

TT-R-266D
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SUPERSEDING
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FEDERAL SPECIFICATION

RESIN, ALKYD; SOLUTIONS

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

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers alkyd resin solutions for use in paints and enamels.

1.2 Classification. Alkyd resin solutions shall be of the following types, classes, and solvents, as specified (see 6.2):

Type I - Long oil soya, safflower or sunflower:

Class A - 70 percent nonvolatile

Class B - 60 percent nonvolatile

Class C - 70 percent nonvolatile-vinyl compatible

Solvent M - Mineral spirits

Solvent X - Xylene

Type II - Long oil linseed:

Class A - 70 percent nonvolatile

Class B - 60 percent nonvolatile

Type III - Medium oil linseed and soya, safflower or sunflower.

Type IV - Medium oil soya, safflower or sunflower.

Type V - Long oil tall oil.

Type VI - Medium oil tall oil.

FSC 8010

2. APPLICABLE DOCUMENTS

2.1 Specifications and standards. The following specifications 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 Specifications:

- TT-D-643 - Drier, Paint, Naphthenate, Liquid, Concentrated
- TT-L-215 - Linseed Oil, Raw (For Use in Organic Coatings).
- TT-M-268 - Methyl Isobutyl Ketone (For Use in Organic Coatings).
- TT-P-143 - Paint, Varnish, Lacquer, and Related Materials; Packaging, Packing, and Marking of.
- TT-T-291 - Thinner; Paint, Volatile Spirits (Petroleum-Spirits).
- TT-X-916 - Xylene (For Use in Organic Coatings).

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 Federal 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., Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, Wash.

(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.)

Military Specifications:

- MIL-V-15218 - Varnish, Mixing, Phenolic.
- MIL-E-24307 - Enamel, Exterior, Gray, (Vinyl-Alkyd) (Formula No. 122-R06).

(Copies of Military Specifications and Standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following documents form a part of this specification to 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) Publications:

- D 1469 - Test for Total Rosin Acids Content of Coating Vehicles.
- D 1950 - Test for Acetone Tolerance of Heat-Bodied Drying Oils.
- D 2998 - Determination of Polyhydric Alcohols in Alkyd Resins.

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

3. REQUIREMENTS

3.1 Quantitative characteristics.

3.1.1 Resin solution. Resin solution shall be supplied as a liquid composed of the specified type of alkyd resin (see 1.2) dissolved in aliphatic or aromatic solvents as specified. Quantitative characteristics shall conform to the requirements shown in table I.

3.1.2 Ingredients.

3.1.2.1 Resin. The nonvolatile resin shall be a pure drying oil type alkyd manufactured from regular distilled fatty acids or alkali refined oil of the type specified (see 1.2). Rosin, rosin derivatives, and other natural resins, phenolformaldehyde resins (both pure and reduced types), or any other synthetic resin other than that specified (see 1.2) shall not be present. Types V and VI may contain rosin and rosin derivatives meeting the requirement of Table II.

3.1.2.2 Phthalic anhydride. Upon analysis by the method specified in 4.2.3, the nonvolatile resin shall show the minimum phthalic anhydride as shown in table I.

3.1.2.3 Fatty oil acids. The fatty oil acids, isolated by the method specified in 4.2.3 and tested in accordance with 4.2.5 shall be characteristic of the specified drying oil listed in table II. Fatty oil acids not characteristic of the specified types shall not be present. Where only individual oils are allowed the fatty acid distribution must be characteristic of the specified oil.

3.1.2.4 Dihydric alcohols. When tested as specified in 4.2.6, the dihydric alcohol content of the nonvolatile resin shall not exceed the amount listed in Table I. If dihydric alcohol is present, pentaerythritol is also required in an equal or larger amount.

