

INCH-POUND

MIL-C-87252A

2 March 1992

SUPERSEDING

MIL-C-87252

2 November 1988

MILITARY SPECIFICATION

COOLANT FLUID, HYDROLYTICALLY STABLE, DIELECTRIC

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification describes the characteristics and provides the requirements for a hydrogenated polyalphaolefin synthetic hydrocarbon fluid for use in electronic applications.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: ASD/ENES, Wright-Patterson AFB OH 45433-6503 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 9160

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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SPECIFICATIONS

FEDERAL

PPP-C-96 - Cans, Metal, 28 Gauge and Lighter

MILITARY

MIL-E-19603 - Enamel, Baking, for Roller Coat Application

STANDARDS

FEDERAL

FED-STD-313 - Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities

FED-STD-595 - Colors Used in Government Procurement

FED-STD-791 - Lubricants, Liquid Fuels, and Related Products; Methods of Testing

MILITARY

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes

MIL-STD-290 - Packaging of Petroleum and Related Products

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia PA 19111-5094.)

2.1.2 Other government publications. The following other Government publications form a part of this specification to the extent specified herein. Unless otherwise specified, the issues shall be those in effect on the date of the solicitation.

PUBLICATIONS

CODE OF FEDERAL REGULATIONS

49 CFR - Transportation

FAR Clause 52.223-3

(Application for copies should be addressed to the Superintendent of Documents, Government Printing Office, Washington DC 20402)

DEPARTMENT OF LABOR (DOL)

OSHA 29 CFR 1910.1200 - Federal Register, Part IV, Department of Labor, OSHA Hazard Communication: Final Rule

(Guideline CPL 2-2.38 may be obtained from OSHA publication office, Room S-4203, 200 Constitution Avenue, NW, Washington, DC 20210.)

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2.2 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- | | | |
|------------|---|--|
| ASTM D92 | - | Flash and Fire Points by Cleveland Open Cup, Standard Test Method for (DoD adopted) |
| ASTM D130 | - | Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test, Standard Method for Detection of (DoD adopted) |
| ASTM D445 | - | Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity), Standard Test Method for (DoD adopted) |
| ASTM D664 | - | Neutralization Number by Potentiometric Titration, Standard Test Method for (DoD adopted) |
| ASTM D877 | - | Dielectric Breakdown Voltage of Insulating Liquids Using Disk Electrodes, Standard Test Method for (DoD adopted) |
| ASTM D1169 | - | Specific Resistance (Resistivity) of Electrical Insulating Liquids, Standard Test Method for |
| ASTM D1744 | - | Water in Liquid Petroleum Products by Karl Fischer Reagent, Standard Test Method for (DoD adopted) |
| ASTM D2532 | - | Viscosity and Viscosity Change After Standing at Low Temperature of Aircraft Turbine Lubricants, Standard Test Method for (DoD adopted) |
| ASTM D4057 | - | Manual Sampling of Petroleum and Petroleum Products, Standard Practice for |
| ASTM D4636 | - | Corrosiveness and Oxidation Stability of Hydraulic Oils, Aircraft Turbine Engine Lubricants, and Other Highly Refined Oils, Standard Test Method for |

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia PA 19103-1187.)

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE), INC.

- | | | |
|------------|---|--|
| AMS 3217/2 | - | Test Slabs, Acrylonitrile Butadiene (NBR-L) Low Acrylonitrile, 65-75 |
|------------|---|--|

(Application for copies should be addressed to SAE, 400 Commonwealth Drive, Warrendale PA 15096-0001.)

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

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3. REQUIREMENTS

3.1 Qualification. The dielectric coolant furnished under this specification shall be products which are authorized by the qualifying activity for listing on the applicable Qualified Products List (QPL) at the time of award of contract (see 4.3 and 6.3).

3.2 Properties. The dielectric coolant shall consist of a hydrogenated polyalphaolefin base fluid with an additive to inhibit oxidation. The required properties shall be as specified in table I. Additional data is included in table V to serve as user information which shall be referred to as typical (inherent) and shall not be a requirement levied upon the supplier (see 6.1.2).

