



SECTION 09 96 00
High-Performance Coatings for LEED® v4 Projects

Display hidden notes for specifier (under File > Options > Display in Word for Microsoft 365)



1.1 SUMMARY

This section includes surface preparation and on-site application of following LEED® v4 compliant:

- A. High-performance paints and coating systems for interior surfaces
- B. High-performance paints and coating systems for exterior surfaces
- C. Intumescent coating systems to fireproof structural steel in a cellulosic fire situation

Related Sections include, but shall not be limited to, the following:

- A. Section 05 05 13: Shop Applied Coatings for Metal
- B. Section 09 67 00: Fluid-Applied Flooring
- C. Section 09 91 13: Exterior Painting
- D. Section 09 91 23: Interior Painting
- E. Section 09 96 46: Intumescent Painting
- F. Section 09 97 00: Special Coatings

1.2 REFERENCES

- A. British Standard (BS):
 - 1. BS 476-20:1987 Fire tests on building materials and structures. Method for determination of the fire resistance of elements of construction (general principles)
 - 2. BS 476-21:1987 Fire tests on building materials and structures. Methods for determination of the fire resistance of loadbearing elements of construction
- B. California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings
- C. California Department of Public Health- CDPH v1.1-2010
- D. European Standards (EN):

1. EN 15804:2013 Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products
- E. International Standards Organisation (ISO):
 1. ISO 8501-1:2007: Preparation of steel substrates before application of paints and related products — Visual assessment of surface cleanliness — Part 1: Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings
 2. ISO 2813:2014 Paints and varnishes - Determination of gloss value at 20 degrees, 60 degrees and 85 degrees
 3. ISO 9001:2015 Quality Management Systems – Requirements
 4. ISO 12944:2018 Corrosion Protection of Structural Steel by Protective Paint Systems
 5. ISO 14025:2006 Environmental labels and declarations - Type III environmental declarations -- Principles and procedures
 6. ISO 17065:2012 Conformity assessment – Requirements for bodies certifying products, processes and services
 7. ISO 21930:2017 Sustainability in buildings and civil engineering works -- Core rules for environmental product declarations of construction products and services
- F. United States Environmental Protection Agency (US EPA):
 1. US EPA Method 24 - Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings
- G. United States Green Building Council (USGBC):
 1. LEED® v4 BD+C Building Design & Construction for New Construction, Core & Shell, Schools, Retail, Data Centers, Warehouses & Distribution Centers, Hospitality and Healthcare
 - a. Sustainable Sites (SS) Credit: Heat Island Reduction
 - b. Materials & Resources (MR) Credits:
 - i. Building Product Disclosure & Optimization – Environmental Product Declaration
 - ii. Building Product Disclosure & Optimization - Material Ingredients
 - c. Indoor Environmental Quality (EQ) Credit: Low-Emitting Materials

1.3 SUBMITTALS

- A. Submit under provisions of Section 01 33 00, Submittal Procedures.
- B. Product Data: Manufacturer's current technical data sheets and application guide on each paint and coating product, including, but not limited to the following:
 1. Product description and typical usage areas
 2. Product performance and aesthetic data including gloss value measured per ISO 2813
 3. Surface preparation requirements and recommendations
 4. Application methods and thinning/cleaning instructions
 5. Storage & handling requirements and recommendations
 6. Primer and topcoat compatibility
 7. Green Building Standards contribution statements

- C. For each intumescent coating system indicated, submittals required as defined in Section 09 96 46: Intumescent Painting
- D. Samples for Verification: For each colour of top finish coat to be applied, with texture to simulate actual conditions, on representative samples of actual substrate:
 - 1. Provide stepped Samples, defining each separate coat, including primer, intumescent paint and finish coat. Use representative colours when preparing samples for review. Resubmit until required gloss, colour and texture of finish coat are achieved.
- E. Cleaning and maintenance instructions for inclusion in project's operation and maintenance manual.
- F. LEED® v4 submittals: For projects pursuing the Building Product Disclosure and Optimization (BPDO) credits within the Materials & Resources (MR) category, USGBC requires submission of the BPDO calculator supported with the following documentation and information:
 - 1. Product-specific Type III Environmental Product Declaration (EPD) conforming to ISO 14025, ISO 21930 and EN 15804 with cradle to gate scope, including third-party verification by an established EPD program operator explicitly recognizing the manufacturer as a participant
 - 2. Self-declaration by manufacturer on each product's technical data sheet documenting material ingredient optimization via the International Alternative Compliance Path - REACH optimization: Fully inventoried chemical ingredients to 100 ppm and not containing substances on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) Authorization list – Annex XIV, the Restriction list – Annex XVII and the SVHC (Substances of Very High Concern) candidate list.
 - 3. Information to include in the BPDO calculator such as manufacturer name, material description matching manufacturer naming convention of the product and material cost