3.1.2.5 Solvent. The solvent shall consist of mineral spirits conforming to Type I, Grade A of TT-T-291 except that for Type I, Class C Solvent X, xylene conforming to Grade B of TT-X-916 shall be used. The solvent for resin solutions intended for use in coatings used in areas with regulations controlling the emission of solvents into the atmosphere shall be mineral spirits conforming to Type II, Grade A of TT-T-291 with a maximum aniline point of 59 deg.C. (138 deg. F.) or mineral spirits with a higher aniline point plus sufficient aromatic solvents to give the same maximum aniline point. The total aromatic content shall not exceed the value permitted for Type II Grade A of TT-T-291.

3.1.2.6 Unsaponifiable. The unsaponifiable content of the resin shall not exceed 1.0 percent when tested as in 4.2.3. Except that Types V and VI shall not exceed 2.0 percent.

TABLE I. Quantitative characteristics

Characteristics	Requirements													
	Type I						Type II				Types III, IV & VI		Type V	
	Class A		Class B		Class C		Class A		Class B		Min.	Max.	Min.	Max.
	Class C Solvent M		Min.	Max.	Solvent X		Min.	Max.	Min.	Max.				
Min.	Max.	Min.			Max.	Min.					Max.	Min.	Max.	Min.
Nonvolatile resin, percent by weight of solution	69	71	59	61	69	71	69	71	59	61	49	51	69	71
Phthalic anhydride, percent by weight of non-volatile resin	23	--	23	--	23	--	23	--	23	--	30	--	23	--
Fatty acids modifying oils, percent by weight of non-volatile resin	60	65	60	65	60	65	60	70	60	70	45	55	60	65
Dihydric alcohol, percent by weight of nonvolatile resin	--	4	--	4	--	4	--	4	--	4	--	7	--	4
Acid number	5	10	5	10	5	10	5	10	5	10	5	12	5	10
Viscosity at 25°C., Gardner bubble viscometer tube	Y	Z2	Q	W	O	S	Y	Z1	Q	V	U	Z	Y	Z2
Reduced viscosity at 25°C., Gardner bubble viscometer tube	C	F	C	F	C	F	C	G	C	G	C	G	C	F
Specific gravity of solution at 25°/25°C.	0.950	0.970	0.920	0.950	0.970	0.990	0.950	0.970	0.930	0.950	0.910	0.930	0.950	0.970
Color, Gardner color standards of 1953	--	10	--	10	--	10	--	12	--	12	--	10	--	10

TABLE II. Fatty Acid Composition

	Type I	Type II	Type III	Type IV	Type V & Type IV
	Soya Safflower Sunflower	Linseed	Linseed and Soya Safflower Sunflower	Soya Safflower Sunflower	Tall Oil
Palmitic & stearic	5-16	7-13	5-16	5-16	9 max.
Oleic	12-28	12-22	12-26	12-28	40-50
Linoleic	45-75	10-20	30-55	45-75	35-50
Linolenic	11 max.	45-65	20-40	11 max.	5 max.
Rosin acids	0	0	0	0	4 max.

3.2 Qualitative characteristics.

3.2.1 Drier ash. Alkyd resin solutions shall be free from metallic paint driers or any other derivatives of manganese, cobalt, zinc or lead as indicated in the ash by a maximum of 0.057 percent ash, based on the resin when tested as in 4.2.8.

3.2.2 Appearance. The appearance shall be clear, transparent, and homogeneous when examined by transmitted light.

3.2.3 Odor. The odor shall be normal for the solvent permitted.

3.2.4 Color. The color of the resin solutions as received shall be not darker than the Gardner standard (1953) number shown in Table I.

3.2.5 Viscosity (reduced). The resin solutions, when reduced as in 4.2.9 with mineral spirits conforming to Type I, Grade A of TT-T-291, shall have the viscosities shown in Table I, except that Type I, Class C, solvent X shall be reduced with xylene conforming to Grade B of TT-X-916.

3.2.6 Gasproofness. A coating of resin solution, applied to a panel and tested as in 4.2.10 shall remain bright and clear without pitting, "crow's footing", frosting, wrinkling, or showing any other defects.