3.3 Performance

3.3.1 Corrosiveness. When tested as specified in section 4, the change in weight of the aluminum alloy, steel, cadmium and magnesium alloy shall be not greater than ± 0.2 milligrams per square centimeter of surface. The change in weight of the copper shall be no greater than ± 0.4 milligrams per square centimeter of surface. There shall be no pitting, etching, nor visible evidence of corrosion on the surface of the metals when viewed under a magnification of 20 diameters. Any corrosion produced on the surface of the copper shall be no greater than No. 3 of ASTM D130. A slight discoloration of the cadmium shall be permitted.

3.3.2 Resistance to oxidation. When tested as specified in section 4, the viscosity of the dielectric coolant shall not have changed more than 5 percent from the original viscosity in centistokes at 40° C after the oxidation-corrosion test. The total acid number shall not have increased by more than 0.5 milligrams of potassium hydroxide per gram of sample over the total acid number of the original sample. There shall be no evidence of separation of insoluble materials nor gumming of the fluid.

3.3.3 Swelling of synthetic rubber. When tested as specified in section 4, the volume change of the standard synthetic rubber NBR-L (AMS 3217/2) by the dielectric coolant shall be within the range of 0.0 to +10 percent.

3.3.4 Solid particle contamination. When tested in accordance with section 4, the number of solid particle contaminants per 100 millimeters of the dielectric coolant shall not exceed the number specified in table I.

3.3.5 Compatibility. The dielectric coolant shall be compatible with other fluids of the same type covered by this specification when tested in accordance with section 4.

3.3.6 Toxicity. The dielectric coolant shall have no adverse effect on the health of personnel when used for its intended purpose. The coolant shall contain no components which produce noxious vapors in such concentrations as to be an annoyance to personnel during formulation or use under conditions of adequate ventilation when exercising caution to avoid prolonged contact with the skin (consult applicable OSHA guidelines). Questions pertaining to the toxic effects shall be referred to the appropriate departmental medical service who will act as an advisor to the procuring activity.

MIL-C-87252A**TABLE I. Properties of the finished coolant.**

Characteristic	Requirement	Unit
Kinematic viscosity, centistokes (cSt)		
@ 40° C, maximum	5.4	cSt
@ 100° C, minimum	1.65	cSt
@ -40° C, maximum	300	cSt
@ -54° C, minimum	1300	cSt
Dielectric strength, minimum	35	KV
Resistivity @ 25° C, minimum	1.0×10^{10}	ohm-cm
Flash point, minimum	160	°C
Fire point, minimum	170	°C
Total acid number, maximum	0.20	mg KOH/gm
Water content, maximum	50	ppm
Particulate contamination size		
Range, Largest Dimension, Micrometers	Number count	
5 to 15	<	32,000
16 to 25	<	5,700
26 to 50	<	1,012
51 to 100	<	180
Greater than 100	<	32

3.3.7 Carcinogens. The contractor shall certify that no carcinogenic or potential carcinogenic constituent are present as defined under OSHA 29 CFR 1910.1200. Certification to this effect shall be made available to the contracting officer or the contracting officers representative.

3.3.8 Low temperature viscosity stability. The kinematic viscosity shall be tested at -54° C as specified in section 4. The viscosity at 3 hours and at 72 hours shall not exceed 1300 cSt.

3.3.9 Storage stability. The fully blended product shall show no separation of ingredients nor evidence of crystallization, shall be clear and transparent when examined visually, and shall conform to the requirements of Section 3 after 12 months storage as specified in 4.5.2.

3.3.10 High temperature stability. When tested in accordance with 4.5.6, the change in fluid viscosity at 40° C shall not exceed five percent; neutralization number of the fluid shall not increase more than 0.1 and there shall be no formation of precipitate or insoluble material.

3.4 Workmanship. The dielectric coolant shall be uniform in quality and free from dirt and other foreign material and shall conform to the best commercial practice applicable to the manufacture and packaging of this class of material.

