

F.S.P.M.A. PAINT SPECIFICATION
FOR EDUCATIONAL FACILITIES USE

MP-16.2

TWO COMPONENT GLAZE, GLOSS & SEMI-GLOSS, WATER BASE, FOR INTERIOR SURFACES

I. SCOPE, USE AND CLASSIFICATION:

- A. SCOPE. This specification covers a water base, two-component, high performance epoxy coating system designed to impart to interior masonry and other interior surfaces a hard glaze finish which is resistant to abrasion, heat, moisture, staining, chemicals, fungus, growth, and fire.
- B. USE. Containers shall have labels, meeting ANSI standards and giving adequate use instructions, firmly secured to each container. Labels shall meet all federal regulation requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard in CFR 1910.1200.
- C. CLASSIFICATION. The paint covered by this specification shall be available in either gloss or semi-gloss as specified by the user and shall be of the following types:

Type I. White. Certification shall be for Type I only.

Type II. Tints. All tinted paints supplied to purchaser must meet all requirements of this specification, except pigment.

II. REQUIREMENTS:

- A. MATERIALS. The paint shall be formulated from materials as specified herein. Materials not specified shall be selected by the supplier and shall be subject to all the provisions of this specification. The paint shall be free from material which is known to be toxic to personnel under normal conditions of use.

The coating system shall be a two-component blend of water reducible polymeric resins and curing agents together with pigments and additives as necessary to meet the specification. Application of coating system shall be in accordance with manufacturer's directions. Each container shall be marked with detailed application directions, including surface preparation, mixing, method of application, coverage rates and curing time.

1. PIGMENT. Any combination of pigments for any specific color shall make up the basic hiding pigment, providing the coating complies with all requirements specified herein. The titanium dioxide shall be rutile, chalk-resisting type conforming to Type III of ASTM D-476. The manufacturer is given wide latitude in the selection of extender pigments to match specified gloss ranges, provided the product conforms to the requirements of this specification.
2. VEHICLE. The vehicle shall consist of an acrylic-epoxy type resin system. The manufacturer must submit an infra-red spectrum chart of their resin system along with their certification sample before certification can take place. This infra-red spectrum shall show no indication of the presence of polyamide resin in the product.
3. THINNER. Volatile portion of blended components may contain some organic solvent up to a maximum of 10% by weight. The remainder shall be water.
4. RESTRICTED METALS. The paint shall comply with the latest requirements of the Federal, Florida State, City or Local Governments for maximum allowable restricted metals content.

5. VOC COMPLIANCE. The paint shall comply with the latest requirements of the Federal, Florida State, City or Local Governments for the maximum allowable VOC content at the time of purchase.
- B. QUANTITATIVE REQUIREMENTS. The paint shall conform to the quantitative requirements as specified in Tables I and II.

TABLE I. QUANTITATIVE REQUIREMENTS

CHARACTERISTICS	TOLERANCE REQUIREMENTS	
	MINIMUM	MAXIMUM
1. Dry opacity (contrast ratio), white only, at 2 mil dry film thickness (see Table II for opacity of colors).	0.94	-
2. Directional reflectance, % Type I, white only	84	-
3. 60° specular gloss after 168 hours air drying*		
Gloss, Type I	61	-
Semi-gloss, Type II	25	60
4. Dry to touch, hours	-	6
5. Recoat, hours	-	16
6. Flash point, °F	141	-
7. Total solids, % by wt. of paint	50 (-2)	**56 (+2)

*Using 3 mil wet film thickness over plate glass backed with white paper.

**Revised from 55(+2) on 3/24/2000 per committee vote on 10/5/99.

TABLE II. OPACITY FOR COLORS

Apparent Reflectivity, %	Contrast ratio, (min.)	Apparent Reflectivity, %	Contrast Ratio, (min.)
80 and above	0.94	68	0.97
78	0.94	66	0.97
76	0.95	64	0.98
74	0.95	62	0.98
72	0.96	60	0.99
70	0.96		

C. QUALITATIVE REQUIREMENTS.

1. COLOR. The color of the paint specified in the contract or purchase order shall match that of the standard color chip. If a color other than white is required, the color shall match that of the standard color chip submitted by the purchaser with the bid.
2. STORAGE STABILITY IN A PARTIALLY FULL CONTAINER. When tested as specified in III.C., the A-component shall show no skinning, livering, curdling, hard caking or gummy sediments which cannot be reincorporated after 5 minutes of shaking. Skin formation, if any, shall be continuous and readily removed. The components shall mix readily to a smooth homogenous consistency.
3. STORAGE STABILITY IN UNOPENED CONTAINER. All containers shall have sufficient preservatives to prevent spoilage for one year.
4. ODOR. The odor shall not be putrid or otherwise offensive or irritating before, during, and after application. There shall be no residual odor after 24 hours of air drying.