For projects pursuing the Low-emitting materials credit within the Indoor Environmental Quality (EQ) category, USGBC requires submission of the low-emitting materials calculator supported with the following documentation and information:

- 4. External confirmation of product compliance in accordance with CDPH Standard Method v1.1-2010 along with VOC emission test reports from laboratories accredited under ISO 17065 stating the following:
 - a. Applicable exposure scenario used
 - b. Amount of wet-applied product in mass per surface area
 - c. Concentration of single VOCs found with Chronic Reference Exposure Limits (CREL)
 - d. Range of Total VOCs (TVOC) after 14 days (336 hours), measured as specified in the CDPH Standard Method v1.1:
 - 0.5 mg/m³ or less
 - Between 0.5 and 5.0 mg/m³
 - 5.0 mg/m³ or more
- 5. Self-declaration of VOC content value determined using U.S. EPA Method 24 and meeting applicable VOC limits of CARB Suggested Control Measures (SCM) 2007 for Architectural Coatings.
- 6. Information to include in the low-emitting materials calculator such as manufacturer name, material description matching manufacturer naming convention of the product, product type as defined by CARB SCM 2007 and volume of wet-applied product on-site.

1.4 QUALITY ASSURANCE

- A. Quality System: Provide the products of a manufacturer who holds valid ISO 9001 certification
- B. Applicator Qualifications: Approved by manufacturer and shall have valid authorization from authorities having jurisdiction
- C. Source Limitations: Obtain compatible block fillers, primers, midcoats and finish topcoats from the same manufacturer as intumescent coatings
- D. Mockups: Provide a full-coat benchmark finish sample for each type of coating and substrate required:
 - a. Engineer will select one surface to represent surfaces and conditions for application of each type of coating and substrate.
 - b. Final approval of colours and finish will be from benchmark samples.
- E. Additional procedures for intumescent systems as defined in Section 09 96 46: Intumescent Painting under 1.4 Quality Assurance

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to project site in manufacturer's original, unopened cans bearing manufacturer's name and label.
- B. Storage: Store materials in an area that is within the acceptable temperature range, per manufacturer's instructions. Protect from freezing.
- C. Handling: Dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.6 PROJECT/SITE CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results.
- B. If necessary for job schedule, the General Contractor shall provide enclosures and heat to maintain proper temperatures and humidity levels in the application areas.
- C. Steel temperature should not exceed 50 degrees Celsius. Manufacturer's current application guidelines should be followed for any application above these temperatures.

1.7 SEQUENCING AND SCHEDULING

- A. Sequence and coordinate installation of intumescent system with work in other sections which would interfere with efficient fireproofing application.
- B. Do not apply intumescent coatings to supporting structural steel until the concrete toppings and/or roofing applications have been completed and are substantially dry.

1.8 WARRANTY

At project closeout, provide to Owner or Owners Representative an executed copy of the manufacturer's standard limited warranty against manufacturing defect, outlining its terms, conditions, and exclusions from coverage.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Jotun A/S including any of its worldwide manufacturing facilities. See full listing here: <https://www.jotun.com/no/en/corporate/about-jotun/worldwide-presence/index.aspx>
- B. Substitutions: Not permitted.
- C. 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 MATERIALS

Below LEED® v4 compliant systems are recommended for high durability in accordance with ISO 12944-5:2018 Part 5: Protective paint systems (for carbon steel) where corrosivity category is as classified under Table 1 in ISO 12944-2:2018 Part 2: Classification of environments. Primers and topcoats listed as part of intumescent coating systems for fire protection have been evaluated for compatibility, adhesion and fire performance to BS 476 parts 20 & 21.

