SECTION 099600 - HIGH-PERFORMANCE COATINGS

Revise this Section by deleting and inserting text to meet Project-specific requirements.

Verify that Section titles referenced in this Section are correct for this Project's Specifications; Section titles may have changed.

1. GENERAL
   * + 1. SUMMARY
          1. Section includes surface preparation and the application of high-performance coating systems[**.**][**on the following substrates:**]

Revise lists below to suit Project.

Exterior Substrates:

Concrete, [**vertical**] [**and**] [**horizontal**] surfaces.

Fiber-cement board.

Clay masonry.

Concrete masonry units (CMUs).

Steel.

Galvanized metal.

Aluminum (not anodized or otherwise coated).

Copper.

Stainless steel.

Wood.

Fiberglass.

Portland cement plaster (stucco).

Interior Substrates:

Concrete, [**vertical**] [**and**] [**horizontal**] surfaces.

Cement board.

Clay masonry.

Concrete masonry units (CMUs).

Steel.

Galvanized metal.

Aluminum (not anodized or otherwise coated).

Wood.

Fiberglass.

Gypsum board.

Plaster.

* + - * 1. Work under this Contract shall also include, but not necessarily be limited to:

Moisture testing of substrates.

Surface preparation of substrates as required for acceptance of paint, including cleaning, small crack repair, patching, caulking, and making good surfaces and areas to the limits defined under MPI Architectural Painting Manual Preparation requirements.

Specific pre-treatments noted herein or specified in the MPI Architectural Painting Manual.

Sealing / priming surfaces for repainting in accordance with MPI Architectural Painting Manual requirements.

Provision of safe and adequate ventilation as required over and above temporary ventilation supplied by others, where toxic and/or volatile / flammable materials are being used.

* + - * 1. Related Requirements:

Retain subparagraphs below to cross-reference requirements Contractor might expect to find in this Section but are specified in other Sections.

Primers in other Sections must be coordinated for compatibility with finish coats specified in this Section. Review other Sections for shop-primed exterior products, and insert references to this Section to establish primer requirements.

[**Section 051200 "Structural Steel Framing"**] [**Section 051213 "Architecturally Exposed Structural Steel Framing"**] for shop priming of structural steel with primers specified in this Section.

Section 055213 "Pipe and Tube Railings" for shop [**priming**] [**painting**] pipe and tube railings with coatings specified in this Section.

Section 099114 "Exterior Painting" for general field painting.

Section 099123 "Interior Painting" for general field painting.

* + - * 1. Refer to drawings and schedules (e.g., Finish Schedule) for type, location and extent of exterior and interior painting required.
      1. DEFINITIONS

Retain this article if high-performance coatings are specified by manufacturers' trade names rather than by MPI paint numbers. Definitions of MPI Gloss Levels below are from "MPI Architectural Painting Specification Manual" (hereafter, "MPI Manual").

Retain terms that remain after this Section has been edited for a project.

* + - * 1. MPI Gloss Level 5: (Semi-Gloss) 35 to 70 units at 60 degrees, according to ASTM D523.
        2. MPI Gloss Level 6: (Gloss) 70 to 85 units at 60 degrees, according to ASTM D523.
        3. MPI Gloss Level 7: (High Gloss) More than 85 units at 60 degrees, according to ASTM D523.
      1. SUBMITTALS
         1. Submittals for this section are subject to the re-evaluation fee identified in Article 4 of the General Conditions.
         2. Manufacturer’s installation instructions shall be provided along with product data.
         3. Submittals shall be provided in the order in which they are specified and tabbed (for combined submittals).
         4. Painting Schedule: Cross-referenced Painting Schedule listing all exterior and interior substrates to be painted and specified finish paint type designation; product name and manufacturer, recommended primers and product numbers, and finish paint color designation for each substrate to be painted.

Designate exterior substrates by building name and number, substrate to be painted and surface location.

Designate interior substrates by building name and number, floor, room name and number, and surface to be painted.

* + - * 1. Product Data: For each type of product. Include preparation requirements and application instructions.

See "Writing Guide" Article in the Evaluations for discussion of first subparagraph below.

Include printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.

Indicate VOC content.

* + - * 1. Sustainable Design Submittals:
        2. Samples for Initial Selection: For each type of topcoat product indicated.

Delete "Samples for Initial Selection" Paragraph above if colors and other characteristics are preselected and specified or scheduled. Retain "Samples for Verification" Paragraph below with or without above.

* + - * 1. Samples for Verification: For each type of coating system and each color and gloss of topcoat indicated.

Submit Samples on rigid backing, 8 inches square.

Apply coats on Samples in steps to show each coat required for system.

Label each coat of each Sample.

Label each Sample for location and application area.

* + - * 1. Contractor’s Qualifications: Submit documentation demonstrating compliance with requirements in Quality Assurance Article.
        2. Certification of Volatile Organic Compounds: Submit certified list demonstrating compliance requirements in Quality Assurance Article.
      1. QUALITY ASSURANCE
         1. Volatile Organic Compounds (VOCs) Regulatory Requirements: Chapter III of Title 6 of the official compilation of Codes, Rules and Regulations of the State of New York (Title 6 NYCRR), Part 205 Architectural Surface Coatings.

Certificate of Compliance: List of each paint product to be delivered and installed. List shall include written certification stating that each paint product listed complies with the VOC regulatory requirements in effect at the time of job site delivery and installation.

* + - * 1. Contractor shall have a minimum of five (5) years proven satisfactory experience and shall show proof before commencement of work that he will maintain a qualified crew of painters throughout the duration of the work. When requested by the Director’s Representative, Contractor shall provide a list of the last three comparable repainting jobs including, name, location, specifying authority / project manager, start / completion dates and value of the work.
        2. All materials, preparation and workmanship shall conform to the standards contained in the latest edition of the Master Painters Institute (MPI) Architectural Painting Manual (herein referred to as the MPI Manual).
        3. Mockups: Apply mockups of each coating system indicated to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

Director’s Representative will select one surface to represent surfaces and conditions for application of each coating system.