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4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements, (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor 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 supplies and service conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspections, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.2 Classification of inspection. The inspection requirements specified herein are classified as follows:

- a. Qualification inspection (see 4.3)
- b. Quality conformance inspection (see 4.4)

4.3 Qualification inspection

4.3.1 Qualification sample. The qualification sample shall consist of two 1-gallon containers of the finished fluid, one quart of the base stock without additive and one ounce of the oxidation inhibitor. In the event that the additive is supplied as a concentrated solution, an equivalent quantity of the solution shall be furnished.

4.3.2 Qualification tests. Qualification sample(s) shall be subjected to all the tests specified under 4.5, methods of inspection.

4.3.3 Data to accompany qualification samples. The samples shall be accompanied by a material safety data sheet and a test report from the manufacturer or a commercial laboratory containing complete information as to the following:

- a. Source and type of base stock and additive materials used.
- b. The formulation and composition of the finished fluid.

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c. Laboratory data showing quantitative results of all the tests required by this specification except storage stability. Separate qualification inspections shall be required for each base stock used. The samples shall be plainly identified by securely attached durable tags or labels marked with the following information:

Sample for qualification inspection

COOLANT FLUID, HYDROLYTICALLY STABLE, DIELECTRIC

Name of ingredient (for ingredient material)

Name of manufacturer

Product code number

Date of manufacture

Submitted by (name) and (date) for qualification inspection in accordance with the requirements of MIL-C-87252 under the authorization of (reference authorizing letter) (see 6.3).

4.3.3.1 Toxicity coordination. At the time of qualification submittal, the contractor shall provide the following certified materials for each ingredient to the Air Force Occupational and Environmental Health Directorate, AL/OEMB, Brooks AFB TX 78235:

Chemical Name and Formula (nomenclature of the International Union of Pure and Applied Chemistry)

NIOSH Identification Number (accession or identification number referenced in the Registry of Toxic Effects of Chemical Substances, if assigned)

In addition, the range of percentages of harmful or toxic components in the finished product and any toxicological data useful in evaluating the safety of the formulation shall be furnished. The Government reserves the right to determine whether such data is adequate for the purposes of qualification under the provisions of this specification. The AL/OEMB personnel have 15 working days from the receipt of the contractor materials to report compliance/noncompliance to the qualifying agency.

4.3.3.2 Formulation sheets. An example of a satisfactory form for the formulation sheet, indicating the chemical name, percent by weight, and purpose of each ingredient, is as follows:

Base stock (composition and source)	percent
Oxidation inhibitor (composition and source)	percent

4.3.4 Retention of qualification. In order to retain qualification of a product approved for listing on the Qualified Products List (QPL), the manufacturer shall verify, by certification, to the qualifying activity that the manufacturer's product complies with the requirements of this specification. The time of periodic verification by certification shall be in two-year intervals from the date of original qualification. The Government reserves the right to re-examine the qualified product whenever deemed necessary to determine that the product continues to meet any or all of the specification requirements.

MIL-C-87252A**TABLE II. Quality conformance tests.**

Inspection	Requirement	Paragraph Test Method	Sampling Plan
Viscosity	3.2	4.5.2	A
Total acid number	3.2	4.5.2	A
Dielectric strength	3.2	4.5.2	A
Resistivity	3.2	4.5.2	A
Flash point	3.2	4.5.2	A
Fire point	3.2	4.5.2	A
Water content	3.2	4.5.2	A
Corrosiveness	3.3.1	4.5.2	A
Oxidation stability	3.3.2	4.5.2	A
Rubber swell	3.3.3	4.5.2	A
Solid particle contamination	3.3.4	4.5.3	C
Compatibility	3.3.5	4.5.4	A
Toxicity	3.3.6	4.5.6	A
Low temperature viscosity stability ^{1/}	3.3.8	4.5.2	A
Inspection of filled containers	5.1	4.5.5	B

^{1/} The 72-hour test is not required during the quality conformance inspection. The 3-hour test is required.

