MIL-L-46075A(MR)
29 September 1971
SUPERSEDING
MIL-L-46075(MR)
10 December 1963

MILITARY SPECIFICATION

LACQUER, RED (FOR AMMUNITION PRIMERS)

1. SCOPE

1.1 This specification covers one grade of red lacquer for application over the foil and anvil of ammunition primer after anvil seating operation. It can be used in areas covered by AIR POLLUTION REGULATIONS.

2. APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on the date of invitation for bids or request for proposal form a part of this specification to the extent specified herein.

SPECIFICATIONS

FEDERAL

TT-P-143 - Paint, Varnish, Lacquer and Related Materials; Packaging, Packing and Marking of.

STANDARDS

FEDERAL

Fed. Test Method Std. No. 141 - Paint, Varnish, Lacquer and Related Materials; Methods of Inspection, Sampling and Testing.

(Copies of specifications and standards required by contractors in connection with specific procurement functions should be obtained from the procuring agency or as directed by the contracting officer.)

FSC 8010

3. REQUIREMENTS

3.1 Composition. The lacquer shall be nitrocellulose combined with a red azo dye[1/] and necessary amounts of solvents to yield a product conforming to the requirements of this specification.

3.2 Quantitative requirements. The lacquer shall conform to the requirements of Table I when tested as in 4.4.

TABLE I - Quantitative requirements

Requirements	Minimum	Maximum
Total solids, percent by weight of lacquer	0.7	1.3
Nitrocellulose, percent by weight of total solids	90	94
Ethyl acetate, percent by weight of lacquer, on analysis	58	78
Butyl acetate, percent by weight of lacquer, on analysis	20	30
Ethyl alcohol, percent by weight of lacquer, on analysis	-	10
Viscosity, Saybolt Universal at 70°F., seconds	40	60
Drying time		
Dry through, minutes	2	4

3.2.1 Solvent. On analysis ethyl acetate, butyl acetate and ethyl alcohol shall be a minimum of 98 percent by weight of the total solvent content of the lacquer.

3.3 Qualitative requirements.

3.3.1 Condition in container. When tested as in 4.4.5 the lacquer shall be clear and free from sediment and suspended matter when examined by transmitted light. It shall show no livering, curdling, gelling or skinning in a freshly opened full container. When flowed out on a clear glass plate the color shall be a transparent red characteristic of the dye used.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order the supplier may utilize his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure that supplies and services conform to the prescribed requirements.

1/ Calco oil red N-1700 manufactured by American Cyanamid Company is a dye of this type.

4.2 Sampling, inspection and testing. Unless otherwise specified sampling, inspection and testing shall be in accordance with method 1031 of Federal Standard 141.

4.3 Testing. Testing under this specification shall be for acceptance of individual lots. The right is reserved to make any additional tests deemed necessary to determine that the lacquer meets the requirements of the specification.

4.4 Test methods.

4.4.1 Test conditions. The routine and referee testing conditions shall be in accordance with section 7 of Federal Standard 141 except as otherwise specified herein.

4.4.2 The following tests shall be conducted in accordance with Federal Standard 141 and as hereinafter specified.

TABLE II - Index of tests

Item	Test methods		
	Applicable method in Fed Std 141	Paragraph of this specification giving further references	Paragraph of this specification giving requirements
Total solids	---	4.4.3	Table I
Nitrocellulose	---	4.4.4	Table I
Ethyl acetate	7360	---	Table I
Butyl acetate	7360	---	Table I
Ethyl alcohol	7360	---	Table I
Viscosity	4285	---	Table I
Drying time	4061	---	Table I
Condition in container	4261	4.4.5	3.3.1

4.4.3 Total solids. Weigh to the nearest milligram a small disposable aluminum dish[1/] approximately 2 inches in diameter. Weigh into the dish from a dropping bottle approximately 2 grams of the lacquer and add 1 ml. of toluene. Dry the pan for one hour in a gravity convection oven at 105°C. Upon cooling, reweigh to the nearest milligram and calculate the percent nonvolatile.