Wall and Ceiling Surfaces: Provide samples of at least 100 sq. ft..

Other Items: Director’s Representative will designate items or areas required.

Final approval of color selections will be based on mockups.

If preliminary color selections are not approved, apply additional mockups of additional colors selected by Director’s Representative at no added cost to the State.

Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Director’s Representative specifically approves such deviations in writing.

Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

* + - * 1. Compatibility of Paint Materials: Primers and intermediate paints shall be products manufactured or recommended by the finish paint manufacturer.
      1. REGULATORY REQUIREMENTS
         1. Conform to work place safety regulations for storage, mixing, application and disposal of all paint related materials to requirements of those authorities having jurisdiction.
         2. To reduce the amount of contaminants entering waterways, sanitary / storm drain systems or into the ground the following procedures shall be strictly adhered to:

Retain cleaning water for water based materials to allow sediments to be filtered out. In no case shall equipment be cleaned using free draining water.

Retain cleaners, thinners, solvents and excess paint and place in designated containers and ensure proper disposal.

Return solvent and oil-soaked rags used during painting operations for contaminant recovery, proper disposal, or appropriate cleaning and laundering.

Dispose of contaminants in an approved legal manner in accordance with hazardous waste regulations.

Empty paint cans are to be dry prior to disposal or recycling (where available).

Close and seal tightly partly used cans of materials including sealant and adhesive containers and store protected in well ventilated fire safe area at moderate temperature.

* + - 1. DELIVERY, STORAGE, AND HANDLING
         1. Deliver painting materials in sealed, original labeled containers bearing manufacturer's name, brand name, type of paint or coating and color designation, standard compliance, materials content as well as mixing and/or reducing and application requirements.
         2. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.

Maintain containers in clean condition, free of foreign materials and residue.

Remove rags and waste from storage areas daily.

* + - * 1. Where toxic and/or volatile / explosive / flammable materials are being used, provide adequate fireproof storage lockers and take necessary precautions and post adequate warnings (e.g. no smoking) as required.
        2. Take necessary precautionary and safety measures to prevent fire hazards and spontaneous combustion and to protect the environment from hazard spills. Materials that constitute a fire hazard (paints, solvents, drop clothes, etc.) to be stored in suitable closed and rated containers or removed from the site on a daily basis.
        3. Comply with requirements of authorities having jurisdiction, in regard to the use, handling, storage and disposal of hazardous materials.

If necessary, insert special requirements for fire protection, heating, ventilation, and other conditions for storage areas on-site.

* + - 1. FIELD CONDITIONS

Some manufacturers' products may require higher temperatures for proper curing. Consult manufacturers and revise first paragraph below to suit requirements for specific products if necessary.

* + - * 1. Apply coatings only when temperature of surfaces to be coated and ambient air temperatures are between 50 and 95 deg F.
        2. Do not apply coatings when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.
        3. Do not apply exterior coatings in snow, rain, fog, or mist.
        4. Perform no Painting work unless a minimum lighting level of 323 Lux (30-foot candles) is provided on surfaces to be repainted.
        5. Apply paint only to dry, clean, and adequately prepared surfaces in areas where dust is no longer generated by construction activities such that airborne particles will not affect the quality of finished surfaces.
        6. Test suspect surfaces (concrete, masonry, plaster and wood surfaces) for moisture and alkalinity as required. Conduct all moisture tests using a properly calibrated electronic moisture meter.

1. PRODUCTS

Manufacturers and products listed in SpecAgent and Masterworks Paragraph Builder are neither recommended nor endorsed by the AIA or Deltek. Before inserting names, verify that manufacturers and products listed there comply with requirements retained or revised in descriptions and are both available and suitable for the intended applications.

* + - 1. MANUFACTURERS

* + - * 1. [Manufacturers:](http://www.specagent.com/Lookup?ulid=11177) Subject to compliance with requirements, provide products by the following:

AkzoNobel

[Benjamin Moore & Co](http://www.specagent.com/Lookup?uid=123457118128).

Carboline.

Cloverdale Paint

PPG Architectural.

Sherwin-Williams.

Approved equivalent.

Retain "Products" Paragraph below and insert lists of manufacturers and products in high performance coating schedules to require specific products or a comparable product from other manufacturers.

See lists of products currently approved by MPI in its "MPI Approved Products Lists." See "Writing Guide" Article in the Evaluations for further discussion.

* + - * 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to products listed in the Exterior High-Performance Coating Schedule or Interior High-Performance Coating Schedule for the coating category indicated.
      1. HIGH-PERFORMANCE COATINGS, GENERAL
         1. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."
         2. Material Compatibility:

Systems could fail if coatings are incompatible. MPI's coating systems match primers and topcoats, taking compatibility into consideration.

Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.

For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.

If retaining subparagraph below, coordinate products retained, if any, in other Part 2 articles, to ensure that one manufacturer can provide products for an entire system.

Products shall be of same manufacturer for each coat in a coating system.

Color selection is often limited because some coating materials yellow or degrade under some environmental conditions.

* + - * 1. Colors: As selected by Director’s Representative from manufacturer's full range.
      1. SOURCE QUALITY CONTROL

Retain this article for large projects or critical coatings where additional control is desired. Delete if tests are not required.

* + - * 1. Testing of Coating Materials: The Director’s Representative reserves the right to invoke the following procedure:

The Director’s Representative will engage the services of a qualified testing agency to sample coating materials. Contractor will be notified in advance and may be present when samples are taken. If coating materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.