3.2.7 Drying time. A film of the Types I, II and V resin solutions, prepared and tested as in 4.2.11, shall set-to touch in not more than 4 hours and shall dry hard in not more than 7 hours. A film of the Types III, IV, and VI resin solutions prepared and tested as in 4.2.11 shall set-to touch in not more than 3 hours and shall dry hard is not more than 5 hours.

3.2.8 Water resistance. When tested as in 4.2.12 the resin film shall show not more than a very slight evidence of whitening, dulling, blooming, blistering, softening, and loss of adhesion.

3.2.9 Compatibility.

3.2.9.1 Raw linseed oil (Types I, II, III, IV, V and VI). There shall be no evidence of clouding, sedimentation, or any other form of incompatibility when the resin solution is tested as in 4.2.13.1.

3.2.9.2 Bodied linseed oil (types I and II, classes A and B only). There shall be no evidence of incompatibility when the resin is tested as in 4.2.13.2.

3.2.9.3 Mineral spirits (types I, II, III, IV, V and VI). There shall be no clouding or other evidence of incompatibility when the resin solution is tested as in 4.2.13.3.

3.2.9.4 Zinc oxide (types I, II, III, IV, V and VI). The increase in viscosity of a reduced zinc oxide paste, prepared in accordance with 4.2.13.4.1, shall be a maximum of 8 KU for types I and V, 15 KU for type II, and 18 KU for types III, IV and VI, when determined as in 4.2.13.4.

3.2.9.5 Phenolic varnish (type I only). There shall be no clouding or evidence of incompatibility other than very slight opalescence when tested as in 4.2.13.5.

3.2.9.6 Vinyl resin (type I, class C only). There shall be no evidence of incompatibility when tested as in 4.2.13.6 (see 6.4). The resin is considered satisfactory if the color requirement of the specification is met and there is no evidence of haze or bloom.

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 use 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.

4.1.1 Sampling and inspection. Sampling and inspection shall be performed in accordance with method 1031 of Fed. Test Method Std. No. 141.

4.2 Test methods.

4.2.1 Test conditions. The routine and referee testing conditions shall be in accordance with section 7 of Fed. Test Method Std. No. 141 except as otherwise specified herein.

4.2.1.1 The following tests shall be conducted in accordance with Fed. Test Method Std. No. 141 and as hereinafter specified. The right is reserved to make any additional tests deemed necessary to determine that the resin meets the requirements of this specification.

TABLE III. Index

	Test Method		Paragraph of this specification giving requirement
	Applicable method in Fed. Test Method Std. No. 141	Paragraph of this specification giving further references	
Volatile and nonvolatile content	4041	4.2.2	Table I
Fatty acids	7014	4.2.3	Table I
Phthalic anhydride	7014	4.2.3	Table I, 3.1.2.2
Dihydric alcohol	--	4.2.6	Table I, 3.1.2.4
Acid number	5073	--	Table I
Specific gravity	--	4.2.7	Table I
Color	4248	--	Table I, 3.2.4
Viscosity	4271	4.2.9	Table I, 3.2.5
Rosin and rosin derivatives	5031	4.2.4	3.1.2.1
Phenolic resin	5141	--	3.1.2.1
Unsaponifiable	7014	4.2.3	3.1.2.6
Fatty oil acids	7501	4.2.5	3.1.2.3
Drier ash	5265	4.2.8	3.2.1
Appearance	4261	--	3.2.2
Odor	4401	--	3.2.3
Gas test	4162	4.2.10	3.2.6
Drying	4061	4.2.11	3.2.7
Water resistance	6011	4.2.12	3.2.8
Compatibility	--	4.2.13	3.2.9

4.2.2 Volatile and nonvolatile. Determine the percent by weight of the volatile and nonvolatile as in method 4041 of Fed Test Method Std. No. 141 and check for compliance with Table I.

4.2.3 Unsaponifiable, fatty acids and phthalic anhydride. Determine the percent unsaponifiable, fatty acids and phthalic anhydride as in method 7014 of Fed. Test Method Std. No. 141. Retain the isolated fatty acids for identification of modifying oils (4.2.5).