- For corrosivity category C2
 - 1. Interior exposure, carbon steel
 - i. Water-borne single-pack acrylic primer and topcoat
 - Pilot WF Primer, one coat @ DFT 100 µm
 - Pilot WF, one coat @ DFT 60 µm (low gloss / semi-gloss / aluminum)
 - ii. Water-borne epoxy primer with acrylic topcoat
 - Penguard WF, one coat @ DFT 100 µm
 - Pilot WF, one coat @ DFT 60 µm (low gloss / semi-gloss / aluminum)
 - iii. Water-borne epoxy primer and topcoat
 - Penguard WF, one coat @ DFT 75 µm
 - Penguard WF, one coat @ DFT 75 µm (matt)
 - 2. Interior exposure with fire protection for load-bearing structural steel
 - i. 30-90 minutes thin-film acrylic water-borne intumescent
 - Penguard WF or Penguard HSP ZP E, one coat @ DFT 100 µm
 - SteelMaster 600WF applied strictly to manufacturer's requirements
 - Hardtop Eco Matt / Hardtop Eco, one coat @ DFT 60 µm (matt / gloss)
 - ii. 90-180 minutes thin-film acrylic water-borne intumescent
 - Penguard WF or Penguard HSP ZP E, one coat @ DFT 100 µm
 - SteelMaster 1200WF applied strictly to manufacturer's requirements
 - Hardtop Eco Matt / Hardtop Eco, one coat @ DFT 60 µm (matt / gloss)
 - iii. 15-150 minutes thin-film solvent free epoxy intumescent
 - Penguard WF, one coat @ DFT 75 µm

- SteelMaster 1200HPE applied strictly to manufacturer's requirements
 - Pilot WF, one coat @ DFT 50 µm (semi-gloss)
3. Exterior exposure, carbon steel
 - i. Water-borne epoxy primer and solvent-borne polyurethane topcoat
 - Penguard WF, one coat @ DFT 80 µm
 - Hardtop Eco Matt / Hardtop Eco, one coat @ DFT 60 µm (matt / gloss)
 - ii. Solvent-borne zinc phosphate epoxy primer and polyurethane topcoat
 - Penguard HSP ZP E, one coat @ DFT 80 µm
 - Hardtop Eco Matt / Hardtop Eco, one coat @ DFT 60 µm (matt / gloss)
 - iii. Solvent-borne micaceous iron oxide epoxy primer and polyurethane topcoat
 - Penguard HSP MIO E, one coat @ DFT 80 µm
 - Hardtop Eco Matt / Hardtop Eco, one coat @ DFT 60 µm (matt / gloss)
 4. Exterior exposure with fire protection for load-bearing structural steel
 - i. 15-150 minutes thin-film solvent free epoxy intumescent
 - Penguard WF, one coat @ DFT 75 µm
 - SteelMaster 1200HPE applied strictly to manufacturer's requirements
 - Hardtop Eco, one coat @ DFT 60 µm (gloss) (topcoat is optional for aesthetics and colour scheme)
 - ii. 15-150 minutes thin-film solvent free epoxy intumescent
 - Penguard WF, one coat @ DFT 75 µm
 - SteelMaster 1200HPE applied strictly to manufacturer's requirements
 - Hardtop One or Hardtop Optima, one coat @ DFT 60 µm (gloss)
- For corrosivity category C3
 1. Interior exposure, carbon steel
 - i. Water-borne single-pack acrylic primer and topcoat
 - Pilot WF Primer, two coats @ DFT 70 µm each
 - Pilot WF, one coat @ DFT 60 µm (low gloss / semi-gloss / aluminum)
 - ii. Water-borne epoxy primer with acrylic topcoat
 - Penguard WF, one coat @ DFT 140 µm
 - Pilot WF, one coat @ DFT 60 µm (low gloss / semi-gloss / aluminum)
 - iii. Water-borne epoxy primer and topcoat
 - Penguard WF, one coat @ DFT 90 µm
 - Penguard WF, one coat @ DFT 90 µm (matt)
 2. Interior exposure with fire protection for load-bearing structural steel
 - i. 30-90 minutes thin-film acrylic water-borne intumescent
 - Penguard WF or Penguard HSP ZP E, one coat @ DFT 120 µm
 - SteelMaster 600WF applied strictly to manufacturer's requirements
 - Hardtop Eco, one coat @ DFT 60 µm (gloss)
 - ii. 90-120 minutes thin-film acrylic water-borne intumescent
 - Penguard WF or Penguard HSP ZP E, one coat @ DFT 120 µm

