

TT-L-1155
October 26, 1967
SUPERSEDING
(See 6.4)

FEDERAL SPECIFICATION

LINSEED OIL, ALKALI REFINED

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE

1.1 This specification covers alkali refined linseed oil to be used as a paint or varnish ingredient.

2. APPLICABLE DOCUMENTS

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

Federal Specification:

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

Federal Standard:

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

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

(Single copies of this specification and other product specifications required by activities outside the Federal Government for bidding purposes are available without charge at the General Services Administration Regional Offices in Boston, New York, Washington, D. C., Atlanta, Chicago, Kansas City, Mo., Ft. Worth, Denver, San Francisco, Los Angeles, and Seattle, Washington.

(Federal Government activities may obtain copies of Federal Specifications, Standards, and Handbooks and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

2.2 Other publications. The following document forms a part of this specification the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

American Society for Testing and Materials (ASTM) Standard:

D-1393 - Method of Test for Flash Point of Drying Oils.

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

(Technical society and technical association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

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3. REQUIREMENTS

3.1 The material shall be an alkali treated linseed oil free from traces of soap and vegetable waxes.

3.2 Quantitative requirements. The material shall conform to the quantitative requirements specified in table I, when tested in accordance with 4.3.

TABLE I. Quantitative requirements

Characteristics	Requirements	
	Minimum	Maximum
Acid number (mg. KOH/g.)	0.1	0.3
Iodine number (Wijs method, cg. I ₂ /g.)	177	195
Saponification number (mg. KOH/g.)	188	196
Unsaponifiable matter (percent by weight)	----	1.5
Specific gravity at 25°C/25°C.	0.926	0.931
Loss on heating at 105°C. $\frac{1}{2}$ (percent by weight)	----	0.3
Refractive index at 25°C.	1.4777	1.4800
Flashpoint (degrees F.)	250	----
Color (Gardner standards 1953)	----	6

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, the supplier may utilize his own facilities or any commercial laboratory acceptable to 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 prescribed requirements.

4.2 Quality assurance. Quality assurance shall be provided in accordance with method 1031 of Fed. Test Method Std. No. 141.

4.3 Test procedures.

4.3.1 The tests specified in table II shall be conducted in accordance with the applicable methods of Fed. Test Method Std. No. 141.

TABLE II. Test procedures

Tests	Applicable test method
Saponification number	5081
Unsaponifiable matter	7011
Iodine number	5061
Loss on heating	4461
Refractive index	4371
Color	4248

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4.3.2 Acid number. The acid number shall be determined in accordance with method 5071 of Fed. Test Method Std. No. 141, except that 0.02 sodium hydroxide or potassium hydroxide in the titration shall be used.

4.3.3 Specific gravity. The specific gravity of the sample 250/250C. shall be determined by any convenient method that is accurate to the third decimal place.

4.3.4 Flashpoint. The flashpoint shall be determined by the ASTM D-1393.

4.3.5 Failure of the linseed oil to pass any test shall be cause for rejection of the lot represented by the sample.

4.4 Inspection of preparation for delivery. Packaging, packing, and marking shall be examined to verify compliance with the requirements of section 5 herein.

5. PREPARATION FOR DELIVERY

5.1 Packaging and packing. The linseed oil shall be delivered in the size and type container specified (see 6.3). The linseed oil shall be packaged and packed level A, B, or C as specified in accordance with TT-F-143 (see 6.3).

5.2 Marking. In addition to any special marking specified in the contract or order, shipment shall be marked in accordance with TT-F-143.

6. NOTES

6.1 Intended use. This specification covers alkali refined linseed oil for use in paint, varnish, and related products. The oil is obtained from flax-seed, which comes from a plant, *linum usitatissimum*.

6.2 The material should be purchased under this specification by weight. Alkali refined linseed oil weighs approximately 7.76 pounds per gallon at 60°F.

6.3 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents:

- (a) Title, number, and date of this specification.
- (b) Size and type of container.
- (c) Selection of applicable level of packaging and packing required (see 5.1).

6.4 Supersession data. This specification includes the requirements of MIL-L-15180A, dated April 22, 1962.

CUSTODIANS:
Navy - SH

Preparing activity:
Navy - SH

Review activities:

Navy - SH
DSA - IS

User activities:

Army - CE, GL, ME, MR

CIVIL AGENCIES INTEREST:
GSA-FSS

Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See section 2 of this specification to obtain extra copies and other documents referenced herein. Price 6 cents each.