4.2.4 Rosin and rosin derivatives.

4.2.4.1 Types I, II, III and IV. The test for rosin and rosin derivatives shall be negative when tested as in method 5031 of Fed. Test Method Std. No. 141.

4.2.4.2 Types V and VI. Determine the rosin and rosin derivatives by ASTM D 1469. For compliance with Table II divide the results obtained by the percent, fatty acids found in the sample.

4.2.5 Fatty oil acids. A portion of the isolated fatty acids from 4.2.3 shall be tested for compliance with 3.1.2.3 and Table II by method 7501 of Fed. Test Method Std. No. 141.

4.2.6 Dihydric alcohols. Determine the dihydric alcohol and pentaerythritol content by ASTM D 2998 for compliance with Table I and 3.1.2.4.

4.2.7 Specific gravity at 25 deg./25 deg.C. Specific gravity at 25 deg./25 deg.C. shall be determined by any method of suitable accuracy.

4.2.8 Drier ash. Determine drier ash in accordance with method 5265 of Fed. Test Method Std. No. 141. Calculate the percentage ash based on the resin content and check for compliance with 3.2.1.

4.2.9 Viscosity (reduced). Using the thinner specified in 3.2.5, reduce types I, II and V resin solutions to 50 +/- 1 percent by weight of nonvolatile and types III, IV and VI to 40 +/- 1 percent by weight of nonvolatile, except that type I, class C, solvent X shall be reduced to 60 +/- 1 percent by weight of nonvolatile. Determine viscosity as in method 4271 of Fed. Test Method Std. No. 141 and check for compliance with Table I.

4.2.10 Gasproofness. Thin the resin solution with mineral spirits conforming to Type I, Grade A of TT-T-291 to a nonvolatile content of 50 percent for types I, II, and V to 40 percent for types III, IV, and VI, except that type I, class C, solvent X shall be reduced with xylene conforming to Grade B of TT-X-916. Test as in method 4162 of Fed. Test Method Std. No. 141 and check for compliance with 3.2.6.

4.2.11 Drying time. Reduce types I, II and V resin solutions as received to 50 percent nonvolatile using mineral spirits conforming to Type I, Grade A, of TT-T-291, reduce types III, IV and VI resin solutions with mineral spirits to 40 percent nonvolatile, except that type I, class C, solvent X shall be reduced with xylene conforming to grade B of TT-X-916. Based on the resin solids percent, add the equivalent of 0.03 percent cobalt (metal) and 0.6 percent lead (metal) using naphthenate driers conforming to types I and II of TT-D-643 respectively. Let stand 24 hours after addition of driers and then determine time required to set-to touch and to dry hard as in method 4061 of Fed. Test Method Std. No. 141. The dry film thickness shall be 1 +/- 0.1 mil. Check for compliance with 3.2.7.

4.2.12 Water resistance. Reduce the resin and add driers as in 4.2.11. Pour the reduced resin on a tin panel of the type described in method 2012 of Fed. Test Method Std. No. 141. After pouring on the coating, allow it to spread over the entire face of the panel, except the upper 0.5 inch, and then allow to drain in a nearly vertical position and dry for 48 hours. Cut off a 0.5-inch strip of the panel from the edge which was at the bottom during the draining and drying period. This is done to remove the accumulation resulting in a thick film at this point. Cut the panel in half lengthwise and save one-half for comparison. Entirely immerse the other half vertically in a beaker of distill 24 hours as in method 6011 of Fed. Test Method Std. No. 141. Two hours after removal from the water, examine the panel by comparison with the unexposed half for compliance with 3.2.8.

4.2.13 Compatibility tests. All compatibility tests specified hereinafter shall be performed at 25 deg. +/- 5 deg.C.

4.2.13.1 Raw linseed oil (types I, II, III, IV, V and VI). Weigh 100 g. of raw linseed oil, conforming to TT-L-215, into a 200 ml. beaker (usual or Berzelius form with spout; diameter, approximately 2-1/8 inches; height, approximately 4 inches). Add 1 g. of type I, II or V resin solution as received, or 20 g. type III, IV or VI resin solution as received. Stir until thoroughly mixed. Allow to stand 30 minutes and examine. Re-examine at the end of 24 hours for compliance with 3.2.9.1.

