

# F.S.P.M.A. PAINT SPECIFICATION

## DIVISION 9 - FINISHES SECTION 09910 EXTERIOR

### FOR GENERAL EDUCATION FACILITIES USE

#### MP-27.3

#### ACRYLIC-BASE, GLOSS, EXTERIOR, WHITE & TINTS

##### I. SCOPE, USE AND CLASSIFICATION

- A. SCOPE: This specification covers a gloss latex coating for use on wood siding, trim, shutters, unglazed brick and asbestos shingles, stucco, cement and cinder block.
- 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 following types of paint are included:
  - 1. Type I. White, pastel base, or ready-mixed colors with reflectance of 60 or above. Certification shall be for Type I only.
  - 2. Type II. Other ready-mixed colors and bases with reflectance less than 60.

##### 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. The prime pigment shall consist of Type III titanium dioxide having excellent commercial light fastness and alkali resistance.
  - 2. VEHICLE. The vehicle shall be a 100% acrylic emulsion together with needed additives to insure a paint with good adhesion and exterior protection of the substrate.
  - 3. 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.
  - 4. 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 quantitative requirements as specified in Table I.

**TABLE I. QUANTITATIVE REQUIREMENTS**

Characteristic	Tolerance Requirements	
	Minimum	Maximum
1. Total Solids, % by wt. of paint, Type I.	43 (-2)	-
2. Viscosity, K.U.		
a. Type I	80 (-3)	108(+3)
b. Type II	80 (-3)	108(+3)
3. Fineness of grind, N.S.	5	-
4. Titanium dioxide (Types III, 80% TiO <sub>2</sub> ), % by wt. of paint, Type I paint only*.	19	-
5. 60 <sup>0</sup> specular gloss after 48 hrs. of air drying, Type I** .	61	-
6. Daylight directional reflectance, Type I only (0.003 wet film).***	81	-
7. Dry opacity, contrast ratio, Type I only (0.003 wet film).	0.97	-
8. Weight per gallon of paint, lbs, Type I.	10.0 (-0.5)	-
9. Nonvolatile matter, % by volume of paint*.	33	-

*\* 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.*

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

*\*\*\* Revised from 90% minimum per committee vote on 11/8/98.*

**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. BRUSH PROPERTIES. The paint shall brush satisfactorily in all respects and shall dry to a smooth, glossy, uniform film.
3. STORAGE STABILITY IN UNOPENED CONTAINER. All containers shall have sufficient preservatives to prevent spoilage for one year.
4. APPEARANCE OF DRIED PAINT. When applied by brushing, the paint shall dry to a uniform, smooth finish, free from craters and other defects caused by bubble retention. There shall be no "shiners", flashing, streaking, or conspicuous laps, nor any objectionable brush marks.
5. ODOR. The odor shall not be putrid during or after application.
6. COMPATIBILITY (For Type II paint only). When tested as specified in IV.C.1., there shall be no color streaks or pigment flotation while brushing. The dried

film of the rubbed-up area shall show no difference from the non-rubbed-up area.

7. 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.
8. CONDITION IN CONTAINER. The paint, when tested as specified in Table II, 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.
9. RECOATING PROPERTIES. When the painted surfaces are recoated, no film irregularity shall be observed for two hours of air drying under standard laboratory air-drying conditions. There shall be no picking or rolling up of the previous coat.
10. FUNGUS PROPERTIES. The paint shall contain no mercury, but shall contain fungicidal protection equivalent to 0.1% mercury as metal by total weight of paint. In order to confirm compliance with this requirement 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.
11. STORAGE STABILITY IN A PARTIALLY FULL CONTAINER. The paint shall show no skinning after 48 hours when tested as specified in III.B. After an additional 14 days, at 120F., the same sample shall show no skinning, livering, curdling, hard caking, or gummy sediment. It shall mix readily to a homogenous state and the viscosity change shall not be greater than  $\pm 10$  K.U.
12. EXPOSURE TEST. When test panels prepared as in III.C. are exposed for one year in a South Florida environment, at 45 South, they shall achieve an overall rating of Good when graded for developments (i.e., cracking, blistering, mildewing, rusting, chalking, flaking, gloss retention, and other deteriorations) by a professional exposure testing company.

### 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 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 II.

**TABLE II. TEST AND METHODS**

Test	Methods
1. Condition in container.	FTM Std. 141C, Meth. 3011.2
2. Total solids, % by wt. of paint.	ASTM D 2369
3. Weight per gallon	ASTM D 1475
4. Consistency, Krebs-Stormer.	ASTM D 562
5. Daylight directional reflectance	ASTM E 97
6. Fineness of grind.	ASTM D 1210
7. Dry opacity	ASTM D 2805
8. Storage stability in partially full container.	FTM Std. 141C, Meth. 3021.1
9. 60° specular gloss.	ASTM D 523
10. Analysis of TiO <sub>2</sub> pigment.	ASTM D 1394, Aluminum Reduction Method (Not currently tested by M-DCPS)
11. Nonvolatile matter (% by volume)	ASTM D 2697

- B. STORAGE STABILITY IN PARTIALLY FULL CONTAINER. Determine skinning after 48 hours in accordance with Federal Test Method Std. 141C, Method 3021.1, except use a 3/4 filled 1 pint, multiple friction-top can. Reseal and store for 14 days at 120 °F. Check for compliance with II.C.11.
- C. EXPOSURE TEST. Three 6" X 12" panels shall be prepared using a masonry panel substrate prepared as in ASTM D 1734 modified to size and three smooth-sanded, clear yellow pine panels prepared as in ASTM D 358-83. Application shall be by brushing only, and shall follow the manufacturer's label instructions as closely as possible. Any primer or other product which is recommended by the manufacturer for use in preparing the surface for application of the test sample shall be furnished with the sample. Check for compliance with II.C.12.

**IV. METHODS OF SAMPLING, INSPECTION AND OTHER TESTS**

- 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 pay for the second quality control test should the sample fail, and this invalidates any purchase contract made under this invalidates. 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.

C. OTHER TESTS.

1. COMPATIBILITY (for Type II tint base paint only). In a beaker containing approximately 100 ml of Type II paint, place 2.0 grams of tinting medium concentrate supplied by the manufacturer of the paint. Stir thoroughly until the tinting concentrate is evenly dispersed to a homogenous mixture. Allow the mixture to stand undisturbed for five minutes. On one clear plate glass panel prepared in accordance with Method 2021 of Federal Test Method Std. No. 141C, brush a coat of the mixture to approximately 1 mil dry film thickness and allow to dry at room temperature in vertical position for 24 hours. While brushing, observe for streaks and pigment separation. On another panel with same preparation draw down (approximately) 2.0 mils wet film thickness of the mixture. While the paint is still wet, rub up an area using the index finger in circular motion and continue for a minimum of 20 revolutions. Exert light pressure of the finger while rubbing so as not to rub off the film. Allow the paint film to dry at room temperature for 24 hours. Examine the dried film and compare the rubbed-up area against the non-rubbed-up area. A difference in color, gloss, and texture of the dried film between these areas constitutes incompatibility.

**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-27.0 - APPROVED February 13, 1991  
REVISION MP-27.1 - APPROVED June 1, 1995  
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PRESIDENT FLORIDA SCHOOL PLANT MANAGEMENT ASSOCIATION

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CHAIR FSPMA PAINT SPECIFICATIONS COMMITTEE