Testing agency will perform tests for compliance with product requirements.

The Director’s Representative may direct Contractor to stop applying coatings if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying coating materials from Project site, pay for testing, and recoat surfaces coated with rejected materials. Contractor will be required to remove rejected materials from previously coated surfaces if, on recoating with complying materials, the two coatings are incompatible.

* + - 1. PAINT MATERIALS

Manufacturers' names and product designations can be inserted in paragraphs in this article. Paints in these paragraphs are specified by referencing MPI paint categories and optional MPI numbers. Note that each paint category below is unique within this Section and is identical to that used in the maintenance repainting schedules at the end of Part 3.

If retaining paragraphs below, first revise the maintenance repainting schedules; then retain, delete, and insert appropriate paint products in paragraphs to correspond with paint systems specified in the maintenance repainting schedules.

* + - * 1. Primers:

Primer, Zinc-Rich, Epoxy: A solvent based, two or three component, epoxy type anti-corrosive primer for cleaned new or repaired ferrous metal surfaces exposed to moderate industrial or marine environments. Must be top-coated to attain maximum protective qualities. Specified topcoats include for interior surfaces MPI # 151,153 or 154 W.B. Light Industrial Coating or for exterior surfaces MPI #161,163,164 W.B. Light Industrial Coating, MPI# 77 Cold Cure Epoxy and MPI # 98 and #108 High Build Epoxy. Minimum recommended surface preparation is SSPC SP-6 Commercial Blast, but in some repainting work, hand or power tool cleaning may be the maximum attainable.

Type ESP-EP1: Primer, Zinc-Rich, Epoxy MPI #20. Provide one of the following:

Carboline: Carbozinc 859.

PPG Architectural: Protective and Marine Coatings Aquapon Zinc Rich Epoxy.

Sherwin-Williams: Protective & Marine Zinc Clad IV.

Approved equivalent.

Primer, Epoxy, Anti-Corrosive, for Metal: A solvent based, two component, epoxy, anti-corrosive primer for exterior and interior, ferrous and galvanized metal surfaces. Specified for use over new, cleaned metals and as a spot primer or full coat over previous epoxy coatings that have been properly prepared with hand, power tool or abrasive blasting cleaning methods. Finish coatings include MPI #77 Cold Cured Epoxy, MPI #98 and #108 High Build Epoxy and for interior surfaces MPI # 151,153 or 154 W.B. Light Industrial Coating or for exterior surfaces MPI #161,163,164 W.B. Light Industrial Coating.

Type ESP-EP2: Primer, Epoxy, Anti-Corrosive, for Metal MPI #101. Provide one of the following:

Benjamin Moore & Co.: Corotech Surface Tolerant Epoxy Mastic Coating.

PPG Architectural: Protective and Marine Coatings Amercoat 235.

Sherwin-Williams: Protective & Marine.

Approved equivalent.

Primer, rust inhibitive, water based A water based, emulsion type, anti-corrosive primer for interior ferrous metals exposed to mildly corrosive environments. This coating shall be resistant to flash rusting when applied to cleaned steel.

Type ISP: Primer, rust inhibitive, water based, MPI #107. Provide one of the following:

Benjamin Moore: Ultra Spec HP Acrylic Metal Primer.

Cloverdale Paint: Ecologic Waterborne Primer.

PPG Architectural: Protective and Marine Coatings Pitt-Tech Ultra ATX 1305 Red Primer.

Sherwin-Williams: Pro Industrial Pro-Cryl Universal Primer.

Approved equivalent.

Primer Sealer, Latex, Interior: A white, pigmented, water based latex sealer used on new interior plaster, concrete and gypsum wallboard surfaces that are subsequently painted with latex or alkyd finish coat(s). Its purpose is to reduce the porosity of the substrate for finish coats. Not intended for use on wood or previously painted surfaces.

Type IAL-P: Primer Sealer, Latex, Interior MPI #50. Provide one of the following:

Benjamin Moore & Co.: Super Hide Zero VOC Latex Primer.

PPG Architectural: Speedhide Zero Interior VOC Latex Sealer.

Approved equivalent.

Sherwin-Williams: ProMar 200 Zero Interior Latex Primer.Block filler, latex: A water based, high solids, emulsion type pigmented coating with bridging and filling properties for interior or exterior concrete masonry units, for the purpose of filling the surface for subsequent applications of paint.

Type LBF: Block Filler: Block filler, latex, interior/exterior, MPI #4. Provide one of the following:

Benjamin Moore: Ultra Spec Hi-Build Masonry Block Filler.

PPG Architectural: Speedhide Int./Ext. Masonry Hi Fill Latex Block Filler.

Sherwin-Williams: Pro Industrial Heavy Duty Block Filler.

Approved equivalent.

Epoxy Block Filler: A solvent based, two component, epoxy, high solids coating for unfilled, interior and exterior block surfaces that are to be coated with a chemically resistant finish. Resistant to water, alkalis, chemicals and solvents. Specified in areas of high humidity, such as public showers, pools and washrooms.

Type EBF: Block Filler: Block filler, epoxy, MPI #116. Provide one of the following:

Benjamin Moore: Corotech; Epoxy Mastic Coating.

Cloverdale Paint: Epoxy Block Filler.

PPG Architectural: Amerlock 400BF.

Sherwin-Williams: Kem Cati-Coat HS Epoxy Filler/Sealer.

Approved equivalent.

