

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

**MP-9.6
TRAFFIC PAINT, WATER EMULSION-BASED**

I. SCOPE, USE AND CLASSIFICATION:

- A. SCOPE. This specification covers ready-mixed paint for marking pavement. The paint is suitable for application on such traffic-bearing surfaces as Portland cement concrete, bituminous cement concrete, asphalt, tar, and previously painted areas of these surfaces. The paint may be used either alone or to bind reflective beads.
- 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 traffic paint to be furnished for this specification shall be of the following types:
- Type 1: White
 - Type 2: Yellow
 - Type 3: Blue

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 of materials which are known to be toxic to personnel under normal conditions of use.
1. 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.
 2. 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-1 for Type 1 (white) and Table I-2 for Type 2 (yellow) and Type 3 (blue).

TABLE I-1. QUANTITATIVE REQUIREMENTS FOR WHITE PAINT

CHARACTERISTICS	TOLERANCE REQUIREMENTS	
	MINIMUM	MAXIMUM
Total solids, % by wt. of paint	50	-
Consistency, Krebs Units (K.U.)	70	90
Dry Time, Minutes	-	60
Dry Opacity (5 mils wet)	0.92	-
Reflectance (Y Value/5 mils wet)	86%	-
Nonvolatile matter, % by volume of paint*	33	-

TABLE I-2. QUANTITATIVE REQUIREMENTS FOR YELLOW AND BLUE PAINTS

CHARACTERISTICS	TOLERANCE REQUIREMENTS	
	MINIMUM	MAXIMUM
Total solids, % by wt. of paint	50	-
Consistency, Krebs Units (K.U.)	70	90
Dry Time, Minutes	-	60
Color, ΔE of CIELAB units:		
Yellow: Fed. Color # 33538	-	6.0
Blue: Fed. Color # 35180 (Handicap Blue)	-	6.0
Nonvolatile matter, % by volume of paint*	33	-

** 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. **STORAGE STABILITY IN A PARTIALLY FULL CONTAINER.** The paint shall show no skinning after 48 hours when tested as specified in Table II. 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 \pm 10 K.U.
2. **STORAGE STABILITY IN UNOPENED CONTAINER.** All containers shall have sufficient preservatives to prevent spoilage for one year.
3. **APPEARANCE OF DRIED PAINT.** When tested as specified in III.B. the paint shall produce a film which is uniform, free from grit, undispersed particles, craters, and pinholes.
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. When tested as specified in III.D., the paint as received shall show no evidence of biological growth, corrosion of the container, livering, or hard settling. The paint shall be readily dispersible by hand stirring for 5 minutes to form a homogenous paint, free from persistent foam and air bubbles.
7. FLEXIBILITY. When tested as specified in III.E., the paint shall not crack, chip, or flake.
8. WATER RESISTANCE. When tested as specified in III.G., the paint film shall not soften, blister, wrinkle, or lose adhesion.
9. STORAGE STABILITY. When tested as specified in III.F., the paint shall conform to the requirements specified in II.C.4 and II.C.8. The consistency shall be within the limits as specified in Table. I.

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 II.

TABLE II. TESTS AND METHODS

CHARACTERISTICS	REQUIREMENT REFERENCE	ASTM TEST METHOD	TEST REFERENCE
Condition in container	II.C.6	-	III.D
Appearance	II.C.3	-	III.B
Storage stability	II.C.1	-	III.F
Flexibility	II.C.7	-	III.E
Water resistance	II.C.8	-	III.G
Color	Table I-2	Fed. Std. 595b (ASTM D2244)	III.C
Consistency	Table I-1& I-2.	D 562	-
Dry opacity	Table I-1.	D 2805	-
Reflectance	Table I-1.	E 97	-
Drying time, no pickup	Table I-1 & I-2.	D 711	-
Total solids	Table I-1 & I-2.	D 2369	-
Nonvolatile matter (% by volume)	Table I-1 & I-2.	D 2697	-

B. APPEARANCE. Draw down the paint on a clear glass panel to a wet film thickness of 0.38 mm (0.015 in.), and allow to dry 24 hours at standard conditions. Evaluate for compliance with II.C.4.

C. COLOR. The manufacturer's technical sheet shall state that the product meets the acceptance criteria for Federal Colors # 33538 (Yellow) and # 35180 (Handicap Blue) included in Table I-2.

D. CONDITION IN CONTAINER. Before stirring the contents of the container in which the material was originally packaged, check for evidence of biological growth and corrosion. Then lower a spatula in the container and determine whether the paint has livered or developed hard settling. Disperse the paint with the spatula for 5 minutes and examine for compliance with II.C.7.

E. FLEXIBILITY. Draw down the paint on a clean tin panel to a wet film thickness of 0.13mm (0.005 in.). The tin panel shall be placed manufacturer's standard gage No. 31, measuring 76 by 127 mm (3 by 5 in.). Air dry the panel for 24 hours at standard conditions, then bake for 5 hours at 107 (+3)C., and finally condition the panel for 30 minutes at standard conditions. Place the test panel with coated side up on a 3.2 mm (1/8 inch) mandrel at a point equally distant from the top and bottom edges of the panel, and bend the panel double (180) in approximately 1 second. Examine the film at the bend under a magnification of 7 diameters for compliance with II.C.8.

F. STORAGE STABILITY IN PARTIALLY FULL CONTAINERS. Fill a 550 cc (1 pt.) resin-lined friction-top can with the samples as received, close tightly, and store at a temperature of 50 C. After 2 weeks, cool to standard conditions and examine paint for livering and hard settling; disperse the paint with a spatula for 5 minutes and determine the viscosity; draw down the paint on a clear glass to a wet film thickness of 0.38 mm (0.005 in.) and allow to dry for 24 hours at standard conditions. Evaluate for compliance with II.C.2.

G. WATER RESISTANCE. Apply the paint on a clean glass plate to a wet film thickness of 0.38 mm (0.015 in.) and allow to dry in a horizontal position at standard conditions for 72 hours. Immerse one-half of the painted plate in distilled water at 25 (\pm 1) C. After 18 hours, remove the panel from the water and allow it to dry for 2 hours at standard conditions. Examine the panel for compliance with II.C.9.

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.

C. 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 TEST BEFORE PURCHASING THIS PRODUCT.

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