5. MATERIAL SAFETY DATA SHEET (MSDS). An MSDS clearly identifying this product, filled out completely according to the Florida Right-to-Know Law, Chapter 442, Florida Statutes MUST BE submitted with each sample submitted for certification.
6. CONDITION IN CONTAINER. The paint, when tested as specified in III.E., shall be free from grit, seeds, skins, lumps, and livering, and shall show no more pigment settling or caking than can be reincorporated into a smooth homogenous state. In a freshly opened container, there shall be no rusting of the container.
7. RECOATING. When tested as in III.B., there shall be no flashing, lifting, mottling, orange peeling, spotting, or wrinkling.
8. SCRUBBABILITY. When the coated panels are tested as specified in III.D., there shall be no exposure of the substrate.
9. WASHABILITY. When tested as specified in Table III and in III.F., the soiling material shall be removed without streaking or staining and the panels shall show a reflectance recovery of 90 percent (%) minimum.
10. FLEXIBILITY. When tested as specified in III.G., there shall be no cracking, chipping or flaking.
11. HARDNESS. The paint, when tested as specified in Table III., shall meet or exceed a 4H pencil hardness. Dry film thickness to be applied as stated in manufacturer's specification. Test to be conducted after full-cure as defined by manufacturer.

III. TEST PROCEDURES FOR LABORATORY ANALYSIS:

The failure of any test in this section shall constitute a failure of the product to conform to the specification.

Unless otherwise noted, all test methods are the latest published revisions.

- A. PHYSICAL AND CHEMICAL PROPERTIES. The following test shall be conducted in accordance with the methods as specified in Table III.

TABLE III. TESTS AND METHODS

TEST	METHODS
Condition in container	FTM Std. 141C, Meth. 3021
Directional reflectance	ASTM E 97
60 ⁰ Specular Gloss	ASTM D 523
Dry Opacity	ASTM D 2805
Flash point, Pensky-Martens	ASTM D 93
Total solids	ASTM D 2369
Scrubability	ASTM D 2486
Storage stability in partially full container	FTM Std. 141C, Meth 3021.1
Washability	ASTM D 3450
Pencil hardness	ASTM D 3363
Drying time	ASTM D 1640

- B. RECOATING. Prepare a glass panel by drawing down a 3 mil wet film of the coating. Air dry for 16 hours at 50% R.H. & 23C. Apply a second coat cross-wise to the first coat and then air dry at room temperature. Examine for compliance with II.C.7.

- C. STORAGE STABILITY IN PARTIALLY FULL CONTAINER. Determine skinning for the A-component after 48 hours in accordance with method cited in Table III, except use a 3/4 filled 1/2 pint multiple friction-top can. Then reseal and store for 7 days at 120F. Check for compliance with II.C.2.
- D. SCRUBBABILITY. Coat a panel as specified in method cited in Table III, and allow to cure according to manufacturer's recommendations at 50% R.H. and 23C. Test the coating for 1,000 cycles, in accordance with the ASTM D 2485, and check for compliance with the requirements of II.C.8.
- E. CONDITION IN CONTAINER. Determine package condition of each component in accordance with method cited in Table III, and evaluate for compliance with II.C.6.
- F. WASHABILITY. Make up washability panels according to method cited in Table III, and allow to cure according to manufacturer's recommendations. Take both reflectance and gloss readings on the coating in the area to be soiled. Soil and wash panels according to the method in ASTM D 3450, using non-abrasive scrubbing medium for 100 cycles. Repeat reflectance readings in the soiled area and compare results with the requirements of II.C.9.
- G. FLEXIBILITY. Draw down a film of the conditioner with a 0.002 inch doctor blade (approximately 0.004 inch cap clearance) on tin panels (prepared for FTMS 141C Method 2012.2). Air dry for 48 hours at 25C and 50% relative humidity and bend rapidly over a 1/8 inch mandrel. Examine for compliance with II.C. 10 as in FTMS 141C, Method 6221.

IV. METHODS OF SAMPLING AND INSPECTION:

- A. SAMPLING. At the option of the purchaser, representative samples shall be taken from deliveries made under this invitation and submitted for quality control testing. If the purchaser's sample fails, the manufacturer shall pay for the actual cost of testing. Failure of any sample so taken to comply with the specification requirements shall invalidate any purchase contract made under this invitation unless the manufacturer requests a repeat quality control test. This second sample shall be from the same batch. The manufacturer shall also pay for the second quality control test should the sample fail, and this invalidates any purchase contract made under this invitation. If the second sample passes, the manufacturer is not responsible for paying the actual cost of the test, and results obtained from the second quality control test shall prevail.
- B. INSPECTION. Physical inspection of package, condition, quantity, and labeling shall be made at point of delivery by the purchaser. MSDS shall be submitted with each shipment in accordance with the Florida Right-to-Know Law, Chapter 442, Florida Statutes, and shall be identical to the MSDS supplied for initial certification.

NOTE: TESTING TO MEET THIS SPECIFICATION DOES NOT INCLUDE AN IN-USE PERFORMANCE TEST. ALL EDUCATIONAL AGENCIES SHOULD CONSIDER AN IN-USE PERFORMANCE TEST BEFORE PURCHASING THIS PRODUCT.

ORIGINAL 16.0 - APPROVED - October 29, 1991
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