

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

DIVISION 9 - FINISHES SECTION 09920 INTERIOR

FOR GENERAL EDUCATION FACILITIES USE

MP-47.2 MOLD AND MILDEW PROOF ACRYLIC PAINT

I. SCOPE, USE AND CLASSIFICATION

- A. SCOPE: This specification covers white or colored water-based 100% acrylic modified anti-microbial, self-protective finishes intended to protect the paint film itself from the growth of mold, mildew and odor causing micro-organisms.
- B. USE: This product can be used internally on walls, ceilings, insulations and most other building materials (wood, brick, block, stucco, concrete, primed metals etc.). It can also be used as part of mold remediation or a preventative system in wall cavities (ie, frame lumber, studs, drywall backing etc). All labels shall be firmly secured to each container and should include adequate use instructions and an indication of compliance with ANSI standards. 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 of one of the following three (3) types:
- TYPE I: Flat/Eggshell Finish
 - TYPE II: Satin Finish
 - TYPE III: Semi-Gloss Finish

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 provisions of this specification. The paint shall be free from materials known to be toxic to personnel under normal conditions of use.
1. VEHICLE: The vehicle shall consist of a 100% acrylic emulsion resin or 100% acrylic modified resin.
 2. RESTRICTED METALS: The coating shall comply with the latest requirements of the Federal, Florida State, City or Local Governments for maximum allowable restricted metals content.
 3. VOLATILE ORGANIC COMPOUNDS (VOC'S) COMPLIANCE: The paint shall comply with the latest requirements of the Federal, Florida State, City or Local Governments for 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. % Solids by weight	42	70
2. Weight per gallon (lb/gal)	10.0	12.0
3. Reflectance @ 400 ft ² /gal (%)	84	98
4. Opacity contrast ratio @ 400 ft ² /gal (%)	95	98
5. Drying time (hr) :		
a. to touch	0.5	2.0
b. to hard	0.75	3.5
c. to recoat	2.0	7.0
6. 60° Gloss (%)		
a. Type I	1	8
b. Type II	10	25
c. Type III	25	55
7. Consistency (viscosity, KU)	80	110
8. Flash Point (°F)	> 200	-
9. Fineness of grind (Hegman units)	3	-
10. Scrubbability (cycles)	1000	-
11. Sag Resistance (mil)	7.0	-
12. Nonvolatile matter, % by volume of paint*.	39	-

** 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.*

C. QUALITATIVE REQUIREMENTS:

1. **COLOR:** The color of the paint is white and tintable to at least medium color tones, as specified in the contract or purchase order and shall match that of the standard color chip.
2. **STORAGE STABILITY IN A PARTIALLY FULL CONTAINER:** The paint shall show no skinning after 48 hours when tested as specified in III-D. After an additional 14 day-period at 120°F, the same sample shall show no skinning, livering, curdling, hard caking, or gummy sediment. It shall mix readily to a homogenous state and the change in viscosity, compared to the original, shall not be greater than 10 K.U.
3. **STORAGE STABILITY IN UNOPENED CONTAINER:** All containers shall have sufficient preservatives to prevent spoilage for one year.
4. **ODOR:** The odor should not be putrid during or after application, however, a slight inoffensive ammonia odor during application is acceptable but shall dissipate with ventilation after application.
5. **ALKALI RESISTANCE:** The paint film, tested as in III-A, shall show no change in hue and not more than very slight changes in reflectance and gloss.

6. MATERIAL SAFETY DATA SHEET (MSDS): An MSDS clearly identifying this product, filled out completed according to the Florida-to-Know Law, Chapter 442, Florida Statute must be submitted with each sample submitted for certification.
7. 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 on the container.
8. FLEXIBILITY: When tested as specified in III-B, there shall be no cracking, chipping or flaking.
9. SAG RESISTANCE: The paint shall have a minimum anti-sag index of 7.0 when tested as specified in III-F.

D. SURFACE PREPARATION:

1. As surface preparation is critical to the performance of mold & mildew preventative coatings, surfaces must be clean, sound, and free of dirt, dust, grease, wax, wall-covering adhesive, soap film, loose paint or other surface contamination. All existing mold and mildew should be removed before painting as per the appropriate EPA guidelines (See <http://www.epa.gov/iaq/molds/moldsresources.html>).

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 revision.

PHYSICAL AND CHEMICAL PROPERTIES: The physical and chemical tests to be performed are shown in Table II as well as the standard methods they should be conducted in accordance with.