4.4 Quality conformance inspection. The quality conformance inspection shall consist of sampling plans A, B, and C (see table II). Samples shall be labeled completely with information identifying the purpose of the sample, name of the product specification number, lot and batch number, date of sampling and contract number.

4.4.1 Inspection lots

4.4.1.1 Bulk lot. A bulk lot (batch) is an indefinite quantity of a homogeneous mixture of material (see 3.2) offered for acceptance in a single isolated container; or manufactured in a single plant run (not exceeding 24 hours) through the same processing equipment, with no change in ingredient material.

4.4.1.2 Packaged lot. A packaged lot is an indefinite number of 55-gallon drums or smaller unit containers (such as a one-gallon can) of identical size and type, offered for acceptance, and filled with a homogeneous mixture of material (see 3.2) from one isolated container; or filled with a homogeneous mixture of material manufactured in a single plant run (not exceeding 24 hours) through the same processing equipment with no change in ingredient material.

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4.4.2 Sampling plan A. A one-gallon bulk lot (see 4.4.1.1) shall be selected in accordance with ASTM D4057 and subjected to inspection and tests specified in 4.5.1 and 4.5.2 except for corrosiveness, oxidation resistance, swelling of synthetic rubber, and storage stability. If the sample fails any of the quality conformance tests, the inspection lot shall be rejected.

4.4.3 Sampling plan B. A random sample of filled unit containers and a sample of shipping containers fully prepared for delivery shall be selected from each packaged lot (see 4.4.1.2) of fluid in accordance with MIL-STD-105, inspection level II. The sample(s) shall be subjected to inspections specified in 4.5.5 to determine compliance with 5.1.

4.4.4 Sampling plan C. Samples of filled and sealed containers shall be taken at such periodic intervals as to be representative of each day's operation. The number of samples taken each day shall be in accordance with MIL-STD-105, inspection level S-3. The sample size and number of determinations shall be as specified in table III. The sample(s) shall be subjected to inspections specified in 4.5.3.

TABLE III. Sample for particle contamination.

Container	Sample Size (milliliter) (ml) ^{1/}	Number of Determinations per Sample
1 quart	100	1
1 gallon	200	2

^{1/} Each determination shall be made on a 100-milliliter portion of the sample. Should the particle count on any individual determination be considered excessive, two additional determinations on another sample from the same container may be used. The container shall be thoroughly shaken immediately prior to withdrawing each 100-milliliter portion for such additional determinations. The arithmetic average of the two closer particle counts shall be considered the particle count of the sample.

4.4.4.1 Referee method. In the event of a solid particle contamination count failure, the referee method shall be the automatic particle counter method calibrated with latex spheres.

4.5 Methods of inspection

4.5.1 Inspection. Inspection shall be in accordance with method 9601 of FED-STD-791.

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4.5.2 Coolant properties tests. The dielectric coolant properties shall be determined in accordance with the applicable methods specified in table IV and 4.5.4. Physical and chemical values specified in section 3 apply to the average of the determinations made on the samples for those values which fall within any stated repeatability or reproducibility limits of the applicable test method.

TABLE IV. Test methods for dielectric coolant properties.

Characteristic	Test Method	
	Federal Std 791	ASTM
Viscosity <u>1/</u>		D445
Total Acid Number		D664
Dielectric Strength		D877
Resistivity		D1169
Flash Point		D92
Fire Point		D92
Water Content		D1744
Low Temperature Viscosity Stability		D2532
Corrosion and Oxidation Stability		D4636
Rubber Swell	3603	
Storage Stability of Fluids and Lubricants	3645	

1/ Initial viscosity reading at -54°C shall be taken at 1.5 hours.

4.5.3 Solid particle examination. Particle contamination shall be measured by the use of automatic particle counters employing the light interruption principle. The automatic counters shall count particles to the limits specified in table I. The operating directions in the manual for the respective instrument shall be used.

