

TT-C-535B
AMENDMENT-2
June 23, 1977
SUPERSEDING
Amendment-1
August 12, 1974

FEDERAL SPECIFICATION

COATING, EPOXY, TWO COMPONENT, FOR INTERIOR
USE ON METAL, WOOD, WALLBOARD, PAINTED SURFACES
CONCRETE AND MASONRY

This amendment, which forms a part of Federal Specification TT-C-535B, dated August 2, 1972, was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

PAGE 1

Paragraph 2.1, under "Federal Specifications", change "TT-P-143" to "PPP-P-1892".

PAGE 2

Paragraph 2.2, delete all references to "American Society for Testing and Materials (ASTM) Standards", and add the following:

American Society for Testing and Materials (ASTM) Standards:

- D 93 - Flash Point by Pensky-Martens Closed Tester.
- D 185 - Coarse Particles in Pigments, Pastes, and Paints.
- D 476 - Titanium Dioxide Pigments.
- D 523 - Specular Gloss.
- D 562 - Consistency of Paints Using the Stormer Viscosimeter.
- D 1210 - Fineness of Dispersion of Pigment-Vehicle Systems.
- D 1475 - Density of Paint, Varnish, Lacquer, and Related Products.
- D 1544 - Color of Transparent Liquids (Gardner Color Scale).
- D 1652 - Epoxy Content of Epoxy Resins.
- D 1653 - Moisture Vapor Permeability of Organic Coating Films.
- D 1729 - Visual Evaluation of Color Differences of Opaque Materials.
- D 2196 - Rheological Properties of Non-Newtonian Materials.
- E 29 - Indicating Which Places of Figures Are To Be Considered Significant in Specified Limiting Values.
- E 84 - Surface Burning Characteristics of Building Materials.

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

Paragraph 3.1, line 3, change "0.5 percent" to "0.06 percent".

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Paragraph 3.3.1, table II, type I, Drying time of mixture, delete quantitative values for Set to touch (hours), Dust free (hours), Dry hard (hours), under minimum and replace with equal values under maximum.

Paragraph 3.3.1, table II, last 2 lines referring to "Lead content, percent by weight of nonvolatile matter", add a maximum requirement of 0.06 for type I and change the maximum requirement for type II from "0.5" to "0.06".

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Paragraph 4.2 and table IV, delete and substitute the following:

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4.2 Test procedures.

4.2.1 The tests shall be conducted in accordance with the test methods specified in table IV.

TABLE IV. Index

Characteristics	Requirement Reference	Applicable Test			Paragraph Reference
		ASTM	Fed. Test Method Std. 141		
Condition in container	3.4.1	----	3011		4.3.2
Storage stability	3.4.2	----	3021, 3022		4.3.3
Brushing properties	3.4.3	----	4321		4.3.4
Spraying properties	3.4.4	----	4331		4.3.5
Baking properties	3.4.5	----	4542		4.3.6
Abrasion resistance	3.4.6	----	----		4.3.7
Color	3.4.7	D 1729	----		4.3.8
Fire resistance	3.4.8	----	----		4.3.9
Stain resistance	3.4.9	----	----		4.3.10
Steam resistance	3.4.10	----	----		4.3.11
Application on damp surface	3.4.11	----	----		4.3.12
Epoxy resin content:	Table I	D 1652	----		4.3.15
Epoxy equivalent	Table I	D 1652	----		4.3.16
Melting point	Table I	----	----		4.3.17
Solvent portion	Table I	----	----		4.3.23
Polyamide resin content:	Table I	----	7391		4.3.18
Amine value	Table I	----	----		4.3.21
Color	Table I	D 1544	----		4.3.19
Viscosity poises	Table I	D 2196	----		4.3.20
Solvent portion	Table I	----	----		4.3.23
Pigment content	Table II	----	4021		----
Vehicle	Table II	----	4021		----
Viscosity	Table II	D 562	----		----
Lead content	Table II	----	----		4.3.24
Coarse particles	Table II	D 185	----		----
Fineness of grind	Table II	D 1210	----		----
Drying time	Table II	----	4061		----
Hiding power	Table II	----	4122		----
Reflectance	Table II	----	4301		----
Gloss	Table II	----	6101		----
Flash point	Table II	D 93	----		----
Impact resistance	Table II	----	----		----
Weight per gallon	Table II	D 1475	----		----
Water vapor transmission	Table II	----	----		4.3.13
Workable pot life	Table II	----	----		4.3.14

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Paragraph 4.3.3, line 2, delete "method 4250 of Fed. Test Method Std. No. 141" and substitute "ASTM D 1729".

Paragraph 4.3.15, lines 1 and 2, delete "method 7403 of Fed. Test Method Std. No. 141" and substitute "ASTM D 1652".

Paragraph 4.3.16, line 1, delete "method 7402 of Fed. Test Method Std. No. 141" and substitute "ASTM D 1652".

Paragraph 4.3.19, lines 1 and 2, delete "method 4246 of Fed. Test Method Std. No. 141" and substitute "ASTM D 1544".

Paragraph 4.3.20, line 2, delete "method 4287 of Fed. Test Method Std. No. 141" and substitute "ASTM D 2196".

Paragraph 4.3.24, delete in its entirety and substitute the following:

4.3.24 Lead content.

4.3.24.1 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 drawdown 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.

4.3.24.2 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 the total 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>Colli- meter</u>	<u>X-ray tube (MO)</u>
Pb	L	33.93	LiF(200)	Flow S.C.	Fine	60Kv 45Ma
Pb (backgrd I)		33.00	LiF(200)	Flow S.C.	Fine	60Kv 45Ma
Pb (backgrd II)	K	35.50	LiF(200)	Flow S.C.	Fine	60Kv 45Ma
Mo		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.

4.3.24.3 Calculation.

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

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

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

Paragraph 4.3.25, change "TT-P-143" to "PPP-P-1892".

Paragraph 5.1, line 2, change "TT-P-143" to "PPP-P-1892".

Paragraph 5.2, line 2, change "TT-P-143" to "PPP-P-1892".

