

TT-V-119D  
 AMENDMENT-2  
June 23, 1977  
 SUPERSEDING  
 Amendment-1  
 July 3, 1975

FEDERAL SPECIFICATION  
 VARNISH, SPAR, PHENOLIC-RESIN

This amendment, which forms a part of Federal Specification TT-V-119D, dated July 6, 1973, 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, line 7 add "and para-tertiary butyl phenol."

Under Federal Specifications:

Delete "TT-D-643" in its entirety. And change "TT-P-143" to "PPP-P-1892".

Add paragraph 2.2 as follows:

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 date of invitation for bids or request for proposal shall apply.

American Society for Testing and Materials (ASTM) Standards:

- D 562 - Test for Consistency of Paints Using the Stormer Viscosimeter.
- D 600 - Specification for Liquid Paint Driers.
- D 1296 - Test for Odor of Volatile Solvents and Diluents.
- D 1308 - Test for Effect of Household Chemicals on Clear and Pigmented Organic Finishes.
- D 1475 - Test for Density of Paint, Varnish, Lacquer and Related Products.
- D 1542 - Qualitative Tests for Rosin in Varnishes.
- D 1545 - Test for Viscosity of Transparent Liquids by Bubble Time Method.
- D 1639 - Test for Acid Value of Organic Coating Materials.
- D 1643 - Test for Gas Checking and Draft Test of Varnish Films.
- D 1653 - Test for Moisture Vapor Permeability of Organic Coating Films.
- D 1951 - Test for Ash in Drying Oils and Fatty Acids.
- D 3278 - Test for Flash Point of Liquids by Setflash Closed Tester.

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

PAGE 2

Table I: under Characteristics, delete "33 gallon length" after Nonvolatile.

Table I: Oil, castor requirement delete "2 minimum and 4 maximum" and substitute "As required."

Table I: Oil, linseed add "or heat polymerized."

Table II, under Characteristics, line 2, add "gallon lbs", after per and change minimum requirement "7.3" to "7.2". At end of table add: under Characteristics "Lead, percent nonvolatile," under minimum "---", under maximum "0.06".

Table I. Line 9, under "Ingredient specification" change "TT-D-643" to "ASTM D 600".

Table II. Line 2, add: "gallon, lbs". At end of table add: under characteristics "Lead, percent nonvolatile", under minimum "---", under maximum "0.06".

FSC 8010

TT-V-119D

PAGE 3

Paragraph 4.3, line 1 and 2. Delete: "in accordance with the following applicable methods of Fed. Test Method Std. No. 141".

PAGE 4

Table III. Delete and substitute:

TABLE III. Index				
Characteristics	Requirement Reference	Applicable Test		Paragraph Reference
		Fed. Test Method Std. No. 141	ASTM Method	
content	Table II	----	D 1951	----
h point	Table II	----	D 3278	----
osity	Table II	----	D 1545	----
nt per gallon	Table II	----	D 1475	----
ng time	Table II	4061	----	----
arance	3.2.1	4261	----	4.3.2
	3.2.2	----	----	4.3.3
r	3.2.3	----	----	4.3.4
atibility	3.2.4	----	----	4.3.5
ning	3.2.5	3021	----	----
ing properties	3.2.6	----	----	4.3.6
-lifting properties	3.2.7	----	----	4.3.7
ng properties	3.2.8	----	----	4.3.7
water resistance	3.2.9	----	----	4.3.8
ocarbon resistance	3.2.10	----	----	4.3.9
li resistance	3.2.11	----	----	4.3.10
proofness	3.2.12	----	----	4.3.11
t proofness	3.2.13	----	----	4.3.12
n and rosin derivatives	3.2.14	----	----	4.3.13
ying and brushing properties	3.2.15.1	----	----	4.3.14.2
ing properties	3.2.15.2	----	----	4.3.14.3
ng time	3.2.15.3	----	----	4.3.14.4
ing anchorage	3.2.15.4	----	----	4.3.14.5
content	Table II	----	----	4.3.16

Paragraph 4.3.1, line 4. Delete "method 5071 of Fed. Test Method Std. No. 141" and substitute "ASTM Method D 1639".

Paragraph 4.3.3, line 1. Delete "method 4401 of Fed. Test Method Std. No. 141" and substitute "ASTM Method D 1296".

Paragraph 4.3.5.2, line 7. Delete "Method 4281 of Fed. Test Method Std. No. 141" and substitute "ASTM Method D 562".

PAGE 5

Paragraph 4.3.8, line 3. Delete "(Method 6011)" and substitute "ASTM Method D 1308, Sec. 5D".

Paragraph 4.3.9.1, line 2, delete "and III".

Paragraph 4.3.9.2, line 3. Delete "(Method 6011)" and substitute "ASTM Method D 1308, Sec 5D".

Paragraph 4.3.11, line 1. Delete "Method 4161 or 4162 of Fed. Test Method Std. No. 141" and substitute "ASTM Method D 1643, Method A or Method B".

Paragraph 4.3.12, line 1. Delete "Method 4171 of Fed. Test Method Std. No. 141" and substitute "ASTM Method 1643, Sec. 10-14".

Paragraph 4.3.13, line 2. Delete "method 5031 of Fed. Test Method Std. No. 141" and substitute "ASTM Method 1542, Sec. 4A".

TT-V-119D

PAGE 6

Paragraph 4.3.14.5, line 4. Delete "Method 6171" and substitute "ASTM Method 6171".

Add new paragraphs:

4.3.16 Lead content.

4.3.16.1 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.

4.3.16.2 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>Collimator</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)		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.

4.3.16.3 Calculation.

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

where I equals gross intensity. These results shall be compared to those obtained with a 0.06 percent lead standard made up from the same type of paint sample and evaluated for compliance with table 1.

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

Paragraph 5.1, line 2. Delete "TT-P-143" and substitute "PPP-P-1892".