

F.S.P.M.A. PAINT SPECIFICATION
FOR EDUCATIONAL FACILITIES USE

MP-4.6
INTERIOR, ALKYD, SEMI-GLOSS, WHITE AND TINTS

I. SCOPE, USE AND CLASSIFICATION:

- A. SCOPE. This specification covers ready-mixed alkyd semi-gloss intended for general interior use on dry walls, plaster, masonry ceiling, wood-work, and metal surfaces. The semi-gloss is characterized by easy brushing, excellent color retention, good drying, water resistance, and excellent flexibility. It may be used as a decorative coating on properly primed walls and ceilings of plaster, wallboard, and similar surfaces, as well as on wood trim and metal (pretreated or otherwise prepared for painting) surfaces.
- 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 paint covered by this specification shall be of the following types:
- Type I. White. Certification shall be for Type I only.
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 prime pigment shall consist of titanium dioxide conforming to ASTM D 476-84, Typell. Zinc oxide is permitted at the discretion of the supplier, provided the semi-gloss complies with all requirements of the specification. Tinting pigments may be used when necessary to match the color required, provided the semi-gloss complies with all requirements of the specification.
 2. VEHICLE. The vehicle shall consist of alkyd resin solutions with an acid number not to exceed 10 on resin nonvolatiles.
 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 the quantitative requirements as specified in Table I.

TABLE I. QUANTITATIVE REQUIREMENTS

CHARACTERISTICS	TOLERANCE REQUIREMENTS	
	MINIMUM	MAXIMUM
1. Pigment, % by wt. of enamel	44 (-2)%	48 (+2)%
2. Titanium dioxide pigment (Type II, 92% rutile TiO ₂), lb/gallon, white only*	2.5	-
3. Nonvolatile vehicle, % by wt. of vehicle.	45%	
4. Consistency, K.U.	77 (-4)	90 (+4)
5. Drying time of enamel: Set-to-touch, hours Dry hard, hours	- -	4 18
6. Directional reflectance Type I, white only	86 (-1)	-
7. 60 ⁰ specular gloss after 168 hours air drying**.	25	60
8. Fineness of grind, N.S.	5 (-1)	-
9. Hiding power (contrast ratio), at 540 sq. ft./gallon (.003 bird applicator) Tints only White	(See Table II) 0.95	- -
10. Impact flexibility (in.-lbs.)	20	-

* 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.

TABLE II - Minimum dry film contrast ratio of tints at 540 sq.ft./gallon.

Apparent % reflectivity	Contrast ratio (minimum)	Apparent % reflectivity	Contrast ratio (minimum)
82 and above	0.95	70	0.98
80	0.96	68	0.98
78	0.96	66	0.99
76	0.96	64	0.99
74	0.97	62	0.99
72	0.97	60 and below	1.00

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.E. 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. 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.
6. CONDITION IN CONTAINER. The paint, when tested as specified in Table III, 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.
7. RECOATING. When tested as in III.C., there shall be no flashing, lifting, mottling, orange peeling, spotting, or wrinkling.
8. BRUSH PROPERTIES. The paint shall brush satisfactorily in all respects and shall dry to a smooth, glossy, uniform film.
9. IMPACT FLEXIBILITY. When tested as in III.B., there shall be no cracking, crazing, or loss of adhesion.
10. SAG RESISTANCE. The paint shall have a minimum anti-sag index of 7.0 when tested as in III.D.
11. BENZENE. No benzene shall be added.

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.

- A. PHYSICAL AND CHEMICAL PROPERTIES. The following tests shall be conducted in accordance with the methods as specified in Table III.

TABLE III. TESTS AND METHODS

TEST	METHODS
Condition in container	FTM Std. 141C, Meth. 3011.2
Skinning*	FTM Std. 141C, Meth. 3021.1
Pigment, % by wt. of enamel	ASTM D 2371
Titanium dioxide content	ASTM D 1394, (Aluminum Reduction Method)
Nonvolatile vehicle, % by wt. of vehicle	FTM Std. 141C, Meth. 4053.1
Consistency, K.U.	ASTM D 562
Drying time	ASTM D 1640
Directional reflectance	ASTM E 97
60 Specular gloss	ASTM D 523
Fineness of grind	ASTM D 1210
Hiding power, contrast ratio (0.003 bird applicator)	ASTM D 2805
Impact flexibility	ASTM D 2794

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

- B. IMPACT FLEXIBILITY. The test procedure shall be in accordance with the method cited in Table III. The test panels shall be "Bonderite 100" type. The test coating shall be applied to a minimum dry film thickness of 3 mils and allowed two (2) weeks drying time at room temperature at 50% RH and 23 C. Both surfaces of the impacted area shall be examined under 7X magnification for cracking and crazing immediately after the test and 72 hours later. Check for compliance with the requirements of II.C.9.
- C. 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 Fed. Test Method Std. No. 141C. Air dry for 24 hours under room conditions. Apply a second coat perpendicular to the first coat, and then air dry as before. Examine for compliance with II.C.7.
- D. SAG RESISTANCE. Mount a sealed Morest or Leneta test chart on a 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 the semi-gloss directly in front of the blade, and draw down the semi-gloss. 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 value based on the degree to which the stripe below the index stripe has merged with the next stripe as follows:

<u>DEGREE OF MERGER</u>	<u>ADD</u>
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

- E. 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. Check for compliance with II.C.2.

IV. METHODS OF SAMPLING AND INSPECTION:

- 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 also pay for the second quality control test should the sample fail, and this invalidates any purchase contract made under this invitation. 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 4 - APPROVED February 2, 1978 (by FSPMA)

REVISION 4.5 - EFFECTIVE June 1, 1995

REVISION 4.6 - EFFECTIVE 2/7/02 Committee voted to change the viscosity requirement from 73 - 93 KU to 73 - 94 KU.

PRESIDENT FLORIDA SCHOOL PLANT MANAGEMENT ASSOCIATION

CHAIR FSPMA CUSTODIAL/FOOD SERVICE CHEMICAL SPECIFICATION COMMITTEE