- SteelMaster 1200WF applied strictly to manufacturer's requirements
- Hardtop Eco, one coat @ DFT 60 µm (gloss)
- iii. 15-150 minutes thin-film solvent free epoxy intumescent
 - Penguard WF, one coat @ DFT 75 µm
 - SteelMaster 1200HPE applied strictly to manufacturer's requirements
 - Pilot WF, one coat @ DFT 50 µm (semi-gloss)
- 3. Exterior exposure, carbon steel
 - i. Water-borne epoxy primer and solvent-borne polyurethane topcoat
 - Penguard WF, one coat @ DFT 120 µm
 - Hardtop Eco, one coat @ DFT 60 µm (gloss)
 - ii. Solvent-borne zinc phosphate epoxy primer and polyurethane topcoat
 - Penguard HSP ZP E, one coat @ DFT 120 µm
 - Hardtop Eco, one coat @ DFT 60 µm (gloss)
 - iii. Solvent-borne micaceous iron oxide epoxy primer and polyurethane topcoat
 - Penguard HSP MIO E, one coat @ DFT 120µm
 - Hardtop Eco, one coat @ DFT 60 µm (gloss)
- 4. Exterior exposure with fire protection for load-bearing structural steel
 - i. 15-150 minutes thin-film solvent free epoxy intumescent
 - Penguard WF, one coat @ DFT 75 µm
 - SteelMaster 1200HPE applied strictly to manufacturer's requirements
 - Hardtop Eco, one coat @ DFT 60 µm (gloss) (topcoat is optional for aesthetics and colour scheme)
 - ii. 15-150 minutes thin-film solvent free epoxy intumescent
 - Penguard WF, one coat @ DFT 75 µm
 - SteelMaster 1200HPE applied strictly to manufacturer's requirements
 - Hardtop One or Hardtop Optima, one coat @ DFT 60 µm (gloss)
- For corrosivity category C4
 - 1. Interior exposure, carbon steel
 - i. Water-borne epoxy primer with acrylic topcoat
 - Penguard WF, two coats @ DFT 100 µm each
 - Pilot WF, one coat @ DFT 60 µm (low gloss / semi-gloss / aluminum)
 - ii. Water-borne epoxy primer and topcoat
 - Penguard WF, one coat @ DFT 120 µm
 - Penguard WF, one coat @ DFT 120 µm (matt)
 - iii. Solvent-borne zinc phosphate epoxy primer and topcoat
 - Penguard HSP ZP E, one coat @ DFT 120 µm
 - Penguard HSP ZP E, one coat @ DFT 120 µm (matt)
 - iv. Solvent-borne micaceous iron oxide epoxy primer and topcoat
 - Penguard HSP MIO E, one coat @ DFT 120 µm
 - Penguard HSP MIO E, one coat @ DFT 120 µm (matt)
 - v. Water-borne zinc rich epoxy primer, epoxy midcoat and acrylic topcoat

