4.5 mils dry per coat)

b. Eg-Shel Finish:

- 1). 1st Coat: S-W Low VOC Waterborne Acrylic Dryfall, B42W82
- 2). 2nd Coat: S-W Low VOC Waterborne Acrylic Dryfall, B42W82 (11 mils wet, 4.5 mils dry per coat)

D. METAL -Steel (Structural Steel Columns, Joists, Trusses, Beams, Miscellaneous and Ornamental Iron, Structural Iron, and Ferrous Metal):

1. Latex Systems:

a. Semi-Gloss Finish:

- 1). 1st Coat: S-W Pro Industrial Pro-Cryl Primer, B66-310 Series (2-4 mils dry)
- 2). 2nd Coat: S-W ProMar 200 Latex Semi-Gloss, B31-2200 Series
- 3). 3rd Coat: S-W ProMar 200 Latex Semi-Gloss, B31-2200 Series (4 mils wet, 1.3 mils dry per coat)

b. Semi-Gloss Finish (Low Odor/Lower VOC):

- 1). 1st Coat: S-W Pro Industrial Pro-Cryl Primer, B66-310 Series (2-4 mils dry)
- 2). 2nd Coat: S-W ProGreen 200 Interior Latex Semi-Gloss, B31-600 Series
- 3). 3rd Coat: S-W ProGreen 200 Interior Latex Semi-Gloss, B31-600 Series (4 mils wet, 1.6 mils dry per coat)

2. Alkyd Systems:

- a. Semi-Gloss Water Base Finish:
 - 1). 1st Coat: S-W Pro Industrial Pro-Cryl Primer, B66-310 Series (2.0 - 4.0 mils dry per coat)
 - 2). 2nd Coat: S-W ProMar 200 Waterbased Acrylic/Alkyd Semi-Gloss, B34-8200 Series
 - 3). 3rd Coat: S-W ProMar 200 Waterbased Acrylic/Alkyd Semi-Gloss, B34-8200 Series (4 mils wet, 1.7 mils dry per coat)
- b. Semi-Gloss Low VOC Solvent Base Finish:
 - 1). 1st Coat: S-W Pro Industrial Pro-Cryl Primer, B66-310 Series (2-4 mils dry)
 - 2). 2nd Coat: S-W ProClassic XP Interior Alkyd Semi-Gloss, B34W551
 - 3). 3rd Coat: S-W ProClassic XP Interior Alkyd Semi-Gloss, B34W551 (4 mils wet, 3.7 mils dry per coat)
- c. Dryfall Waterborne Topcoats:
 - 1). Semi-Gloss Finish:
 - a). 1st Coat: S-W Pro Industrial Pro-Cryl Primer, B66-310 Series (2-4 mils dry)
 - b). 2nd Coat: S-W Low VOC Waterborne Acrylic Dryfall, B42W83.
 - 2). Eg-Shel Finish:
 - a). 1st Coat: S-W Pro Industrial Pro-Cryl Primer, B66-310 Series (2-4 mils dry)
 - b). 2nd Coat: S-W Low VOC Waterborne Acrylic Dryfall, B42W82

E. WOOD - Walls, Ceilings, Doors, Trim.

- 1. Latex Systems:
 - a. Semi-Gloss Finish:
 - 1). 1st Coat: S-W PrepRite ProBlock Latex. B51 Series (4 mils wet, 1.4 mils dry)
 - 2). 2nd Coat: S-W ProMar 200 Latex Semi-Gloss, B31-2200 Series
 - 3). 3rd Coat: S-W ProMar 200 Latex Semi-Gloss, B31-2200 Series (4 mils wet, 1.3 mils dry per coat)
 - b. Semi-Gloss (Low Odor - Low VOC):
 - 1). 1st Coat: S-W PrepRite ProBlock Latex. B51 Series (4 mils wet, 1.4 mils dry)
 - 2). 2nd Coat: S-W ProGreen 200 Interior Latex Semi-Gloss, B31-600 Series
 - 3). 3rd Coat: S-W ProGreen 200 Interior Latex Semi-Gloss, B31-600 Series (4 mils wet, 1.6 mils dry per coat)
- 2. Stain and Varnish:
 - a. Clear Finish:
 - 1). 1st Coat: S-W Wood Classics 250 VOC Oil Stain A49-800 Series
 - 2). 2nd Coat: S-W Wood Classics Waterborne Polyurethane Varnish
 - 3). 3rd Coat: S-W Wood Classics Waterborne Polyurethane Varnish (4 mils wet, 1.0 mil dry per coat)
 - a). Sheen: Satin