* + - * 1. Epoxy Coatings:

Epoxy: A solvent based, gloss, two component, epoxy coating specified for wall and floor surfaces in moderate to heavy traffic commercial and moderate industrial environments. Must be resistant to incidental splash and spillage of dilute (5%) sulfuric acid, (15%) hydrochloric acid, (20%) sodium hydroxide, gasoline and heavy duty cleaners and detergents. Used as a self-priming material on smooth, low porosity concrete, masonry and wood surfaces. On concrete masonry units (blocks) MPI #4 Latex (dry areas) or #116 Epoxy (damp areas) block fillers are used as the first coat. On ferrous and galvanized metals, a primer such as MPI #20 Epoxy Zinc Rich, #101 Epoxy Anti-Corrosive and #19 Inorganic Zinc rich primers This epoxy shall be able to be applied at temperatures ranging from 15° to 40° C and a maximum relative humidity of 80%.

Type EP: Epoxy, gloss, MPI #77. Provide one of the following:

Cloverdale Paint: ClovaCoat 300.

Sherwin-Williams: Protective & Marine Tile-Clad HS Epoxy.

Approved equivalent.

Epoxy deck coating: A solvent based, two component epoxy, non-slip coating for interior and exterior metal decks. Resistant to abrasion, solvents, fuel and oils.

Type EPD: Epoxy deck coating (slip resistant), MPI #82. Provide one of the following:

Benjamin Moore: Corotech; Polyamide Epoxy Coating.

Cloverdale Paint: Clovagrip Anti-Slip Coating.

PPG Architectural: PPG PMC High Gloss Epoxy.

Sherwin-Williams: Protective & Marine Reugrip 250.

Approved equivalent.

Epoxy, high build, low gloss: A two component epoxy, high solids, low gloss coating for use on interior or exterior concrete, masonry and primed metal surfaces. Metal surfaces may be primed with conventional epoxy primers, epoxy zinc rich primers or inorganic zinc rich primers. For increased durability, this product may be top coated with epoxy or polyurethane enamels.

Type EHB-1: Epoxy, high build, low gloss, MPI #108. Provide one of the following:

Benjamin Moore: Corotech; Polyamide Epoxy Semi-Gloss.

Cloverdale Paint: ClovaGuard.

PPG Architectural: Amerlock 600.

Sherwin-Williams: Protective & Marine Macropoxy 646 Fast Cure Epoxy.

Approved equivalent.

High-build epoxy, gloss: A high build, solvent based, two component epoxy for application over an epoxy (MPI #101) or zinc rich primer (MPI #20) to provide protection to exterior/interior steel surfaces in marine or industrial environments. Also used for masonry and concrete surfaces where a durable, chemical resistant film is required. On new concrete masonry units, used over epoxy block filler (MPI #116). Used as an intermediate coat for MPI #72 Aliphatic Polyurethane.

Type EHB-2: High-build epoxy, gloss, MPI #98. Provide one of the following:

Benjamin Moore: Corotech; Polyamide Epoxy Gloss

Cloverdale Paint: ClovaCoat 300 Epoxy High Gloss.

PPG Architectural: HPC High Gloss Epoxy.

Sherwin-Williams: Pro Industrial High Performance Epoxy.

Approved equivalent.

Epoxy, high build, self-priming: A 2 component epoxy, high solids, low gloss coating for use on interior or exterior ferrous metal surfaces. This material may be applied directly to metal without the use of a primer. Intended for use in areas of severe industrial and marine environments. For increased durability, this product may be top-coated with 2 component epoxy or polyurethane enamels.

Type EHB-3: Epoxy, high build, self-priming, MPI #120. Provide one of the following:

PPG Architectural: Amerlock 600.

Sherwin-Williams: Protective & Marine Macropoxy 646 Fast Cure Epoxy.

Approved equivalent.

Epoxy-modified latex, semi-gloss: A water based two component epoxy-modified latex paint for prepared interior surfaces.  Does not provide the same level of abrasion and chemical resistance as conventional two-component epoxy coatings.  Uses specified include; masonry, gypsum board, and primed metal surfaces, in both new and repainting systems.

Type EML-1: Epoxy-modified latex, semi-gloss (MPI Gloss Level 5), MPI #215. Provide one of the following:

AkzoNobel: Devoe High Performance Coatings; Tru Glaze WB 4426 Water Borne Epoxy.

Cloverdale Paint: Ecologic Waterborne Epoxy Gloss.

PPG Architectural: Protective and Marine Coatings Aquapon WB EP Epoxy, Semi-Gloss.

Approved equivalent.

Epoxy-modified latex, gloss: A water based two component epoxy-modified latex paint for prepared interior surfaces.  Does not provide the same level of abrasion and chemical resistance as conventional two-component epoxy coatings.  Uses specified include; masonry, gypsum board, and primed metal surfaces, in both new and repainting systems.

Type EML-2: Epoxy-modified latex, gloss (MPI Gloss Level 6), MPI #115. Provide one of the following:

AkzoNobel: Devoe High Performance Coatings; Tru Glaze WB 4426 Water Borne Epoxy.

Cloverdale Paint: Ecologic Waterborne Epoxy Gloss.

PPG Architectural: Protective and Marine Coatings Aquapon WB EP.

Sherwin-Williams: Pro Industrial Waterbased Catalyzed Epoxy.

Approved equivalent.

* + - * 1. Polyurethane Coatings:

Polyurethane, Two-Component, Pigmented, Gloss (Gloss Level 6): A solvent based, two component polyurethane, pigmented coating with a gloss finish for interior or exterior brick, block, concrete, plaster, wood and metal surfaces, where abrasion, weathering, chemical and solvent resistance is required.

Type AU: Polyurethane, Two-Component, Pigmented, Gloss (Gloss Level 6) MPI #72. Provide one of the following:

AkzoNobel: Devoe High Performance Coatings; Devthane 379.

Benjamin Moore & Co.: Corotech Aliphatic Acrylic Urethane Gloss.

PPG Architectural: Protective & Marine Coatings Pitthane Ultra Gloss 95-812 Series.