- Waterfine Barrier, one coat @ DFT 60 µm
 - Penguard WF, one coat @ DFT 80 µm
 - Pilot WF, one coat @ DFT 60 µm (low gloss, semi-gloss, aluminum)
2. Interior exposure with fire protection for load-bearing structural steel
- i. 15-150 minutes thin-film solvent free epoxy intumescent
 - Penguard WF, one coat @ DFT 75 µm
 - SteelMaster 1200HPE applied strictly to manufacturer's requirements
 - Pilot WF, one coat @ DFT 50 µm (semi-gloss)
3. Exterior exposure, carbon steel
- i. Water-borne epoxy primer and solvent-borne polyurethane topcoat
 - Penguard WF, two coats @ DFT 100 µm
 - Hardtop Eco, one coat @ DFT 60 µm (gloss)
 - ii. Solvent-borne zinc phosphate epoxy primer and polyurethane topcoat
 - Penguard HSP ZP E, two coats @ DFT 100 µm
 - Hardtop Eco, one coat @ DFT 60 µm (gloss)
 - iii. Solvent-borne micaceous iron oxide epoxy primer and polyurethane topcoat
 - Penguard HSP MIO E, two coats @ DFT 100 µm
 - Hardtop Eco, one coat @ DFT 60 µm (gloss)
 - iv. Water-borne zinc-rich epoxy primer, midcoat and solvent-borne polyurethane topcoat
 - Waterfine Barrier, one coat @ DFT 60 µm
 - Penguard WF, one coat @ 80 µm
 - Hardtop Eco, one coat @ DFT 60 µm (gloss)
 - v. Water-borne zinc-rich epoxy primer, solvent-borne midcoat and polyurethane topcoat
 - Waterfine Barrier, one coat @ DFT 60 µm
 - Penguard HSP ZP E or Penguard HSP MIO E, one coat @ 80 µm
 - Hardtop Eco, one coat @ DFT 60 µm (gloss)
4. Exterior exposure with fire protection for load-bearing structural steel
- i. 15-150 minutes thin-film solvent free epoxy intumescent
 - Penguard WF, one coat @ DFT 75 µm
 - SteelMaster 1200HPE applied strictly to manufacturer's requirements
 - Hardtop Eco, one coat @ DFT 60 µm (gloss) (topcoat is optional for aesthetics and colour scheme)
 - ii. 15-150 minutes thin-film solvent free epoxy intumescent
 - Penguard WF, one coat @ DFT 75 µm
 - SteelMaster 1200HPE applied strictly to manufacturer's requirements
 - Hardtop One or Hardtop Optima, one coat @ DFT 60 µm (gloss)

- For corrosivity category C5
 1. Interior exposure, carbon steel
 - i. Water-borne epoxy primer with solvent-borne polyurethane topcoat
 - Penguard WF, two coats @ DFT 120 µm each
 - Hardtop Eco, one coat @ DFT 60 µm (gloss)
 - ii. Water-borne zinc rich epoxy primer, midcoat and solvent-borne polyurethane topcoat
 - Waterfine Barrier, one coat @ DFT 60 µm
 - Penguard WF, one coat @ DFT 140 µm
 - Hardtop Eco, one coat @ DFT 60 µm (gloss)
 - iii. Solvent-borne zinc phosphate epoxy primer with polyurethane topcoat
 - Penguard HSP ZP E, two coats @ DFT 120 µm each
 - Hardtop Eco, one coat @ DFT 60 µm (gloss)
 - iv. Solvent-borne micaceous iron oxide epoxy primer with polyurethane topcoat
 - Penguard HSP MIO E, two coats @ DFT 120 µm each
 - Hardtop Eco, one coat @ DFT 60 µm (gloss)
 2. Interior exposure with fire protection for load-bearing structural steel
 - i. 15-150 minutes thin-film solvent free epoxy intumescent
 - Penguard WF, one coat @ DFT 75 µm
 - SteelMaster 1200HPE applied strictly to manufacturer's requirements
 - Pilot WF, one coat @ DFT 50 µm (semi-gloss)
 3. Exterior exposure, carbon steel
 - i. Water-borne epoxy primer with single-pack polysiloxane topcoat
 - Penguard WF, two coats @ DFT 120 µm each
 - Hardtop One, one coat @ DFT 60 µm (gloss)
 - ii. Water-borne zinc-rich epoxy primer, midcoat with single-pack polysiloxane topcoat
 - Waterfine Barrier, one coat @ DFT 60 µm
 - Penguard WF, one coat @ DFT 140 µm
 - Hardtop One, one coat @ DFT 60 µm (gloss)
 - iii. Solvent-borne zinc phosphate epoxy primer with single-pack polysiloxane topcoat
 - Penguard HSP ZP E, two coats @ DFT 120 µm each
 - Hardtop One, one coat @ DFT 60 µm (gloss)
 - vi. Solvent-borne micaceous iron oxide epoxy primer with single-pack polysiloxane topcoat
 - Penguard HSP MIO E, two coats @ DFT 120 µm each
 - Hardtop One, one coat @ DFT 60 µm (gloss)
 4. Exterior exposure with fire protection for load-bearing structural steel
 - i. 15-150 minutes thin-film solvent free epoxy intumescent
 - Penguard WF, one coat @ DFT 75 µm
 - SteelMaster 1200HPE applied strictly to manufacturer's requirements
 - Hardtop Eco, one coat @ DFT 60 µm (gloss) (topcoat is optional for aesthetics and colour scheme)
 - ii. 15-150 minutes thin-film solvent free epoxy intumescent
 - Penguard WF, one coat @ DFT 75 µm
 - SteelMaster 1200HPE applied strictly to manufacturer's requirements