4.5.4 Compatibility. Samples of candidate dielectric coolant in amounts of 20 ml, 100 ml, and 180 ml shall be mixed with samples from each of the fluids previously approved under this specification. Total volume of each mixture shall be 200 ml. Mixtures shall be prepared in 250 ml stoppered flasks. The flasks shall be thoroughly shaken and then stored in an oven at 135°C for 2 hours. At the end of this time, none of the mixtures shall show any signs of sediment, turbidity, or crystallization. The samples shall then be stored at -54°C for a period of 2 hours. Slight turbidity at this time, which later disappears, will be permitted in the samples.

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4.5.5 Examination of filled containers. Each sample of filled container and shipping container shall be examined for defects of construction of the container and closure, evidence of leakage and net content. Any sample from the lot having one or more defects or under the required fill shall be rejected; and if the number of defective containers in any lot exceeds the acceptance number for the appropriate sampling plan of MIL-STD-105, the lot represented by the sample shall be rejected.

4.5.6 High temperature stability

4.5.6.1 Apparatus. Thermal stability characteristics of the hydraulic fluid shall be determined using the following test apparatus: a 50 ml round bottom flask (Ace Glass Inc., Vineland NJ 08360 or equivalent); a 75° angle adapter (24/40, Ace Glass or equivalent); gas inlet tube (6 mm OD pyrex tubing); and a high temperature bath capable of maintaining a temperature of $175 \pm 2^\circ \text{C}$.

4.5.6.2 Procedure. Place 25 ml of candidate fluid in flask fitted with 75° angle adapter and gas inlet tube. The height of the glass inlet tube should be adjusted to within 1.0 cm above the level of the fluid. Place a 2.5 cm length of 1/4-inch OD stainless steel tubing, type 304 in the fluid. Heat the fluid for 100 hours at a temperature of $175 \pm 2^\circ \text{C}$ while maintaining a 1 liter per hour flow of dry nitrogen (lamp grade) on the surface of the fluid via the gas inlet tube. Upon completion of the test, the fluid shall meet the requirements of 3.3.13.

4.6 Toxicological product formulations. The contractor shall furnish to the contracting activity the toxicological data and formulations required to evaluate the safety of the material for the proposed use through the submission of the material safety data sheet detailed in FED-STD-313.

5. PACKAGING

5.1 Packaging and packing. The packaging and packing of the dielectric coolant shall be in accordance with MIL-STD-290. The levels of packaging and packing shall be as specified (see 6.2.1). Unless otherwise specified, the fluid shall be furnished in 1-quart and 1-gallon metal cans conforming to type I of PPP-C-96; and 1-gallon metal can conforming to type V, class 4 oblong (PPP-C-96) fitted with a gasketed screw cap closure and no handle. Top of oblong can shall be flat and free from embossing. Exterior can dimensions (height (excluding pouring device) 9-15/32 inches, width 6-19/32 inches, depth 4-4/32 inches allowable tolerance 2/32 inches). All materials used in the construction of the containers shall be such as will not affect or be affected by the contained dielectric coolant. Just prior to filling, all containers shall be thoroughly cleaned, rinsed with clean filtered fluid, and examined to ensure absolute absence of loose solder, dirt, fibers, lint, metal particles, seaming compound, corrosion products, water, or other foreign contaminants. The bottom seam shall show no extruded seaming compound and there shall be no seaming compound on the body immediately adjacent to the side seam. Visible seaming compound, evenly distributed and forming a very fine edge at the point of contact of the seam with the body, shall not be cause for rejection. If a solder seam is used in the fabrication of the can, residual soldering flux shall not be present on the inside seam of the container.

5.2 Marking. The marking of the dielectric coolant containers shall be in accordance with MIL-STD-290, except that containers shall be coated BLUE, a color approximating Color No. 15200 or

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35466 (MIL-E-19603) of FED-STD-595. Exterior tops and bottoms of cans shall not be painted. Color of markings shall be black. Any additional special markings required will be made a part of the contract order (see 6.2).

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended Use. The material covered by this specification is intended for use as a heat transfer medium in closed systems and capable of functioning as a dielectric fluid over the temperature range of -54°C to 135°C . Dielectric coolant is used to cool aircraft radar, aircraft avionics systems, missiles, and navigation systems.