Sherwin-Williams: Protective & Marine Acrolon 218 HS.

Approved equivalent.

1. EXECUTION
   * + 1. EXAMINATION
          1. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
          2. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

Percentages in six subparagraphs below are based on "MPI Manual."

Concrete: 12 percent.

Fiber-Cement Board: 12 percent.

Masonry (Clay and CMUs): 12 percent.

Wood: 15 percent.

Gypsum Board: 12 percent.

Plaster: 12 percent.

* + - * 1. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
        2. Plaster Substrates: Verify that plaster is fully cured.
        3. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.
        4. Proceed with coating application only after unsatisfactory conditions have been corrected.

Application of coating indicates acceptance of surfaces and conditions.

* + - 1. PREPARATION

For renovation projects, consult "MPI Maintenance Repainting Manual" and revise first paragraph below and coating systems specified in Exterior High-Performance Coating Schedule and Interior High-Performance Coating Schedule.

* + - * 1. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and coating systems indicated.
        2. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.

* + - * 1. Clean substrates of substances that could impair bond of coatings, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

Coordination of shop-applied prime coats with high-performance coatings is critical.

Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce coating systems indicated.

* + - * 1. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.

If applicable, retain one of two subparagraphs below or, if necessary, insert acid etching of concrete surfaces.

Clean surfaces with pressurized water. Use pressure range of [**1500 to 4000 psi**] [**4000 to 10,000 psi**] at 6 to 12 inches.

Abrasive blast clean surfaces to comply with SSPC-SP 7/NACE No. 4.

* + - * 1. Masonry Substrates: Remove efflorescence and chalk. Do not coat surfaces if moisture content, alkalinity of surfaces, or alkalinity of mortar joints exceeds that permitted in manufacturer's written instructions.

Retain subparagraph below or, if necessary, insert acid etching of clay masonry substrates.

Clean surfaces with pressurized water. Use pressure range of [**100 to 600 psi**] [**1500 to 4000 psi**] at 6 to 12 inches.

Retain "Steel Substrates" Paragraph below if steel is not shop primed or if shop primer is removed in the field.

* + - * 1. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer[**.**][**but not less than the following:**]

SSPC-SP 7/NACE No. 4 permits tight residues of rust, mill scale, and coatings to remain. Be aware that blast cleaning methods may not be practical for use at the Project site and may not be allowed by authorities having jurisdiction.

SSPC-SP 7/NACE No. 4.

SSPC-SP 11 requires complete removal of rust, mill scale, and paint by power tools. SSPC-SP 11 uses nonabrasive methods and bridges the gap between the marginal cleaning required in SSPC-SP 7/NACE No. 4 and the more thorough cleaning required in SSPC-SP 6/NACE No. 3, SSPC-SP 10/NACE No. 2, and SSPC-SP 5/NACE No. 1.

SSPC-SP 11.

SSPC-SP 6/NACE No. 3 is recommended by MPI as the minimum preparation for high-performance coatings and requires that two-thirds of surface area be free of visible residue.

SSPC-SP 6/NACE No. 3.

SSPC-SP 10/NACE No. 2 requires that 95 percent of surface area be free of visible residue.

SSPC-SP 10/NACE No. 2.

SSPC-SP 5/NACE No. 1 removes visible rust, mill scale, paint, and foreign matter.

SSPC-SP 5/NACE No. 1.

Retain "Shop-Primed Steel Substrates" Paragraph below if primers are shop applied and are not removed in the field.

* + - * 1. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

Galvanized-metal substrates should not be chromate passivated if primers are field applied. If galvanized metal is chromate passivated, consult manufacturers for appropriate surface preparation and primers.

* + - * 1. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied coatings.

If necessary, insert requirements for acid etching aluminum.

* + - * 1. Aluminum Substrates: Remove loose surface oxidation.
        2. Wood Substrates:

If necessary, insert requirements for power or pressure washing.

Scrape and clean knots. Before applying primer, apply coat of knot sealer that is recommended in writing by topcoat manufacturer for coating system indicated.

Sand surfaces that will be exposed to view and dust off.

Prime edges, ends, faces, undersides, and backsides of wood.

After priming, fill holes and imperfections in the finish surfaces with filler that is recommended in writing by topcoat manufacturer for coating system indicated. Sand smooth when dried.

* + - 1. APPLICATION
         1. Apply high-performance coatings according to manufacturer's written instructions and recommendations in "MPI Manual."

If Project requires restricted application method (e.g., using only spray or rollers), revise first subparagraph below accordingly.

Use applicators and techniques suited for coating and substrate indicated.

Coat surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, coat surfaces behind permanently fixed equipment or furniture with prime coat only.

Coat backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.

Do not apply coatings over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.

If tinting is not required, delete first paragraph below. Different tints will show through as topcoat erodes.

* + - * 1. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of the same material are to be applied. Tint undercoats to match color of finish coat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
        2. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance.
        3. Apply coatings to produce surface films without cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Produce sharp glass lines and color breaks.
      1. FIELD QUALITY CONTROL
         1. Dry Film Thickness Testing: The State may engage the services of a qualified testing and inspecting agency to inspect and test coatings for dry film thickness.

Contractor shall touch up and restore coated surfaces damaged by testing.

If test results show that dry film thickness of applied coating does not comply with coating manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with coating manufacturer's written recommendations.

* + - 1. CLEANING AND PROTECTION
         1. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
         2. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
         3. Protect work of other trades against damage from coating operation. Correct damage to work of other trades by cleaning, repairing, replacing, and recoating, as approved by Director’s Representative, and leave in an undamaged condition.
         4. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

This Section may be edited using Deltek's SpecBuilder and the MPI Architectural Painting Decision Tree.

