

**F.S.P.M.A. PAINT SPECIFICATION
FOR GENERAL EDUCATION FACILITIES USE**

MP- 15.1

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

I. SCOPE, USE AND CLASSIFICATION:

A. SCOPE. This specification covers a solvent 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.

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 a polyester-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. Solvents and thinners used shall be non-photo-chemically reactive and comply with air pollution regulations (Rule 66). Flash points of both components shall be a minimum of 80 F. No benzene shall be present in any part of the system.

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, white only, at 2 mil dry film thickness (see Table II for opacity of colors).	94	-
2. Directional reflectance, % Type I, white only	84	-
3. 60 Specular gloss after 168 hours air drying*		
a. Gloss	61	-
b. Semi-gloss	25	60
4. Impact flexibility, in-lbs.	20	-
5. Curing time, days	-	21
6. Flash point, °F	80	-
7. Non-volatile vehicle content, %	60	68
8. by wt. of vehicle.		
9. Total solids, % by wt. of paint	75	-

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

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 coating components 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.G., 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.F., there shall be no exposure of the substrate.
9. WASHABILITY. When tested as specified in Table III and in III.H., the soiling material shall be removed without streaking or staining and the panels shall show a reflectance recovery of 90 percent (%) minimum.
10. NATURE OF RESIN¹. When tested as specified in III.I., the infra-red analysis shall identify the type of resin used for the coating. The purpose of the infra-red analysis is to assure that samples submitted are uniform, and that subsequent samples of the same product are equivalent.
10. IMPACT FLEXIBILITY. When tested as in III.D., there shall be no cracking, crazing or loss of adhesion.

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.

¹ *In order to confirm compliance with this requirement(s) the vendor shall submit either a formal report from an independent laboratory or a confidential, notarized, legally-binding manufacturer's report indicating the method used and the laboratory results obtained for the specific brand submitted for certification.*

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

- A. PHYSICAL AND CHEMICAL PROPERTIES. The following tests 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. 3011.2
Nonvolatile vehicle, % by wt. of vehicle	FTM Std. 141C, Meth. 4051.1
Directional reflectance	ASTM E 97
60 Specular gloss	ASTM D 523
Dry opacity	ASTM D 2805
Impact Flexibility	ASTM D 2794
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

- B. RECOATING. Prepare a glass panel by drawing down a 3 mil wet film of the coating. Air dry for 24 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 each 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. Check for compliance with II.C.2.
- D. IMPACT FLEXIBILITY. The test procedure shall be in accordance with method cited in Table III. the test panels shall be "Bonderite 100" type. The test coating shall be applied to a minimum dry film thickness of 3 mils and allowed to cure, according to manufacturer's printed instructions for maximum curing times, at 50% R.H. and 23C. The concave surface of the impacted area shall be examined under 7X magnification for cracking and crazing immediately after the test and 72 hours later. Check for compliance with the requirements of II.C.11.
- E. CURING TIME. After the final coat has cured as specified, or 21 days after application, place 10 drops of acetone on the coating surface and cover with a watchglass. After 3 minutes, remove the acetone by blotting. Allow a recovery period of one hour. There shall be no evidence of softening or wrinkling of the coating.
- F. 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 23 C. Test the coating for 1,000 cycles, in accordance with the ASTM D-2486, and check for compliance with the requirements of II.C.8.
- G. 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.

- H. 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.
- I. NATURE OF RESIN². Extract a 50 ml. sample with a suitable solvent and separate by vacuum filtration or by centrifuging. Reduce the volume of the clear extract to 25 ml. Apply a thin film of the extract solution to a salt plate and dry at room temperature. The prepared plate shall be placed in an infra-red spectrophotometer and a spectrum taken from 4000 to 400 reciprocal centimeters.

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 MP-15.0 - APPROVED February 2, 1990
REVISION MP-15.1 - EFFECTIVE June 1, 1995

PRESIDENT FLORIDA SCHOOL PLANT MANAGEMENT ASSOCIATION

CHAIR FSPMA CUSTODIAL/FOOD SERVICE CHEMICAL SPECIFICATION COMMITTEE

² *In order to confirm compliance with this requirement(s) the vendor shall submit either a formal report from an independent laboratory or a confidential, notarized, legally-binding manufacturer's report indicating the method used and the laboratory results obtained for the specific brand submitted for certification.*