

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

DIVISION 9 - FINISHES
SECTION 09910 EXTERIOR

FOR GENERAL EDUCATION FACILITIES USE

MP- 51
HIGH SOLIDS ACRYLIC POLYURETHANE

I. SCOPE, USE AND CLASSIFICATION:

- A. SCOPE. This specification covers a high solids acrylic polyurethane that is a fast drying high gloss coating that provides color and gloss retention for exterior exposure.
- B. USE. This product can be used over prepared metal. Containers shall have labels, meeting ANSI standard and giving adequate use instructions, firmly secure 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 surface coating covered by this specification shall be of one grade and class only.

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. VEHICLE. The vehicle shall consist of an aliphatic polyurethane 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. 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 Table I.

TABLE I. QUANTITATIVE REQUIREMENTS

CHARACTERISTICS	TOLERANCE REQUIREMENTS	
	MINIMUM	MAXIMUM
1. Non-volatile content % by weight of paint.	40	-
2. Specular Gloss 60 ⁰ (%).	70	-
3. Consistency (Viscosity, K.U.)	55	115
4. Drying time (hr) :		
a. to touch	-	2
b. to hard	2	-
5. Weight per gallon (lb).	10.5	12.0
6. Adhesion on steel (psi.)	100	-
7. Dry heat resistance (⁰ F)*.	190	-
8. Pencil Hardness.	H	-

**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.*

C. QUALITATIVE REQUIREMENTS.

1. COLOR. This coating shall be white or opaque in color.
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 days, at 120 ⁰F., 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 ± 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 shall not be putrid during or after application.
5. ALKALI RESISTANCE. When tested as specified in III.A., a film of the conditioner shall not show any cracking, softening or loss of adhesion. Wrinkling shall be disregarded.
6. 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.
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. RESISTANCE TO LIFTING. The conditioner shall show no evidence of being lifted when a top coat is applied when tested as specified in III.C.

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 following tests shall be conducted in accordance with the methods as specified in Table II.

TABLE II. TESTS AND METHODS

TEST	METHODS
1. Condition in container	FTM Std. 141C, Meth. 3011.2
2. Specular Gloss	ASTM D 523
3. Skinning	FTM Std. 141C, Meth. 3021.1
4. Non-volatile paint content	ASTM D 2369
5. Consistency, Krebs-Stormer	ASTM D 562
6. Drying time (Set-to-touch & Dry hard)	ASTM D 1640
7. Weight per gallon	ASTM D 1475
8. Adhesion	ASTM D 4541
9. Dry Heat Resistance*	ASTM D 2485, Method A
10. Pencil Hardness	ASTM D3363

**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.*

- A. ALKALI RESISTANCE. Immerse a solvent clean, dry test tube in a 400 ml beaker containing 4 inches of well-mixed conditioner for 5 seconds. Withdraw and suspend the tube in the same position as withdrawn and allow to dry at room temperature for 72 hours. Care must be exercised that the adhering film is not rubbed off. Immerse the coated portion of the test tube for 30 minutes in a 350 ml beaker containing 125 ml of 2 % sodium hydroxide solution maintained at 25 °C. Remove the test tube and allow to dry for 2 hours. Examine the adhering material for compliance with II.C.5.
- B. 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 25 °C. and 50% relative humidity and bend rapidly over a 1/8 inch mandrel. Examine for compliance with II.C.8. as in FTMS 141C, method 6221.

- C. RESISTANCE TO LIFTING. Brush a coat of primer conditioner, approximately 1 mil wet film thickness, on a clean steel panels (prepared for FTMS 141C, Method 2011.2), allow to dry at room temperature for 24 hours. Brush a thin coat, approximately 1 mil wet film thickness of exterior enamel conforming to MP-28 over the dried conditioner of film. While brushing observe for lifting. Allow the primer to dry at room temperature for 48 hours and then examine for compliance with II.C.9.
- D. STORAGE STABILITY IN PARTIALLY FULL CONTAINER. Determine skinning after 48 hours accordance with Federal Test Method 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.3.

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 invalidate. If the second sample passes, the manufacturer is not responsible for paying the actual cost of the test, and results obtained form 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 PRODUCE.

ORIGINAL MP-51 - APPROVED on May 18, 2006

PRESIDENT FLORIDA SCHOOL PLANT MANAGEMENT ASSOCIATION

CHAIR FSPMA PAINT SPECIFICATIONS COMMITTEE