Epoxy Coatings: Epoxies have excellent adhesion to many substrates. They’re known for being “surface tolerant” which is why so many epoxy primers are specified. They can also be used as an intermediate coat and top coat due to their durability and impact resistance. They generally have very good chemical resistance which allows the higher performing epoxies to be used for tank linings, containment areas, and for general protection against chemicals. One of downsides of epoxies is that will eventually chalk and fade. Epoxies have lower VOC’s than polyurethanes so they are better for application in occupied areas.

Polyurethane Coatings: Polyurethanes are known for their outstanding UV resistance, gloss retention and color stability. These coatings are usually sold as finish and are usually applied at 2-3 mils DFT. One concern with polyurethanes is their sensitivity to humidity and moisture. As a rule of thumb, it is best to apply these coatings between 10 AM – 4 PM, which is when the humidity is generally at its lowest point of the day. Depending on the product, polyurethanes can have better chemical resistance and provide better abrasion and impact resistance than the epoxies.

* + - 1. EXTERIOR HIGH-PERFORMANCE COATING SCHEDULE

Coating systems in this article are based on "MPI Manual." For renovation projects, consult "MPI Maintenance Repainting Manual" and revise coating systems accordingly.

* + - * 1. Concrete Substrates, Vertical Surfaces:

Epoxy System MPI EXT 3.1D:

Prime Coat: Epoxy, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Pigmented Polyurethane over Epoxy System MPI EXT 3.1M:

Prime Coat: Epoxy, matching intermediate coat.

Intermediate Coat: Epoxy, gloss, MPI #77. Type EP.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

* + - * 1. Concrete Substrates, Horizontal Surfaces:

Epoxy Non-Slip Deck Coating is a solvent based, two component epoxy, non-slip coating for interior and exterior metal decks. Resistant to abrasion, solvents, fuel and oils.

Epoxy Non-Slip Deck Coating System MPI EXT 3.2C:

"MPI Manual" states that application procedures and products used in this system vary; therefore, it relies on manufacturer's written recommendations for primers and number of coats for a Premium Grade system and does not include a Budget Grade system.

Prime Coat: As recommended in writing by topcoat manufacturer.

Intermediate Coat: As recommended in writing by topcoat manufacturer.

Topcoat: Epoxy deck coating (slip resistant), MPI #82. Type EPD.

* + - * 1. Cement Board Substrates:

Epoxy System MPI EXT 3.3E:

Prime Coat: Epoxy, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Pigmented Polyurethane over Epoxy System MPI EXT 3.3F:

Prime Coat: Epoxy, gloss, MPI #77. Type EP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching prime coat.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

* + - * 1. Clay Masonry Substrates:

MPI recommends epoxy system below for smooth brick.

Epoxy System MPI EXT 4.1D:

Prime Coat: Epoxy, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Pigmented Polyurethane over Epoxy System MPI EXT 4.1J:

Prime Coat: Epoxy, matching intermediate coat.

Intermediate Coat: Epoxy, gloss, MPI #77. Type EP.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

* + - * 1. CMU Substrates:

Epoxy System MPI EXT 4.2E:

Block Filler: Block filler, epoxy, MPI #116. Type EBF.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Pigmented Polyurethane over High-Build Epoxy System MPI EXT 4.2G:

Block Filler: Block filler, epoxy, MPI #116. Type EBF.

Intermediate Coat: Epoxy, high build, low gloss, MPI #108. Type EHB-1.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

* + - * 1. Steel Substrates:

Epoxy System MPI EXT 5.1F:

Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101. Type ESP-EP2.

Intermediate Coat: Epoxy, high build, low gloss, MPI #108. Type EHB-1.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Epoxy Deck Coating over Epoxy Primer and High-Build Epoxy System MPI EXT 5.1V:

Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101. Type ESP-EP2.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, high build, low gloss, MPI #108. Type EHB-1.

Topcoat: Epoxy deck coating, MPI #82. Type EPD.

Pigmented Polyurethane over High-Build Epoxy System MPI EXT 5.1J:

Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101. Type ESP-EP2.

Intermediate Coat: Epoxy, high build, low gloss, MPI #108. Type EHB-1.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

Galvanized-metal substrates should not be chromate passivated if primers are field applied. If galvanized metal is chromate passivated, consult manufacturers for appropriate surface preparation and primers.

* + - * 1. Galvanized-Metal Substrates:

Epoxy System MPI EXT 5.3C:

Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101. Type ESP-EP2.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Pigmented Polyurethane over Epoxy Primer System MPI EXT 5.3L:

Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101. Type ESP-EP2.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Polyurethane, two component, pigmented, gloss matching topcoat.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

* + - * 1. Stainless-Steel Substrates:

Epoxy System MPI EXT 5.6D:

Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101. Type ESP-EP2.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

* + - * 1. Wood Substrates: Glued-laminated construction.

Pigmented Polyurethane System MPI EXT 6.1J:

Prime Coat: Polyurethane, two component, pigmented, gloss, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Polyurethane, two component, pigmented, gloss, matching topcoat.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

* + - * 1. Wood Substrates: Exposed framing.

Pigmented Polyurethane System MPI EXT 6.2J:

Prime Coat: Polyurethane, two component, pigmented, gloss, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Polyurethane, two component, pigmented, gloss, matching topcoat.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

* + - * 1. Wood Substrates: [**Wood trim**] [**Architectural woodwork**] [**Doors**] [**Windows**] [**Wood board siding**] [**and**] [**wood fences**]

Pigmented Polyurethane System MPI EXT 6.3H:

Prime Coat: Polyurethane, two component, pigmented, gloss, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Polyurethane, two component, pigmented, gloss, matching topcoat.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

* + - * 1. Fiberglass Substrates:

Epoxy System MPI EXT 6.7F:

Prime Coat: Epoxy, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Pigmented Polyurethane over Epoxy System MPI EXT 6.7D:

Prime Coat: Epoxy, matching intermediate coat.