4.2.13.2 Bodied linseed oil (classes A and B, types I and II only).

4.2.13.2.1 Class A. Weigh 25.7 g. of the class A resin solution as received, and 4.3 grams of mineral spirits conforming to Type I, Grade A of TT-T-291 into a 200 ml. beaker (usual or Berzelius form with spout; diameter, approximately 2-1/8 Inches; height, approximately 4 inches). Add 30.0 g. of reagent bodied oil (see 4.2.13.2.3). Stir with a glass rod until the contents of the beaker are thoroughly mixed. After 30 minutes, place the beaker over fine newsprint (7 point type) and determine whether the print is legible when viewed vertically through the contents of the beaker. The test shall be made in diffuse illumination of proper intensity for reading such print.

4.2.13.2.2 Class B. Weigh 30.0 g. of the class B resin solution as received into a 200 ml. beaker (see 4.2.13.2.1). Add 30.0 g. of reagent bodied oil (see 4.2.13.2.3). Stir and proceed as specified in 4.2.13.2.1.

4.2.13.2.3 Reagent. The bodied oil shall be heat-polymerized linseed oil conforming to the following requirements:

Viscosity at 25 deg. C. Gardner bubble viscometer tube	Y +/- 1/2 bubble
Specific gravity at 15.5 deg./15.5 deg. C.	
Minimum	0.960
Iodine value (Wijs), minimum	120
Saponification value, minimum	190
Unsaponifiable matter, maximum percent	1.5
Acid value, maximum	3.5
Ash, maximum percent	0.05
Color (Gardner 1953):	
Original, maximum	6
After heat test, maximum	11
Heat test	No violent bubbling or decomposition when heated at 315 deg. +/- 10 deg. C. for 1 hour
Acetone number (see 4.2.13.2.3.1)	100 to 113
Refractive index at 25 deg. C.	1.4870 to 1.4880

4.2.13.2.3.1 Determine the acetone number (or acetone tolerance) of the bodied linseed oil in accordance with ASTM D 1950.

4.2.13.3 Mineral spirits (types I, II, III, IV, V and VI). Follow the procedure specified in 4.2.13.1 using 100 g. of mineral spirits conforming to Type I, Grade A of TT-T-291 and 1 g. of resin solution as received. Check for compliance with 3.2.9.3.

4.2.13.4 Zinc oxide (types I, II, III, IV, V and VI).

4.2.13.4.1 Procedure. Mix reagent zinc oxide (see 4.2.13.4.2) in an amount equal to the nonvolatile component of the resin solution as received, in the resin solution with the aid of a suitable mechanical mixer for a period of 3 minutes. Then within 5 minutes, pass the resultant paste over a laboratory (water-cooled), three-roll mill with the rolls set at 1.5 mils, using three passes to insure smooth paste free from coarse, unground aggregates. Immediately reduce the resulting zinc oxide paste to a viscosity of 80 +/- 1 Krebs units with mineral spirits conforming to Type I, Grade A of TT-T-291. Determine the viscosity in accordance with method 4281 of Fed. Test Method Std. No. 141. Store the reduced paste in tightly closed full cans, and make viscosity measurements five days after grinding and check for compliance with 3.2.9.4.

4.2.13.4.2 The zinc oxide shall conform to the following requirements:

Type	American process
Particle shape	Acicular, as evaluated by microscope
Zinc oxide, minimum percent	98.5
Sulfur, maximum percent	0.25
Impurities including moisture, maximum percent	1.5
Coarse particles (325 sieve), maximum percent	0.2
Oil absorption	21 to 25 grams of oil/100 grams of pigment
Apparent density, maximum, pounds per cubic feet	12

4.2.13.5 Phenolic varnish (type I only).

4.2.13.5.1 Procedure. Pour 35 ml. of resin solution as received into a 100 ml. graduated cylinder. Add 55 ml. of phenolic varnish conforming to type I of MIL-V-15218. Agitate until well mixed. Examine at the end of 30 minutes and also after 24 hours, and check for compliance with 3.2.9.5.