F. DRYWALL (Walls, Ceilings, Gypsum Board, Plaster Board and similar items)

- 1. Latex Systems:

- a. Eg-Shel/Satin Finish:
 - 1). 1st Coat: S-W ProMar 200 Latex Primer, B28W8200 (4 mils wet, 1.2 mils dry)
 - 2). 2nd Coat: S-W ProMar 200 Latex Eg-Shel, B20-2200 Series
 - 3). 3rd Coat: S-W ProMar 200 Latex Eg-Shel, B20-2200 Series (4 mils wet, 1.6 mils dry per coat)
 - 4). Eg-Shel / Satin Finish (Low Odor - Zero VOC):
 - a). 1st Coat: S-W Harmony Low Odor Interior Latex Primer, B11 (4 mils wet, 1.3 mils dry per coat)
 - b). 2nd Coat: S-W Harmony Low Odor Interior Latex Eg-Shel, B9 Series
 - c). 3rd Coat: S-W Harmony Low Odor Interior Latex Eg-Shel, B9 Series (4 mils wet, 1.8 mils dry per coat)

2.5 EXTERIOR PAINT SYSTEMS

- A. Concrete: Concrete Floors, Patios, Porches, Steps and Platforms.
 - 1. Acrylic System Water-Based:
 - a. Floor Finish:
 - 1). 1st Coat: S-W Porch and Floor Enamel, A32-Series
 - 2). 2nd Coat: S-W Porch and Floor Enamel, A32-Series (4 mils wet; 1.4 mils dry per coat).
- B. Metal: Aluminum, Galvanized.
 - 1. Latex Systems:
 - a. Semi-Gloss Finish:
 - 1). 1st Coat: S-W Metalatex Acrylic Semi-Gloss, B42 Series
 - 2). 2nd Coat: S-W Metalatex Acrylic Semi-Gloss, B42 Series (4 mils wet, 1.5 mils dry per coat)
- C. METAL: Misc. Iron, Ornamental Iron, Structural Iron and Steel, Ferrous Metal.
 - 1. Latex Systems:
 - a. Semi-Gloss Finish:
 - 1). 1st Coat: S-W Pro Industrial Pro-Cryl Universal Primer, B66-310 Series (5-10 mils wet, 2-4 mils dry)
 - 2). 2nd Coat: S-W Metalatex Acrylic Semi-Gloss, B42 Series
 - 3). 3rd Coat: S-W Metalatex Acrylic Semi-Gloss, B42 Series (4 mils wet, 1.5 mils dry per coat)
- D. WOOD: Siding, Trim, Shutters, Sashes, Hardboard-Bare/Primed.
 - 1. Stain - Water Reducible Systems:
 - a. Semi-Transparent:
 - 1). 1st Coat: S-W WoodScapes Polyurethane Stain, A15T5
 - 2). 2nd Coat: S-W WoodScapes Polyurethane Stain, A15T5 (100-350 sq. ft. /gal)
 - b. Solid Color:

- 1). 1st Coat: S-W WoodScapes Solid Color Stain, A15 Series
- 2). 2nd Coat: S-W WoodScapes Solid Color Stain, A15 Series (200-400 sq. ft. /gal)

