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

DIVISION 9 – FINISHES
SECTION 09910 EXTERIOR & 09920 INTERIOR
FOR GENERAL EDUCATION FACILITIES USE

MP-36.0

INTERIOR-EXTERIOR CORROSION RESISTANT, WATER BASED, DIRECT-TO-METAL, SEMI-GLOSS, ENAMEL, WHITE & TINTS

I. SCOPE, USE AND CLASSIFICATION

A. SCOPE: This specification describes a water emulsion latex type high-gloss enamel intended for direct application to clean steel, aluminum and galvanized metal surfaces. It will also produce excellent results when applied over properly primed wood substrates. It is highly weather-resistant and is characterized by excellent color and gloss retention, good drying, freedom from after-tack, and good flexibility.

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 enamel covered by this specification shall be of the following types:

1. Type I. White. Certification shall be for Type I only.
2. Type II. Tints. All tinted paints supplied to purchaser must meet all requirements of this specification.

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 pigments or any combination thereof, including extenders shall be of good commercial quality provided the resulting enamel complies with all the requirements specified herein. The prime pigment shall consist of an exterior grade rutile titanium dioxide.

2. VEHICLE. The vehicle shall consist of a water-based polymer emulsion.

3. LEAD CONTENT. The paint shall comply with the latest requirements of the Federal Government for maximum allowable lead content. Such compliance shall be stated on label and in the MSDS and clearly identifying the product.

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. Such compliance shall be stated on the MSDS and container clearly identifying the product.

B. QUANTITATIVE REQUIREMENTS. The paint shall conform to the quantitative requirements as specified in Tables I and II. For any test where applicable, the film thickness shall be applied as per the manufacturer's instructions.

TABLE I. QUANTITATIVE REQUIREMENTS

Characteristic	Tolerance Requirements	
	Minimum	**Maximum**
1. Titanium dioxide, % by wt. of enamel*.	**17**	**-**
2. Non-volatile vehicle, % by wt. of paint.	**24(-1)**	**-**
3. Consistency, K.U.	**80 (-3)**	**108 (+3)**
4. Dry time of enamel:		
a. Set-to touch, hours.	**-**	**2**
b. Dry hard, hours.	**-**	**24**
5. 60^0 specular gloss after 48 hrs. air drying.	**25**	**60**
6. Directional reflectance, 45 - 0, white only, %	**86**	**-**
7. Hiding power (contrast ratio).	**0.97**	**-**
8. Salt spray, 500 hours*:		
a. Blisters	**Scribe 10**	**-**
b. Face rust	**10**	**-**
c. Rust creepage	**6**	**-**

**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 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. 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.

3. STORAGE STABILITY IN UNOPENED CONTAINER. All containers shall have sufficient preservatives to prevent spoilage for one year.

4. 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.

5. 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 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 10 K.U.

6. ODOR. The odor shall not be putrid during or after application.

7. FLEXIBILITY. When tested as specified in III.B., there shall be no cracking, chipping, or flaking.

8. RECOATING. When tested as specified in III.D., there shall be no flashing, lifting, mottling, orange peeling, spotting or wrinkling.

9. 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.

10. BRUSH PROPERTIES. The paint shall brush satisfactorily in all respects and shall dry to a smooth, glossy uniform film.

11. SAG RESISTANCE. The paint shall have a minimum anti-sag index of 7 when tested as in III.E.

12. EXPOSURE TEST. When test panels prepared as in III.F. 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 specified in Table II.

TABLE II. TEST AND METHODS

Test	Methods
1. Analysis of TiO_2 pigment*.	ASTM D 1394, Aluminum Reduction Method (Not currently tested by M-DCPS)
2. Condition in container.	FTM Std. 141C, Meth. 3011.2
3. Nonvolatile Vehicle, % by wt. of paint.	FTM. Std.141C, Meth. 4053.1
4. Drying time.	ASTM D 1640
5. Skinning**	FTM Std. 141C, Meth. 3021.1
6. Consistency, Krebs-Stormer.	ASTM D 562
7. 60^0 specular gloss.	ASTM D 523
8. Directional reflectance, 45-0.	ASTM E 97
9. Hiding power, contrast ratio.	ASTM D 2805
1. Salt spray* a. Blistering rating b. Face rust c. Rust creepage	ASTM B 117 ASTM D 714 ASTM D 610 ASTM D 1654

** 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.*
***Except use a 3/4 filled 1/2 pint, multiple friction-top can.*

B. FLEXIBILITY. Draw down a film of the enamel on a flat, tin-plated, 31 gauge steel panel with an applicator which produces dry film 0.0003 inch thick. Air dry for 18 hours, bake for 5 hours at 105^0C., cool for 1/2 hour at room temperature, and bend over a 1/8 inch mandrel. Examine the coating for cracks over the area of the bend in a strong light at 7X magnification.

C. 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.5.

D. RECOATING. Draw down the paint on a sealed chart with an applicator which produces a wet film 0.003 inches thick as in Method 4061.2 of Federal Test Method Std. No. 141C. Air dry for 24 hours under room conditions. Apply a second coat perpendicular to the first coat, and air dry as before. Examine for compliance with II.C.8.

E. SAG RESISTANCE. Mount a sealed Morest or Leneta test chart on vacuum plate. 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 enamel directly in front of the blade and draw down the enamel. The completed draw down shall then be immediately removed from the vacuum plate and placed in a vertical position with the stripes horizontal, the thinnest stripe being at the top. Allow to dry at room temperature in this position, and then determine the Anti-Sag Index as follows:

The lowest (heaviest film thickness) stripe which does not touch the next lower stripe is the Index Stripe. Fractional values are obtained by adding to the index value a fractional value based on the degree to which the stripe below the index stripes has merged with the next stripe as follow:

DEGREE OF MERGER	ADD
Complete (intervening block is completely wetted	0.0
Not complete, but definitely more than half	0.2
Approximately half	0.4
Appreciable, but definitely less than half	0.6
Slight, just touching	0.8

F. EXPOSURE TEST. Three 6" X 12" panels shall be prepared using clean, degreased cold roll steel strips prepared as in ASTM D 1014. Application shall be by brushing only, and shall follow the manufacturer's label instructions as closely as possible. Any primer of 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.

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 36.0 - APPROVED June 6, 1996

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PRESIDENT FLORIDA SCHOOL PLANT MANAGEMENT ASSOCIATION

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CHAIR FSPMA PAINT SPECIFICATIONS COMMITTEE