4.2.13.6 Vinyl resin (type I, class C only).

4.2.13.6.1 Procedure. Weigh 20 g. of vinyl resin (see 4.2.13.6.2) and add gradually to 100 g. of methyl isobutyl ketone, conforming to TT-M-268, with constant agitation. Add all of the vinyl resin solution in increments, with constant stirring to 50 g. of type 1, class C alkyd resin. The resulting blend shall be clear without sign of cloud, haze, or separation after standing in a closed glass container for 48 hours. A flowout of the blend on a clean glass plate shall dry to a hard clear glossy finish with no evidence of haze or cloud. If any doubt as to compatibility exists, a small amount of paint conforming to MIL-E-24307 shall be made. Check for compliance with 3.2.9.6.

4.2.13.6.2 The vinyl resin shall be a partially hydrolyzed vinyl chloride-acetate copolymer; white powder; specific gravity, minimum, 1.35; and not less than 98 percent passing through a number 20 sieve. The composition shall be 89.5 to 91.5 percent vinyl chloride, 5.3 to 7.0 percent vinyl alcohol, and 2.0 to 5.5 percent vinyl acetate. A solution of 18 percent resin in methyl isobutyl ketone shall be not darker than a solution of 0.2 g. of potassium dichromate in one liter of water. (Vinyl resin VAGH of the Bakelite Co. is satisfactory for this test.)

5. PREPARATION FOR DELIVERY

5.1 The resin solutions shall be packaged, packed, and marked for shipment in accordance with TT-P-143. The level of packaging shall be A, B, or C and the level of packing shall be A, B, or C as specified (see 6.2). Quantity per container shall be as specified in the contract or order.

6. NOTES

6.1 Intended use. The alkyd resin solutions covered by this specification are intended for use in paints and enamels. The resin portions are all of the oxidizing type but vary in oil length and in the nature of the oil modifier. All of the resin solutions air-dry, with normal drier concentrations, within 7 hours or less, and they are also suitable for baking at from 200 deg. to 300 deg.F.

6.1.1 Type I (long oil soya, safflower or sunflower) and type V (long oil tall oil) resin solutions should be used in products requiring maximum ease of brushing combined with color retention and durability. These include architectural enamels, structural and machinery paints, and primer; also, marine, trim, house, and sign paints.

6.1.2 Type II (long oil linseed) resin solution is useful in red lead primers and other structural paints. Its brushing properties are excellent for a varnish type of product and it dries to a high gloss.

6.1.3 The type III (medium oil linseed and soya, safflower or sunflower), type IV (medium oil soya, safflower or sunflower) and type VI (medium oil tall oil) resin solutions may be used in all kinds of durable exterior coatings (for example TT-E-489). When used as vehicles in automotive and truck enamels, structural paints, and bulletin enamels, they provide easy brushing, excellent weather resistance, and high gloss.

6.2 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) Type and class required (see 1.2).
- (c) Solvent required (see 3.1.2.5).
- (d) Quantity required (see 5.1).
- (e) Size of container (see 5.1).
- (f) Level of packaging and packing required (see 5.1).

6.3 Alkyd resin solutions should be purchased by net weight.

6.4 It has been found that the glycerol alkyds are usually compatible with vinyl resins while the pentaerythritol alkyds are sometimes incompatible.

6.5 Alkyd resin solutions used in paints and enamels intended for use in areas with regulations controlling the emission of solvents into the atmosphere shall contain solvents specified in 3.1.2.5.

CUSTODIANS:

Army - MR
Navy - SH
Air Force - 84

Preparing activity:

Army - MR

CIVIL AGENCY INTEREST:

GSA

Review activities:

Army - MI, MU, WC, ME
Navy - AS, OS

User activities:

Army - AT
Navy - YD

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