PART 3: EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared; notify Architect and UT Dallas Project Manager of unsatisfactory conditions before proceeding. If substrate preparation is the responsibility of another installer, notify Architect and UT Dallas Project Manager of unsatisfactory preparation before proceeding.
- B. 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. General: Surfaces shall be dry and in sound condition. Remove oil, dust, dirt, loose rust, peeling paint or other contamination to ensure good adhesion.
 1. Remove mildew before painting by washing with a solution of 1 part liquid household bleach and 3 parts of warm water. Apply the solution and scrub the mildewed area. Allow the solution to remain on the surface for 10 minutes. 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.
 2. Remove items including but not limited to thermostats, electrical outlets, switch covers and similar items prior to painting. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
 3. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50° F (10° C), unless products are designed specifically for these conditions. On large expanses of metal siding, the air, surface and material temperatures must be 50° F (10° C) or higher to use low temperature products.
- B. Aluminum: Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP1, Solvent Cleaning.
- C. Block (Cinder and Concrete): Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, and form release agents, moisture curing membranes, loose cement, and hardeners. Concrete and mortar must be cured at least 30 days at 75° F (24° C). The pH of the surface should be between 6 and 9, unless the products are designed to be used in high pH environments. 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.
- D. 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.
- E. Cement Composition Siding/Panels: Remove all surface contamination by washing with an appropriate cleaner, rinse thoroughly and allow drying. 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.

- F. Copper and Stainless Steel: Remove all oil, grease, dirt, oxide and other foreign material by cleaning per SSPC-SP 2, Hand Tool Cleaning.
- G. Exterior Composition Board (Hardboard): Some composition boards may exude a waxy material that must be removed with a solvent prior to coating. Whether factory primed or unprimed, exterior composition board siding (hardboard) must be cleaned thoroughly and primed with an alkyd primer.
- H. Drywall - Exterior: 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. Exterior surfaces must be spackled with exterior grade compounds.
- I. 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.
- J. 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.
- K. Plaster: Must be allowed to dry thoroughly for at least 30 days before painting, unless the products are designed to be used in high pH environments. 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 drying.
- L. Steel: Structural, Plate, and Similar Items: 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.
 - 1. 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.
 - 2. 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. Beforehand tool cleaning, remove visible oil, grease, soluble welding residues, and salts by the methods outlined in SSPC-SP1.
 - 3. 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.
 - 4. White Metal Blast Cleaning, SSPC-SP5 or NACE 1: A White Metal 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. 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.
 - 5. 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% 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.
6. Brush-Off Blast Cleaning, SSPC-SP7 or NACE 4: A Brush-Off Blast Cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, loose mill scale, loose rust, and loose paint. Tightly adherent mill scale, rust, and paint may remain on the surface. 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.
 7. 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 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.
 8. Near-White Blast Cleaning, SSPC-SP10 or NACE 2: Near White 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 5% 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.
 9. High- and Ultra-High Pressure Water Jetting for Steel and Other Hard Materials: SSPC-SP12 or NACE 5: This standard provides requirements for the use of high- and ultra-high pressure water jetting to achieve various degrees of surface cleanliness. This standard is limited in scope to the use of water only without the addition of solid particles in the stream.
 10. Water Blasting, SSPC-SP12/NACE No. 5: 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.
- M. Vinyl Siding, Architectural Plastics, EIFS and Fiberglass: Clean thoroughly by scrubbing with a warm, soapy water solution. 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 siding to warp.
- N. Stucco: Must be clean and free of any loose stucco. If recommended procedures for applying stucco are followed, and normal drying conditions prevail, the surface may be painted in 30 days. The pH of the surface should be between 6 and 9, unless the products are designed to be used in high pH environments such as Loxon.
- O. 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.

3.3 INSTALLATION

- A. General: Apply all coatings and materials with manufacture specifications in mind. Mix and thin coatings according to manufacturer's recommendations.
- B. Do not apply to wet or damp surfaces. 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. Test new concrete for moisture content.

- 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 manufacturers recommended dry film thickness.
- F. Regardless of number of coats specified, apply as many coats as necessary for complete hide, and uniform appearance.

3.4 PROTECTION

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

END OF SECTION 09 90 00