1/ Aluminum dishes suitable for this purpose are obtainable from Fisher Scientific Co., Catalog Number 8-732.

4.4.4 Nitrocellulose. Pour about 10 ml. of the lacquer into a 250 ml. Erlenmeyer flask having a 24/40 standard joint and weigh. Evaporate the solvents from the lacquer almost to dryness using a water bath at 60°C. and a gentle current of air, in such a manner that the sample will still flow but has high viscosity. Redissolve the sample in 3 ml. of acetone; if the drying has been carried too far it may be necessary to use 4 ml. of acetone. If it will not dissolve in 4 ml. of acetone, discard and start with a new sample. Add 27 ml. of ethyl alcohol and insert a magnetic stirring bar. While stirring vigorously, add water from a buret or pipet slowly at first until the resin precipitates, then continue until the flask is filled. Allow the precipitated nitrocellulose to settle, then filter through a large, 50 ml. fritted glass crucible of medium porosity, transferring and washing with water. Dry the crucible in an oven at 105°C., cool and weigh, calculating directly as nitrocellulose. Confirm that the precipitate is nitrocellulose by placing a small portion on a white porcelain plate and treating with a few drops of 1 percent diphenylamine in concentrated sulfuric acid. A deep blue color confirms the presence of nitrocellulose.

4.4.5 Condition in container. Determine package condition in accordance with method 4261 of Federal Standard 141 and observe for compliance with 3.3.1.

5. PREPARATION FOR DELIVERY

5.1 Packaging and packing. The lacquer shall be delivered in 1 gallon containers, 5 gallon lug covered steel pails or in 55 gallon steel drums as specified (see 6.2). The lacquer shall be packaged level A or C; packed level A, B, or C as specified (see 6.2) in accordance with TT-P-143.

5.2 Marking. The containers shall be marked in accordance with Specification TT-P-143.

6. NOTES

6.1 Intended use. The lacquer covered by this specification is intended as a sealer for small arms ammunition primers.

6.2 Ordering data. Purchasers should exercise any desired options offered herein and procurement documents should specify the following:

(a) Title, number and date of this specification.
(b) Whether inspection will be made in accordance with section 1031 of Federal Standard 141 (see 4.2).
(c) Size of container required (see Section 5).
(d) Level of packaging and packing required (see Section 5).

6.3 The lacquer should be purchased by volume, the unit being one U.S. liquid gallon of 231 cubic inches at 15.6°C. (60°F.).

6.4 The lacquer is contemplated to be comparable to the following approximate composition by weight. However, the Government assumes no responsibility for the acceptance of a product claimed to be manufactured under the identical formula.

Red Lacquer

1.4 lbs.	30-40 second R.S. Nitrocellulose (70% in denatured alcohol SD No. 1)
25.0 lbs.	N-butyl acetate
74.0 lbs.	Ethyl acetate
40 grams	Red azo dye

Military Custodian:
Army - MR

Preparing activity:
Army - MR

(Project No. 8010-A011)

SPECIFICATION ANALYSIS SHEET

Form Approved Budget Bureau No. 119-R004

INSTRUCTIONS

This sheet is to be filled out by personnel either Government or contractor involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity.

SPECIFICATION

MIL-L-46075A(MR), Lacquer, Red (For Ammunition Primers)

ORGANIZATION	CITY AND STATE

CONTRACT NO	QUANTITY OF ITEMS PROCURED	DOLLAR AMOUNT
		$

MATERIAL PROCURED UNDER A

☐ DIRECT GOVERNMENT CONTRACT ☐ SUBCONTRACT

1 HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A GIVE PARAGRAPH NUMBER AND WORDING

B RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES

2 COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID

3 IS THE SPECIFICATION RESTRICTIVE?

☐ YES ☐ NO IF "YES" IN WHAT WAY?

4 REMARKS *(Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity.)*

SUBMITTED BY *(Printed or typed name and activity)*	DATE

DD FORM 1 APR 63 1426 REPLACES NAVSHIPS FORM 4863 WHICH IS OBSOLETE

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