6.1.1 Storage conditions. Prior to use in the intended equipment, the product may be stored under conditions of covered or uncovered storage in geographic areas ranging in temperature from -54°C to $+50^{\circ}\text{C}$.

6.1.2 Additional data for typical properties of the finished coolant. Additional data is included in table V to serve as user information which shall be referred to as typical (inherent) and shall not be a requirement levied upon the supplier.

TABLE V. Typical properties of the finished coolant.

Characteristic	Inherent Value
Specific gravity	
@ 25°C (77°F)	0.809
@ 15.6°C (60°F)	0.805
Coefficient of thermal expansion (CC/CC/ $^{\circ}\text{C}$)	2.7×10^{-4}
Thermal conductivity (cal-cm/s-cm ² $^{\circ}\text{C}$)	
@ -40°C (-40°F)	4.5×10^{-4}
@ 149°C (300°F)	3.4×10^{-4}
Specific Heat (cal/gm/ $^{\circ}\text{C}$)	
@ -40°C (-40°F)	0.48
@ 25°C (77°F)	0.53
@ 75°C (100°F)	0.55
@ 149°C (300°F)	0.65

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6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).
- c. Type and size of containers (see 5.1).
- d. Quantity.
- e. Applicable levels of preservation and packing with requirements in detail (see 5.1).
- f. FAR Clause 52.223-3.

6.2.1 Purchase unit. The fluid covered by this specification should be purchased by volume, the unit being a U.S. gallon of 231 cubic inches at 15.6° C (60° F).

6.3 Qualification. With respect to products requiring qualification, awards will be made only for products which are, at the time set for opening of bids, qualified for inclusion in QPL-87252 whether or not such products have actually been so listed by that date. The attention of the contractors is called to these requirements, and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification in order that they may be eligible to be awarded contracts or purchase orders for the products covered by this specification. The activity responsible for the Qualified Products List is the Wright Laboratory, Materials Directorate, Systems Support Division, Wright-Patterson AFB, OH 45433-6533. Information pertaining to qualification of products and letter of authorization may be obtained from: WL/MLSE, Wright-Patterson AFB OH 45433-6533.

6.3.1 Qualification information. It is understood that the material furnished under this specification subsequent to final approval should be of the same composition and shall be equal to products upon which approval was originally granted. In the event that the fluid furnished under contract is found to deviate from the composition of the approved product, or that the product fails to perform satisfactorily, approval of such products will subject to immediate withdrawal from the Qualified Products List.

6.4 Subject term (key word) listing

Dielectric coolant
 Fire point
 Flash point
 Kinematic viscosity
 Liquid coolant
 Oxidation
 Synthetic hydrocarbon
 Synthetic rubber

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6.5 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:

Air Force - 11

Navy - AS

Army - ME

Preparing Activity:

Air Force - 11

Project No. 9160-1009

Review Activities:

Air Force - 68

Navy - SH

Army - AV, MI, AR

DLA-GS

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, not to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:

1. DOCUMENT NUMBER
MIL-C-87252A2. DOCUMENT DATE (YYMMDD)
920302

3. DOCUMENT TITLE

COOLANT FLUID, HYDROLYTICALLY STABLE, DIELECTRIC

4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME (Last, First, Middle Initial)

b. ORGANIZATION

c. ADDRESS (Include Zip Code)

d. TELEPHONE (Include Area Code)
(1) Commercial7. DATE SUBMITTED
(YYMMDD)(2) AUTOVON
(If applicable)

8. PREPARING ACTIVITY

A. NAME

AF CODE 11

B. TELEPHONE (Include Area Code)

(1) Commercial

(513) 255-6281

(2) AUTOVON (If applicable)

DSN 785-6281

C. ADDRESS (Include Zip Code)

ASD/ENES

WRIGHT-PATTERSON AFB OH 45433-6503

IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:

Defense Quality and Standardization Office
5203 Leesburg Pike, Suite 1403, Falls Church VA 22041-3466
Telephone (703) 756-2340 AUTOVON 289-2340