

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

DIVISION 9 - FINISHES SECTION 09910 EXTERIOR PAINT

FOR GENERAL EDUCATION FACILITIES USE

MP-23.1

EXTERIOR/INTERIOR, ANTI-SLIP, SOLVENT-BASE FLAT, WHITE AND COLORS

I. SCOPE, USE AND CLASSIFICATION

- A. SCOPE: This specification covers an epoxy ester modified alkyd anti-slip coating which has been designed for use on concrete, metal and wood surfaces. This coating provides an abrasive anti-slip surface for ramps, walkways, steps, and boat decks & docks.
- 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.

TYPE I : White or factory-custom colors with reflectance of 60 or above.

TYPE II: Other ready-mixed colors and factory-custom colors 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. Titanium dioxide conforming to ASTM D 476 Type IV shall be used with alkali and abrasion resistant extender pigments. Type II, colored paints, shall be tinted with light fast and alkali resistant lead free pigments.
 - 2. VEHICLE. The vehicle shall consist of a modified alkyd epoxy dispersed in a solvent solution, together with minimum amounts of necessary additives to insure a coating with excellent adhesion, durability and anti-slip properties.
 - 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.	78 (-2)	-
2. Pigment, % by wt. of paint.	69 (-2)	-
3. Non-volatile vehicle, % by wt. of paint.	8.5 (-1)	-
4. Weight per gallon of paint, lbs.	14.5 (-0.5)	-
5. Consistency (viscosity, KU)	125 (-4)	135 (+4)
6. Drying time (hr) :		
a.Set to touch.	-	4
b.Hard for re-coat.	-	24

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. The paint shall show no skinning after 48 hours when tested as specified in III B.
3. STORAGE STABILITY IN UNOPENED CONTAINER. All containers shall have sufficient preservatives to prevent spoilage for one year.
4. APPEARANCE OF DRIED PAINT. When properly applied, the paint shall dry to uniform, smooth appearance with laps and brush marks not being conspicuous. The paint will have a low-sheen with an even "sandpaper" appearance.
5. ODOR. The color shall not be putrid during or after application.
6. COMPATIBILITY. 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 unrubbed-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 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 tested as specified in IV.C.2, when the painted surfaces are recoated, no film irregularity shall be observed after one hour of air drying under conditions. There shall be no picking or rolling up of the previous coat.
10. ANTI-SLIP. When tested as specified in IV.C.3. the surface shall have a static coefficient of friction of a minimum of 0.5 This test shall be performed in accordance with ASTM D

4518-87 Method, to determine if the product should be classified as slip resistant, antislip, or terms of similar import.

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. Total Solids, % by wt. of paint	ASTM D-2369
2. Consistency, Krebs-Stormer	ASTM D-562
3. Drying time	ASTM D 1640
4. Weight per gallon	ASTM D-1475
5. Condition in container.	FTM Std. 141C, Meth. 3011.2
6. Pigment, % by wt. of paint.	ASTM D 2371
7. Storage stability in partially full container.	FTM Std. 141C, Meth. 3021.1
8. Abrasion test*.	ASTM D 3363
9. Non-volatile vehicle, % by wt. of paint.	FTM Std. 141C, Meth. 4053.1

**Abrasion test ASTM D 3363, Dip-coated on cold rolled steel = 3H Scratch Hardness.*

- B. STORAGE STABILITY IN PARTIALLY FULL CONTAINER. Determine skinning after 48 hours in accordance with Federal Test Method Standard No. 141C, Method 3021.1, except use a 3/4 filled pint, multiple friction top can. Check for compliance with II.C.2.
- C. IMPACT FLEXIBILITY. The test procedure shall be in accordance with method cited in Table II. The test panels shall be "Bonderite 100" type. The test coating shall be applied to minimum dry film thickness of 3 mils and allowed to cure according to manufacturer's printed instructions at 50% R.H. and 23 C. The surfaces of the impacted area shall be examined under 7X magnification for cracking and crazing immediately after the test and 72 hours later. The presence of crazing or loss of adhesion at either time shall constitute failure of this test.

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 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 a 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 unrubbed-up area. A difference in color, gloss, and texture of the dried film between these areas constitutes incompatibility.
2. RECOATING PROPERTIES AND APPEARANCE. Conduct the test under standard laboratory air-drying conditions. Apply the paint with a 2-inch nylon brush to the 6" x 12" masonry panels over non-asbestos fibered cement board at a rate of approximately 100 square feet per gallon. Rinse the brush with solvent and remove the excess solvent by shaking the brush vigorously. Apply the paint by brushing across the panel using back-and-forth strokes using the tip of the brush. During application, note the working properties of the paint. After 1 hour of air-drying, apply the second coat in the manner as the first coat. During application, examine the paint film for picking and rolling up of the first coat. After 24 hours examine the dried film for smoothness and uniformity. Check for compliance with II.C.4 and II.C.9.
3. For purposes of certification only, the manufacturer will be required to submit a copy of an independent laboratory report showing the results of the test for Anti-Slip. The test should be performed in accordance with ASTM D 4518-87 Method B for compliance with Anti-Slip criteria II.C.10.

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-23.0 - APPROVED February 13, 1991
REVISION MP-23.1 - EFFECTIVE June 1, 1995

PRESIDENT FLORIDA SCHOOL PLANT MANAGEMENT ASSOCIATION

CHAIR FSPMA PAINT SPECIFICATIONS COMMITTEE