

TT-P-910
 AMENDMENT - 2
 July 12, 1983
 SUPERSEDING
 Amendment - 1
 June 23, 1977

FEDERAL SPECIFICATION

PAINT, RUBBER-BASE, FOR INTERIOR USE (CONCRETE AND MASONRY FLOORS)

This amendment, which forms a part of Federal Specification TT-P-910, dated February 26, 1974, was approved by the Assistant Administrator, Office of Federal Supply and Services, General Services Administration, for the use of all Federal agencies.

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Under Federal Specifications:

Change "TT-P-143" to "PPP-P-1892"

Add "TT-T-291 - Thinner, Paint, Mineral Spirits, Regular and Odorless"

Add new paragraph:

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on the date of invitation for bid or request for proposal shall apply.

American Society for Testing and Materials (ASTM) Standards:

- D 523 - Specular Gloss
- D 562 - Test for Consistency of Paints Using the Stormer Viscometer
- D 729 - Visual Evaluation of Color Differences of Opaque Materials
- D 1734 - Making and Preparing Concrete and Masonry Panels for Testing Paint Finishes
- D 2244 - Instrumental Evaluation of Color Differences of Opaque Materials
- D 2805 - Hiding Power of Paints

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

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Table I

| | | |
|--|----------|-----------|
| Line 3. Delete ", hours:" | | |
| Line 4. Change to read "Set-to-touch, minutes | 15 min | 45 max" |
| Line 5. Add "hours" after Hard | | |
| Line 11. Change to read "Contrast ratio | 0.98 min | ---- " |
| Add, under characteristics "Lead, percent of nonvolatile | ---- | 0.06 max" |
| Delete the note at the bottom of the table. | | |

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Para. 4.3.1. Delete and substitute:

4.3.1 Test conditions shall be in accordance with Section 9, Fed. Test Method Std. No. 141 and test methods shall be in accordance with Table II or as otherwise specified.

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Table II. Delete and substitute:

TABLE II. Test Methods

| Characteristics | Requirement Reference | Test Method | | Paragraph Reference |
|-------------------------|-----------------------|-------------------------------|----------------|---------------------|
| | | Fed. Test Method Std. No. 141 | ASTM Method | |
| Condition in container | 3.5.1 | 3011 | ---- | 4.3.2 |
| Color | 3.5.2 | ---- | D 1729, D 2244 | 4.3.3 |
| Application properties | 3.5.3 | ---- | ---- | 4.3.4 |
| Flexibility | 3.5.4 | 6221 | ---- | 4.3.5 |
| Storage stability | 3.5.5 | 3021 | D 1849 | 4.3.6 |
| Dilution stability | 3.5.6 | 4203 | ---- | 4.3.7 |
| Cement-water test | 3.5.7 | ---- | ---- | 4.3.8 |
| Detergent resistance | 3.5.8 | ---- | ---- | 4.3.9 |
| Self-lifting properties | 3.5.9 | ---- | ---- | 4.3.10 |
| Streaking resistance | 3.5.10 | ---- | ---- | 4.3.11 |
| Rubber-base precipitate | Table I | ---- | ---- | 4.3.12 |
| Consistency | Table I | ---- | D 562 | ---- |
| Water content | Table I | 4081 | ---- | ---- |
| Drying time 1/ | Table I | 4061 | ---- | ---- |
| Abrasion resistance | Table I | 6192 | ---- | 4.3.13 |
| Contrast ratio | Table I | ---- | D 2805 | 4.3.15 |
| Gloss, 60° | Table I | ---- | D 523 | 4.3.16 |
| Lead content | Table I | ---- | ---- | 4.3.17 |

1/ Drying time shall be conducted on films with dry film thickness of 0.00125 - 0.00150 inch

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Para. 4.3.3, lines 4 and 5. Change "...method 4250 of Fed. Test Method Std. No. 141..." to "...ASTM D 1729".

Para. 4.3.4, lines 1 and 2. Change "...method 2051, Procedure B of Fed. Test Method Std. No. 141..." to "...ASTM D 1734.".

Para. 4.3.6.2, line 1. Change "...method 3022 of Fed. Test Method Std. No. 141..." to "...ASTM D 1849..."

Para. 4.3.7, line 3. Change "...a thinner or solvent specified in 3.3..." to "...mineral spirits conforming to TT-T-291, Type II..."

Para. 4.3.8, lines 5 and 6. Change "...as prescribed in footnote 1 of 4.3.1..." to "...as in 4.3.7..."

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Para. 4.3.13, second sentence. Delete and replace with "Make duplicate drawdowns of 0.0150 inch \pm 0.0002 inch wet film thickness on solvent cleaned 4 inch by 4 inch steel panels."

Add new paragraphs:

4.3.15 Contrast ratio. The contrast ratio shall be determined on 0.001 inch \pm 0.0001 inch thick dried paint films as described in paragraph 4.1, ASTM D 2805.

4.3.16 Specular gloss. Draw down the thoroughly mixed paint on plane opaque white glass panels as specified in 2.1.5 of method 2021 of Fed. Test Method Std. No. 141. Use a doctor blade which will produce a wet film thickness of 0.003 inch \pm 0.0001 inch. Dry the panels for 48 hours at standard conditions in a dust free environment. Determine 60° specular gloss in accordance with ASTM D 523.

4.3.17 Lead content.

4.3.17.1 Sample preparation. Using a 0.006-inch film applicator and a mechanical applicator plate, duplicate drawdowns for each sample of well-mixed paint shall be made on a standard paint penetration chart and dried for 24 hours. The drawdowns shall be at least 10 inches long on the sealed portion of the penetration chart. The drawdown shall be cut into discs of appropriate size to fit the sample holder of a fluorescence X-ray spectrometer.

4.3.17.2 Procedure. Lead content shall be determined using an X-ray fluorescence spectrometer capable of determining lead content at a minimum level of 0.03 percent by weight of nonvolatile. The settings for a wavelength, dispersive fluorescence spectrometer shall be as follows: (1)

| <u>Element</u> | <u>Analytical Line</u> | <u>Angle</u> | <u>Crystal</u> | <u>Detection</u> | <u>Collimator</u> | <u>X-ray tube (MO)</u> |
|--------------------|----------------------------|--------------|----------------|------------------|-------------------|------------------------|
| Pb | L | 33.93 | LiF (200) | Flow S.C. | Fine | 60kV 45mA |
| Pb (background I) | | 33.00 | LiF (200) | Flow S.C. | Fine | 60kV 45mA |
| Pb (background II) | | 35.50 | LiF (200) | Flow S.C. | Fine | 60kV 45mA |
| Mo | K | 20.33 | LiF (200) | Flow S.C. | Fine | 60kV 45mA |

Pulse height selection shall be used in all measurements and counting time shall be 100 seconds. Place the sample disc in the wavelength dispersive unit. Measure the count rates of lead, lead background and the Molybdenum Compton scattered background from the X-ray tube.

4.3.17.3 Calculation.

$$R = \frac{2I_{Pb} - I_{Pb}(\text{background I}) - I_{Pb}(\text{background II})}{2I_{Mo}}$$

where I equals gross intensity. These results shall be compared with those obtained by a 0.06 percent lead standard made up from the same type of paint sample and evaluated for compliance with table I.

Para. 5.1, line 2. Change "TT-P-143" to "PPP-P-1892".

(1) Energy dispersive fluorescence spectrometers shall be set up according to the manufacturer's manual.