- A. ALKALI RESISTANCE: Apply the test paint by draw-down to obtain a dry film of 2.0 (\pm 0.2) mil thickness on a Leneta plastic scrub panel (P-121-10N). Allow to air dry for 120 hours after the application of the paint. Place 5 drops of 2% (w/v) aqueous sodium hydroxide solution on the paint and immediately cover the surface with a 50 mm watchglass. After 2 hours, remove the watchglass and wash off the solution. Allow 2 hours for recovery and examine for compliance with II-C-5.
- B. FLEXIBILITY: Prepare the test panel in accordance with Method 2012.2 of Fed. Test Method Standard No. 141C. Supplement the test panel cleaning procedure with an additional cleaning with abrasive soap (such as Bon Ami or equal) so that the entire surface of the panel is wet. Apply the paint in accordance with Method 2162 of Federal Test Method Standard No. 141C on the clean, dry panel with a 0.003-inch (approximately 0.006-inch gap clearance) Bird film applicator or similar blade which produces the same film thickness. Air dry for 18 hours, bake for 3 hours at 105(+2) °F, then cool for 1/2 hour. Bend over a 1/8-inch mandrel and examine in accordance with Method 6221 of Federal Test Method Standard No. 141C for compliance with II-C-8.

- C. **SCRUBBABILITY:** When tested according to ASTM D 2486, the paint film shall not be worn through to the test panel after 1000 cycles (2000 strokes) of the brush.

TABLE II. TEST AND METHODS

Test	Methods
1. Condition in container	FTM Std. 141C, Method 3011.2
2. Skinning	FTM Std. 141C, Method 3021.2
3. Total Solids, % by wt. of paint	ASTM D-2369
4. Consistency, Krebs-Stormer	ASTM D-562
5. Drying time (Set-to-Touch, Dry Hard)	ASTM D-1640
6. Weight per gallon	ASTM D-1475
7. Reflectance	ASTM E 97
8. Opacity	ASTM D 2805
9. 60° Gloss (%)	ASTM D 523
10. Fineness of grind	ASTM D 1210
11. Flash Point	ASTM D 56
12. Scrubbability	ASTM D 2486
13. Sag Resistance	ASTM D 4400
14. Mold Resistance Tests	ASTM D3273 & ASTM D5590 (Note: See Table III below)
15. Nonvolatile matter (% by volume)	ASTM D 2697

- D. **STORAGE STABILITY IN PARTIALLY FULL CONTAINER:** Determine skinning after 48 hours in accordance with Federal Test Methods Std. 141C, Method 3021.1, except use a ¾ filled 1-pint, multiple friction-top can. Then reseal and store for 14 days at 120 °F, check for compliance with II-C-2.
- E. **EFFICACY TO MOLD AND MILDEW:** The manufacturer must submit a certification from an independent laboratory stating that the received samples meet the acceptance criteria included in Table III:

TABLE III. TESTS, METHODS, QUANTITATIVE RESULTS

Test	Methods	Acceptance Criteria
Resistance of paint films to fungal defacement: Agar Plate	ASTM D5590. Must include addition of <i>Stachybotrys Charatrum</i> (see Page 2, note 3 of test description) and leach testing (see page 3, Note 8)	<2 leached and unleached
Resistance to Mold on the Surface of Interior Coatings	ASTM D3273 (Evaluated per ASTM D3274-00)	Minimum Rate: 8

Note: When priming is required a mold & mildew preventative primer must be used. Some mold & mildew preventative coatings are self-priming. Check manufacturer specification or technical sheet.

- F. **SAG RESISTANCE:** Mount a sealed Morest or Leneta test chart on a vacuum plate of an automatic film applicator. Set the Leneta Anti-Sag Meter at the top of the test chart with the open side of the blade facing the operator. Place a suitable quantity of the paint directly in front of the blade, and draw down the paint. The completed draw down shall then be immediately removed from the automatic film applicator and placed in a vertical position with the stripes horizontal and the thinnest stripe at the top. Allow to dry at room temperature in this position and then determine the Anti-Sag Index as per ASTM D 4400.

IV. METHODS OF SAMPLING, INSPECTION AND OTHER TESTS

- A. **SAMPLING:** At the option of the purchaser, representative samples shall be taken from randomly chosen shipments 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 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 future purchase contracts. If the second sample passes, the manufacturer is not responsible for paying the actual cost of the test and the 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 APPROVED by FSPMA Paint Committee on August 15, 2005.

REVISION 47.1 EFFECTIVE March 10, 2006

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PRESIDENT FLORIDA SCHOOL PLANT MANAGEMENT ASSOCIATION

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