TT-L-50G
AMENDMENT-2
August 12, 1977
SUPERSEDING
Amendment-1
June 23, 1977

FEDERAL SPECIFICATION

LACQUER, NITROCELLULOSE, ACRYLIC AND
ACRYLIC-BUTYRATE, AEROSOL
(IN PRESSURIZED DISPENSERS)

This amendment, which forms a part of Federal Specification TT-L-50G, dated September 17, 1976, was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

PAGE 2

Paragraph 2.1, delete the references to UU-C-282, PPP-B-636, PPP-B-640, PPP-F-320, Fed. Std. No. 102, and MIL-STD-129. On line 19, change "Tariff Order Section" to "Traffic Department".

Paragraph 2.2, under "American Society for Testing and Materials (ASTM) Standards", delete "D 3335 - Determination of Low Concentration of Lead in Paint by Atomic Absorption Spectroscopy".

Paragraph 3.1.4, change last sentence to read "When tested as specified in 4.4.19, neither vinyl chloride nor chlorofluorocarbons 11, 12, 114 and 115 shall be present".

PAGE 4

Paragraph 3.3.5, line 2, delete "0.5" and add "0.06".

PAGE 7

Table III, line 8, delete "D 3335" under ASTM method and add "4.4.18" under test paragraph.

PAGE 8

Paragraph 4.4.11, line 3, delete "18 hours" and add "24 hours".

PAGE 9

Add paragraph 4.4.18 as follows:

4.4.18 Lead content.

4.4.18.1 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.

4.4.18.2 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)

Element	Analytical Line	Angle	Crystal	Detection	Collimeter	X-ray tube (MO)
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.

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

4.4.18.3 Calculation.

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

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 3.3.5.

4.4.19 Analysis of propellant gas for chlorofluorocarbons and vinyl chloride.

4.4.19.1 Special apparatus and materials. The chemical analysis described herein requires the following apparatus and materials

(a) The can-piercing, pressure-measuring device recommended in the CSMA Aerosol Guide for determining the internal pressure of aerosol products. The device is available as Model CPA-6 from Builders Sheet Metal Works, Inc., 110 Wooster Street, New York, NY 10017.

(b) A temperature-programmable gas chromatograph (Hewlett-Packard Model 5750 gas chromatograph, or equivalent) equipped with a 0.5 ml gas sampling valve and thermal conductivity detector.

(c) Two stainless steel gas chromatography columns, 1.83 m long by 3 mm outside diameter, packed with 60-200 mesh silica gel.

(d) Standard propellant gases in lecture bottles (available from Matheson Gas Products or another supplier): chlorofluorocarbon no. 11, 12, 114, 115, and vinyl chloride.

(e) Lecture bottle control valve (Matheson Model 58, or equivalent).

4.4.19.2 Gas chromatographic analysis. Condition the chromatographic columns at 200°C with helium as the carrier gas at a flow rate of 75-100 ml/minute for 1 hour. Remove the actuator and cap of an unused aerosol container. Puncture the can using the pressure measuring device and connect the device to the gas chromatograph. Triplicate chromatographic analysis shall be done on the aerosol propellant sample and on mixtures of the aerosol propellant with each of the five standard propellant gases. For mixing each standard propellant, with the aerosol propellant sample, use a T connection (Swagelock or equivalent). The T connection shall be removed entirely when the aerosol propellant sample alone is to be analyzed. Bubble each gas sample through the sampling valve at a moderate rate for 2 minutes before each run is made to purge the valve of any other gases. Analyze the samples using a temperature program from 100 to 200°C at 6°C per minute, with a 2 minute post injection hold at 100°C and a 5 minute upper limit hold at 200°C. There shall be no material in the aerosol propellant sample having the same retention time as any of the five standard propellant gases.

Delete paragraphs 5.2 through 5.3.3 and substitute the following:

5.2 Packing. Packing shall be level A or Commercial, as specified (see 6.4).

5.2.1 Level A. Twelve dispensers of lacquer of the same description, packaged as specified in 5.1, shall be packed in fiberboard boxes made from weather resistant fiberboard with a bursting test strength of not less than 275 lbs. per square inch. Fiberboard separators the full height of the box shall be required. The box flaps shall be secured with water-resistant adhesive applied to not less than 75 percent of the surface area of contact between the flaps, or with 3-inch wide waterproof tape applied to the full length of the seams and extending over the ends not less than 3 inches. Alternatively, wirebound, cleated plywood, or nailed wood boxes shall be acceptable shipping containers when lined with a waterproof barrier material. The barrier material shall be sealed at the edges with waterproof tape or adhesive.

5.2.2 Commercial. The lacquer, packaged as specified in 5.1, shall be packed in fiberboard boxes to insure safe delivery at destination, to provide for safe redistribution by the initial receiving activity, and shall be acceptable by common carrier under the National Motor Freight Classification or Uniform Freight Classification.

5.3 Unitization. When shipments to Government depots are full car or truckload, the shipping containers shall be unitized for shipment and handling in accordance with normal commercial practice. The unitized load shall not exceed 2,500 pounds in weight, 63 inches in height, 56 inches in length, and 45 inches in width.

5.4 Marking. Packages, shipping containers, and unitized loads (when applicable) shall be marked in accordance with Fed. Std. No. 123.

5.5 Special marking. Legible commercial marking shall be acceptable. Cans overcoated to obliterate original marking shall not be acceptable. Marking shall be lithographed on the unit container or printed on a label securely affixed to the container and shall include the following:

(a) Color number of Fed. Std. No. 595.
(b) Net weight in ounces.
(c) Name of material.
(d) Directions for use including surface preparation.
(e) A formula in general terms.
(f) For best results use at temperatures between 16 and 22°C (60 and 90°F).
(g) Date of manufacture.
(h) "Do not puncture or burn.
(i) "Keep from fire or flame."
(j) "Use with adequate ventilation.
(k) "Avoid repeated contact with skin.
(l) "Store below 49°C (120°F).
(m) "Keep from children."
(n) "Shake for 60 seconds before use."