Intermediate Coat: Epoxy, gloss, MPI #77. Type EP.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

* + - * 1. Portland Cement Plaster Substrates:

Epoxy System MPI EXT 9.1D:

Prime Coat: Epoxy, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

This Section is intended to be edited using Deltek's SpecBuilder and the MPI Architectural Painting Decision Tree, located at www.Deltekone.com/MPI.

* + - 1. INTERIOR HIGH-PERFORMANCE COATING SCHEDULE

Coating systems in this article are based on "MPI Manual." For renovation projects, consult "MPI Maintenance Repainting Manual" and revise coating systems accordingly.

* + - * 1. Concrete Substrates, Vertical Surfaces:

MPI recommends epoxy system below for smooth concrete.

Epoxy System MPI INT 3.1F:

Prime Coat: Epoxy, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Epoxy, High-Build System MPI INT 3.1P:

Prime Coat: High-build epoxy, matching topcoat (reduced).

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: High-build epoxy, matching topcoat.

Retain one of two "Topcoat" subparagraphs below.

Topcoat: High-build epoxy, low gloss, MPI #108. Type EHB-1.

Topcoat: High-build epoxy, gloss, MPI #98. Type EHB-2.

MPI recommends epoxy-modified latex system below for smooth concrete.

Epoxy-Modified Latex System MPI INT 3.1G:

Prime Coat: Epoxy-modified latex, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy-modified latex, matching topcoat.

Retain one of two "Topcoat" subparagraphs below.

Topcoat: Epoxy-modified latex, semi-gloss (MPI Gloss Level 5), MPI #215. Type EML-1.

Topcoat: Epoxy-modified latex, gloss (MPI Gloss Level 6), MPI #115. Type EML-2.

* + - * 1. Concrete Substrates, Horizontal Surfaces.

MPI recommends epoxy system below for smooth concrete.

Epoxy System MPI INT 3.2C:

Prime Coat: Epoxy, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Epoxy, High-Build System MPI INT 3.2L:

Prime Coat: High-build epoxy, matching topcoat (reduced).

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: High-build epoxy, matching topcoat.

Retain one of two "Topcoat" subparagraphs below.

Topcoat: High-build epoxy, low gloss, MPI #108. Type EHB-1

Topcoat: High-build epoxy, gloss, MPI #98. Type EHB-2.

Pigmented Polyurethane System MPI INT 3.2D:

Prime Coat: Epoxy, gloss, MPI #77. Type EP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Polyurethane, two component, pigmented, gloss, matching topcoat.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

* + - * 1. Cement Board Substrates:

Epoxy System MPI INT 3.3E:

Prime Coat: Epoxy, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Epoxy-Modified Latex System MPI INT 3.3D:

Prime Coat: Epoxy-modified latex, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy-modified latex, matching topcoat.

Retain one of two "Topcoat" subparagraphs below.

Topcoat: Epoxy-modified latex, semi-gloss (MPI Gloss Level 5), MPI #215. Type EML-1.

Topcoat: Epoxy-modified latex, gloss (MPI Gloss Level 6), MPI #115. Type EML-2.

* + - * 1. Clay Masonry Substrates:

MPI recommends epoxy system below for smooth brick.

Epoxy System MPI INT 4.1F:

Prime Coat: Epoxy, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

MPI recommends epoxy-modified latex system below for smooth brick.

Epoxy-Modified Latex System MPI INT 4.1G:

Prime Coat: Epoxy-modified latex, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy-modified latex, matching topcoat.

Retain one of two "Topcoat" subparagraphs below.

Topcoat: Epoxy-modified latex, semi-gloss (MPI Gloss Level 5), MPI #215. Type EML-1.

Topcoat: Epoxy-modified latex, gloss (MPI Gloss Level 6), MPI #115. Type EML-2.

* + - * 1. CMU Substrates:

Epoxy System [**MPI INT 4.2F**] [**MPI INT 4.2G**]:

Retain one of two "Block Filler" subparagraphs below; first corresponds to MPI INT 4.2F, which MPI recommends for dry environments; second to MPI INT 4.2G, which MPI recommends for wet environments.

Block Filler: Block filler, latex, interior/exterior, MPI #4. Type LBF.

Block Filler: Block filler, epoxy, MPI #116. Type EBF.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Epoxy, High-Build System MPI INT 4.2R:

Prime Coat: Epoxy block filler, MPI #116. Type EBF.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: High-build epoxy, matching topcoat.

Retain one of two "Topcoat" subparagraphs below.

Topcoat: High-build epoxy, low gloss, MPI #108. Type EHB-1.

Topcoat: High-build epoxy, gloss, MPI #98. Type EHB-2.

MPI recommends epoxy-modified latex system below for dry environments.

Type IHPC-3-CMU; Epoxy-Modified Latex System MPI INT 4.2J:

Block Filler: Block filler, latex, interior/exterior, MPI #4. Type LBF.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy-modified latex, interior, matching topcoat.

Retain one of two "Topcoat" subparagraphs below.

Topcoat: Epoxy-modified latex, semi-gloss (MPI Gloss Level 5), MPI #215. Type EML-1:

Topcoat: Epoxy-modified latex, gloss (MPI Gloss Level 6), MPI #115. Type EML-2:

* + - * 1. Steel Substrates:

Epoxy System MPI INT 5.1L:

Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101. Type ESP-EP2.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

High-Build Epoxy over Epoxy Zinc-Rich Primer System MPI INT 5.1P:

Prime Coat: Primer, zinc-rich, epoxy, MPI #20. Type ESP-EP1.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, high build, low gloss, MPI #108. Type EHB-1.

