**SECTION 05 05 13**

**SHOP-APPLIED FEVE FLUOROPOLYMER COATINGS FOR METAL**

This section includes editing notes to assist the user in editing the section to suit project requirements. These notes are included as hidden text, and can be revealed or hidden by the following method in Microsoft Word:

 Display the FILE tab on the ribbon, click OPTIONS, then DISPLAY. Select or deselect HIDDEN TEXT.

This master specification section has been prepared by AGC Chemicals Americas for use in the preparation of a project specification section covering shop-applied fluoroethylene vinyl ether (FEVE) coatings utilizing Lumiflon FEVE fluoropolymer resins, for use on architectural components.

AGC Chemicals Americas produces the FEVE resins, but does not provide specific coating formulations. Therefore, specific coating properties should be verified with a manufacturer of these coatings prior to editing this section.

Coatings based on Lumiflon FEVE fluoropolymer resins are also available in formulations that can be field-applied for remedial work such as for windows, curtain walls, metal roofs, and metal facades. Refer to Section 09 96 73 - Field-Applied FEVE Fluoropolymer Coatings for Metal, available from AGC Chemicals Americas.

The following should be noted in using this specification:

Hypertext links to specific websites are included after manufacturer names and names of organizations whose standards are referenced within the text, to assist in product selection and further research. Hypertext links are contained in parenthesis and shown in blue, e.g.:

 [(www.astm.com](http://(www.astm.com))

Optional text requiring a selection by the user is enclosed within brackets and as red text, e.g.: “Color: [Red.] [Black.] [\_\_\_\_\_.]"

Items requiring user input are enclosed within brackets and as red text, e.g.: "Section [\_\_\_\_\_ - \_\_\_\_\_\_\_\_]."

For assistance on the use of the products in this section, contact AGC Chemicals Americas by calling 610-423-4300, by email at info@lumiflonusa.com, or visit their website at [www.lumiflonusa.com](http://www.lumiflonusa.com).

1. **GENERAL**
	1. SUMMARY

Edit the following paragraphs to include only those items specified in this section.

* + 1. Section Includes:
			1. Shop-applied FEVE fluoropolymer coatings for [railings] [architectural metalwork] [roof panels] [wall panels] [doors] [frames] [entrances] [storefronts] [windows] [curtain walls] [translucent panel systems] [louvers] [skylights] [sun screens] [HVAC equipment] [light fixtures] [fencing] [and] [\_\_\_\_].

Lumiflon coatings can be applied to a wide range of architectural components. Coordinate the following paragraphs with other sections in the Project Manual, referring back to this section for coating requirements so that all components receive similar Lumiflon coatings.

* + 1. Related Sections:
			1. Division 01: Administrative, procedural, and temporary work requirements.
			2. Section [05 50 00- Metal Fabrications] [05 70 00 - Decorative Metal] [05 58 00 - Formed Metal Fabrications] [05 59 00 - Metal Specialties] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Architectural metalwork to receive shop-applied coatings.
			3. Section [05 52 00 - Metal Railings] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Metal railings to receive shop-applied coatings.
			4. Section [07 41 13 - Metal Roof Panels] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Metal roof panels to receive shop-applied coatings.
			5. Section [07 42 13 - Metal Wall Panels] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Metal wall panels to receive shop-applied coatings.
			6. Section [07 42 13.23 - Metal Composite Material Wall Panels] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Metal composite panels to receive shop-applied coatings.
			7. Section [08 11 13 - Hollow Metal Doors and Frames] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Steel doors and frames to receive shop-applied coatings.
			8. Section [08 11 16 - Aluminum Doors and Frames] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Aluminum doors and frames to receive shop-applied coatings.
			9. Section [08 32 13 - Sliding Aluminum-Framed Glass Doors] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Aluminum sliding doors to receive shop-applied coatings.
			10. Section [08 41 13 - Aluminum Entrances and Storefronts] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Aluminum entrances and storefronts to receive shop-applied coatings.
			11. Section [08 42 00 - Entrances] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Metal entrances to receive shop-applied coatings.
			12. Section [08 44 13 - Glazed Aluminum Curtain Walls] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Aluminum curtain wall to receive shop-applied coatings.
			13. Section [08 44 33 - Sloped Glazing Assemblies] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Metal sloped glazing assemblies to receive shop-applied coatings.
			14. Section [08 45 00 - Translucent Wall and Roof Assemblies] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Metal wall and roof assemblies to receive shop-applied coatings.
			15. Section [08 51 13 - Aluminum Windows and Glass Doors] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Aluminum windows and glass doors to receive shop-applied coatings.
			16. Section [08 62 00 - Unit Skylights] [08 63 00 - Metal-Framed Skylights] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Aluminum skylight assemblies to receive shop-applied coatings.
			17. Section [08 91 00 - Louvers] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Aluminum louvers to receive shop-applied coatings.
			18. Section [10 71 13 - Exterior Sun Control Devices] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Aluminum sun screens to receive shop-applied coatings.
			19. Section [10 14 00 - Signage] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: [Interior] [Exterior] signs to receive shop-applied coatings.
			20. Section [23 33 00 - HVAC Air Distribution] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: HVAC equipment to receive shop-applied coatings.
			21. Section [26 50 00 - Lighting] [\_\_ \_\_\_\_ - \_\_\_\_\_\_\_]: Light fixture to receive shop-applied coatings.
			22. Section [32 31 00 - Fences and Gates] [\_\_ \_\_ \_\_ - \_\_\_\_\_\_\_]: Metal fences to receive shop-applied coatings.
	1. REFERENCES
		1. American Architectural Manufacturers Association (AAMA) ([www.aamanet.org](http://www.aamanet.org)) 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Architectural Extrusions and Panels.
		2. International Organization for Standardization (ISO) [(www.iso.org)](http://www.iso.org) 2813 - Paints and Varnishes - Determination of Gloss Value at 20 Degrees, 60 Degrees and 85 Degrees.
	2. SUBMITTALS

