O-T-620C
INTERIM AMENDMENT-3
June 6, 1977
SUPERSEDING
Interim Amendment-2
December 28, 1970

INTERIM AMENDMENT

TO

FEDERAL SPECIFICATION

1,1,1-TRICHLOROETHANE, TECHNICAL, INHIBITED
(METHYL CHLOROFORM)

This iterim amendment was developed by the General Services Administration, Federal Supply Service, Washington, DC 20406, based upon currently available technical information. It is recommended that Federal agencies use it in procurement and forward recommendations for changes to the preparing activity at the address shown above.

The General Services Administration has authorized the use of this interim amendment as a valid exception to Federal Specification O-T-620C, dated September 13, 1967.

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Paragraph 2.1, line 5, delete: "BB-C-310 - Chlorofluoro Hydrocarbons (Halogenated Hydrocarbons)."

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Paragraph 3.4.2, lines 2 and 3, delete: "chlorofluoro hydrocarbons of the methane and ethane series conforming to BB-C-310, or equivalent." Lines 3 and 4, delete: "The propellant shall be not less than 32 percent by weight of the finish product," and substitute "It shall contain no vinyl chloride or fluorocarbons no. 11, 12, 114, or 115 when tested as specified in 4.5.13."

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At the end of section 4, add the following:

4.5.13 Analysis of propellant gas for fluorocarbons and vinyl chloride.

4.5.13.1 Special apparatus and materials.

(a) A can-piercing, pressure-measuring device recommended in CSMA Aerosol Guide for determining the internal pressure of aerosol products. The device is available as Model CBA-6 from Builders Sheet Metal Works, Inc., 110 Wooster Street, New York, NY 10012.

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

(c) Two stainless steel gas chromatography columns, 6 feet long by 1/8" outside diameter, packed with 60-200 mesh silica gel.

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

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

4.5.13.2 Procedure. Condition the chromatographic columns at 200°C with normal helium as the carrier gas at 75-100 ml/minute for one 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 analyses 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 the standard propellants with the aerosol propellant sample, use a "T" connection (Swagelok, 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 two minutes before each run is made to purge the valve of any other gases. Analyze the sample using a thermal conductivity detector. The temperature program shall be 100°C 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. Helium is used as the carrier gas at the rate of 75-100 ml per minute. There shall be no detectable material in the aerosol propellant sample having the same retention time as any of the five standard propellant gases.

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Paragraph 5.4.3.2, delete and substitute the following:

5.4.3.2 The following label shall appear prominently on each unit container and unit package of types II and III material. Each type III unit container shall be marked by lithograph, or slik-screen process. Over-labeling of already marked containers will be unacceptable.

1,1,1-TRICHLOROETHANE

CAUTION

Use with adequate ventilation.
Avoid prolonged or repeated breathing of vapor.
Avoid prolonged or repeated contact with skin.
Do not take internally.

Paragraph 5.4.3.4.3, delete and substitute the following:

5.4.3.4.3 Each container of type III material shall be labeled with the manufacturer's recommended use instructions to cover the following areas:

Typewriter cleaning.
Spot remover for clothing and furniture.
Cleaning assembled electronic equipment.

Instructions shall include required precautions for the above.

Paragraph 6.3, delete and substitute the following:

6.3 Basis of purchase. 1,1,1-trichloroethane, type I, should be purchased by volume, the unit being a U.S. gallon of 231 cubic inches at 25°/25°C. (77°/77°F). The volume of deliveries may be determined by dividing the net weight in pounds, by weight per gallon. To obtain the weight per gallon, multiply the specific gravity at 25°/25°C (see table I), by 8.322. One gallon of 1,1,1-trichloroethane at 25°C weighs between 10.685 and 11.018 pounds.