Retain one of two "Topcoat" subparagraphs below. Retain first for a Premium Grade system; retain second for a Budget Grade system.

Topcoat: Epoxy, gloss, MPI #77 Type EP

Topcoat: Epoxy, high-build, low gloss, MPI #108. Type EHB-1.

Epoxy over Self-Priming Epoxy System MPI INT 5.1V:

Prime Coat: Epoxy, high build, self-priming, MPI #120. Type EHB-3.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Epoxy, High-Build System MPI INT 5.1Y:

Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101. Type ESP-EP2.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: High-build epoxy, matching topcoat.

Retain one of two "Topcoat" subparagraphs below.

Topcoat: High-build epoxy, low gloss, MPI #108. Type EHB-1.

Topcoat: High-build epoxy, gloss, MPI #98. Type EHB-2.

Epoxy Deck Coating System MPI INT 5.1LL:

Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101. Type ESP-EP2.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, gloss, MPI #77. Type EP.

Topcoat: Epoxy deck coating (slip resistant), MPI #82. Type EPD.

Epoxy-Modified Latex System MPI INT 5.1K:

Prime Coat: Primer, rust inhibitive, water based, MPI #107. Type ISP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy-modified latex, interior, matching topcoat.

Retain one of two "Topcoat" subparagraphs below.

Topcoat: Epoxy-modified latex, semi-gloss (MPI Gloss Level 5), MPI #215. Type EML-1.

Topcoat: Epoxy-modified latex, gloss (MPI Gloss Level 6), MPI #115. Type EML-2.

Pigmented Polyurethane over Epoxy Primer System MPI INT 5.1F:

Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101. Type ESP-EP2.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Polyurethane, two component, pigmented, matching topcoat.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

Pigmented Polyurethane over High-Build Epoxy System MPI INT 5.1G:

Prime Coat: Primer, epoxy, anti-corrosive, for metal, MPI #101. Type ESP-EP2.

Intermediate Coat: Epoxy, high build, MPI #108. Type EHB-1.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

Pigmented Polyurethane over Self-Priming Epoxy System MPI INT 5.1U:

At the time of this writing, only one manufacturer's product was listed for MPI #120.

Prime Coat: Epoxy, high build, self-priming, MPI #120. Type EHB-3.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Polyurethane, two component, pigmented, matching topcoat.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

Pigmented Polyurethane over Inorganic Zinc and Epoxy System MPI INT 5.1H:

Pigmented Polyurethane over Epoxy Zinc-Rich and Epoxy System [**MPI INT 5.1J**]:

Prime Coat: Primer, zinc rich, epoxy, MPI #20. Type ESP-EP1.

Intermediate Coat: Epoxy, gloss, MPI #77. Type EP.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

* + - * 1. Wood Substrates: Glued-laminated construction.

Epoxy System MPI INT 6.1L:

Prime Coat: Epoxy, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Pigmented Polyurethane System MPI INT 6.1E:

Prime Coat: Polyurethane, two component, pigmented, matching topcoat.

Intermediate Coat: Polyurethane, two component, pigmented, matching topcoat.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72. Type AU.

* + - * 1. Wood Substrates: [**Wood trim**] [**Architectural woodwork**] [**Doors**] [**Windows**] [**and**] [**wood board paneling**].

Epoxy System MPI INT 6.3L:

Prime Coat: Epoxy, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

* + - * 1. Fiberglass Substrates:

Epoxy System MPI INT 6.7D:

Prime Coat: Epoxy, matching topcoat.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Pigmented Polyurethane System MPI INT 6.7E:

Prime Coat: Epoxy, gloss, MPI #77. Type EP.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching prime coat.

Topcoat: Polyurethane, two component, pigmented, gloss (MPI Gloss Level 6), MPI #72 Type AU.

MPI recommends epoxy-modified latex system below for dry environments.

Epoxy-Modified Latex System MPI INT 6.7F:

Block Filler: Block filler, latex, interior/exterior, MPI #4. Type LBF.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy-modified latex, interior, matching topcoat.

Retain one of two "Topcoat" subparagraphs below.

Topcoat: Epoxy-modified latex, semi-gloss (MPI Gloss Level 5), MPI #215. Type EML-1.

Topcoat: Epoxy-modified latex, gloss (MPI Gloss Level 6), MPI #115. Type EML-2.

* + - * 1. [**Gypsum Board** ][**and** ]**[Plaster** ]Substrates:

Epoxy System MPI INT 9.2E:

Prime Coat: Primer sealer, latex, interior, MPI #50. Type IAL-P.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy, matching topcoat.

Topcoat: Epoxy, gloss, MPI #77. Type EP.

Epoxy, High-Build System MPI INT 9.2N:

Prime Coat: Primer sealer, latex, interior, MPI #50. Type IAL-P.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete first "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: High-build epoxy, matching topcoat.

Retain one of two "Topcoat" subparagraphs below.

Topcoat: High-build epoxy, low gloss, MPI #108. Type EHB-1.

Topcoat: High-build epoxy, gloss, MPI #98. Type EHB-2.

Epoxy-Modified Latex System MPI INT 9.2F:

Prime Coat: Primer sealer, latex, interior, MPI #50. Type IAL-P.

For a Premium Grade system, "MPI Manual" requires intermediate coat; delete "Intermediate Coat" Subparagraph below for a Budget Grade system.

Intermediate Coat: Epoxy-modified latex, matching topcoat.

Retain one of two "Topcoat" subparagraphs below.

Topcoat: Epoxy-modified latex, semi-gloss (MPI Gloss Level 5), MPI #215. Type EML-1.

Topcoat: Epoxy-modified latex, gloss (MPI Gloss Level 6), MPI #115. Type EML-2.

END OF SECTION 099600