- Hardtop One or Hardtop Optima, one coat @ DFT 60 µm (gloss)

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas and conditions, with Applicator present, for compliance with requirements and other conditions affecting performance of work.
 - 1. Proceed with application only after unsatisfactory conditions have been corrected and surfaces to receive paint are thoroughly dry.
 - 2. Start of painting will be construed as Applicator's acceptance of surfaces and conditions within a particular area.
- B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total intumescent paint system for various substrates. On Engineer's request, furnish information on characteristics of finish materials to ensure use of compatible primers.

3.2 PREPARATION

- A. General: Surface preparation of structural steel shall be carried out in accordance with ISO 12944-4:2018 and evaluated to the blasting standard of ISO 8501-1:2007
- B. Material Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
 - 1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue
 - 2. Stir material before application to produce a mixture of uniform density, and as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using

3.3 APPLICATION

- A. General: Apply paint according to manufacturer's written current application guides.
 - 1. Use applicators and techniques best suited for substrate and type of material being applied.
 - 2. Do not apply coatings over dirt, rust, scale, grease, moisture, scuffed surfaces or conditions indicated as unacceptable in manufacturer's written instructions or to surfaces that are otherwise detrimental to forming an acceptable coating.
 - 3. Do not apply any intumescent coatings until all clips, hangars, supports, sleeves and any other item that may penetrate the intumescent coating are in place.
- B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
 - 1. The number of coats and the film thickness required are the same regardless of the application method.

2. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer.
 3. If previous coat shows through the finished topcoat, apply additional coats until paint film is of uniform finish, colour and appearance.
 4. Give special attention to ensure that edges, corners, crevices, welds and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
 5. Any damage to the factory applied priming coat shall be repaired and touched up, in compliance with recommendations of priming coat manufacturer. After the application of the prime coat, application of intumescent paint shall not commence without written approval by the Engineer.
 6. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure and where applying another coat of paint does not cause the undercoat to lose adhesion.
- C. Application Procedures: Apply coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
- D. Minimum Coating Thickness: Apply materials at not less and not more than manufacturer's recommended spreading rate for the surface to be coated. Provide the total dry film thickness of the entire system as recommended by the manufacturer to provide surface burning characteristics and fire resistance rating specified, but not less than thickness specified in this Section.
- E. Additional procedures to follow related to intumescent paint are defined under 3.4 Application in Section 09 96 46: Intumescent Painting

3.4 FIELD QUALITY CONTROL

- A. Wet and Dry Film Thickness (DFT) shall be checked regularly during applications at intervals as instructed by Engineer and in accordance with manufacturer's current data
1. To ensure the correct thickness is being applied, frequent measurements shall be taken using a wet film thickness gauge.
 2. Take a DFT reading as soon as the coating is fully cured.
 - a. Contractor should provide Elcometer 456 (or equivalent) electromagnetic (electronic gauge) type to take DFT thickness. Ensure to deduct thickness of primer from measured thickness.
 - b. All paint inspection equipment should be calibrated daily at site and yearly by a third-party agency. Calibration certificates should be available for inspection by the engineer.
- B. Completed work: Match approved samples for colour, texture and coverage. Remove, refinish or repaint work not complying with specified requirements.

3.5 CLEANING AND PROTECTION

- A. Cleanup: At the end of each workday, remove rubbish, empty cans, rags and other discarded materials from project site.
- B. Provide "wet paint" signs to protect newly painted finishes. After completing painting, remove temporary protective wrappings provided by others to protect their work.

Last Updated
07/11/2020

09 90 00 Painting & Coating

PROJECT NAME
PROJECT NO.

END OF SECTION