Retain the following for submittals requiring the Design Professional’s review.

* + 1. Action Submittals:
			1. Product Data: Coating manufacturer’s descriptive data and test results for coatings.
			2. Samples: [3 x 3] [\_\_ x \_\_] inch coating samples [showing available colors,] [in specified color,] on representative backing.

Retain the following for submission of informational submittals. These submittals are intended for the Owner's record purposes and are not intended to be reviewed by the Design Professional.

* + 1. Informational Submittals:
			1. Certificate of Compliance: Coating manufacturer’s certification that coatings applied on Project components comply with referenced AAMA standard.

Retain the following for submission of closeout submittals for the Owner's record purposes.

* + 1. Closeout Submittals:
			1. Maintenance Data: Provide information regarding touch-up, cleaning, and maintenance of coatings.

Retain the following for projects requiring sustainable documentation.

* + 1. Sustainable Design Submittals: Refer to Division 01.
	1. QUALITY ASSURANCE

The following paragraph specifies a minimum level of experience required of the parties performing the work of this section. Retain if required, and edit to suit project requirements.

* + 1. Coating Applicator Qualifications:
			1. Minimum [2] [\_\_] years [documented] experience in work of this Section.

Coating manufacturers may approve applicators to apply their products. Verify with specific coating manufacturers.

* + - 1. [Approved by coating manufacturer.]
	1. DELIVERY, STORAGE AND HANDLING
		1. Apply protective coverings to finished surfaces prior to shipment.
		2. Deliver, store, and handle components in manner to prevent damage to coatings.
		3. Furnish touch-up paint along with each material shipment.
	2. WARRANTIES

Coating warranties vary between coating manufacturers. Verify coating warranties with specific coating manufacturers.

* + 1. Furnish coating manufacturer’s written warranty providing coverage for following time periods:
			1. Color and gloss retention: [\_\_].
			2. Film integrity: [\_\_].
1. **PRODUCTS**
	1. MATERIALS
		1. Shop-Applied Coatings:
			1. Formulated using Lumiflon resins by AGC Chemicals Americas, [www.lumiflonusa.com,](http://www.lumiflonusa.com) to suit specific application.
			2. Resin type: Fluoroethylene vinyl ether (FEVE).
			3. Meet or exceed requirements of AAMA 2605.

Gloss rating vary depending on the specific formulation, ranging from matte to high gloss. Verify available gloss ratings with specific coating manufacturer.

* + - 1. Gloss: [\_\_] tested to ISO 2813.

Delete the following if colors are specified in the Schedule at the end of this section or on the Drawings.

* + - 1. Color: [Custom color.] [[\_\_\_\_] color.] [To be selected from manufacturer's full color range.]

* 1. APPLICATION
		1. Surface Preparation: As required by coating manufacturer.
		2. Application: Apply coatings in accordance with coating manufacturer’s instructions to uniform surface, free from blemishes.
			1. Aluminum substrates: One coat FEVE fluoropolymer coating.
			2. Steel substrates: One coat primer and one coat FEVE fluoropolymer coating.
1. **EXECUTION**
	1. INSTALLATION
		1. Install components as specified in referenced specification sections.
	2. ADJUSTING
		1. Touch up minor scratches and abrasions in coatings in accordance with coating manufacturer’s instructions.
		2. Replace components having damage that cannot be successfully touched up.
	3. CLEANING
		1. Clean finished surfaces after installation in accordance with coating manufacturer’s instructions.
	4. SCHEDULE

If necessary, include a schedule listing the various components to receive shop-applied coatings. Coordinate with Part 2 - Products. The following may assist in developing a schedule.

|  |  |
| --- | --- |
| COMPONENT | COLOR  |
|  |  |
| Entrance Hollow Metal Doors | Dark bronze |
| Aluminum Storefront | Pewter |
| Interior Door Frames | Custom color to be selected |

END OF SECTION