MIL-P-46002B
AMENDMENT 3
20 February 1986
SUPERSEDING
AMENDMENT 2
14 May 1985

MILITARY SPECIFICATION

PRESERVATIVE OIL, CONTACT AND VOLATILE CORROSION-INHIBITED

This amendment forms a part of Military Specification MIL-P-46002B, dated 9 March 1984, and is approved for use by all Departments and Agencies of the Department of Defense.

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* 2.1.1, after MIL-STD-290, add:

"2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and 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.

DEPARTMENT OF LABOR (DOL)

OSHA 29 CFR 1910.1200 Hazard Communication Interpretation Regarding Lubricating Oils

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

2.2, delete in their entirety: "A366, D130 and D270", and add the following:

"A366 - Steel Carbon Cold-Rolled Sheet, Commercial Quality.
D130 - Detection of Copper Corrosion from Petroleum Products by the Copper Strip Tarnish Test.
D4057 - Manual Sampling of Petroleum and Petroleum Products.
D4177 - Automatic Sampling of Petroleum and Petroleum Products."

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* 3.2, add "The contractor shall certify that no carcinogenic or potentially carcinogenic constituents are present as defined under the Hazard Communication Standard (HCS) 29 CFR 1910.1200. Certification to this effect shall be made available to the contracting officer or the contracting officer's representative."

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After 3.6.6, add new paragraph as follows.

"3.6.7 Vapor phase copper protection. After testing the oil as specified in 4.10.7, any corrosion produced on the copper shall not be greater then No. 3 of ASTM D130 copper corrosion standards."

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4.3.2, line 2, delete "D270" and substitute "D4057 or D4177".

* 4.4.1, add the following: "Certification of non-carcinogenicity as specified (ie materials are not considered carcinogenic or potentially carcinogenic)."

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* 4.5.1, delete and substitute.

"4.5.1 First article inspection. First article inspection shall consist of tests for all of the requirements for this specification. Testing shall be performed in the contractor's plant or in a government approved laboratory as specified by the procuring activity or its designated agent (see 6.4). Whether testing is performed by the contractor or an independent laboratory, written certification signed by a responsible officer of the company and approved by the regional quality assurance representative (QAR) stating that the first article samples meet all of the requirements of the specification is required. The statement shall include the laboratory report listing all of the tests performed, the results obtained, and the product designation. Safety data sheets conforming to FED-STD-313 shall also be submitted with the certified test data to the activity listed in 6.4."

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4.10.1, line 2, delete "A1748" and substitute "D1748".

4.10.2.1, line 1, delete "16" and substitute "76".

* 4.10.2.2, line 2, delete "mm" and substitute "nm" and delete "μinch" and substitute "microinch".

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After 4.10.6.3, add the following new paragraphs·

"4.10.7 Vapor phase copper corrosion."

"4.10.7.1 Test strips. The test strips shall be copper, cold rolled, half hard temper and shall conform to QQ-C-576. The strips shall have a surface area of 26 ±5 cm^2 and shall measure 76 mm by 13 mm by less then 6.4 mm (3-inch by 1/2-inch by less than 1/4-inch). Drill a hole 4.8 mm (3/16-inch) in diameter, centered 6.4 mm (1/4-inch) from one end in each strip. Three strips shall be used for each test.

"4.10.7.2 Polishing test strips. Polish the unnumbered side of the test strips to a surface finish of 380 ± 130 mm (15 ±5 microinches) using a 280-grit aluminum oxide or silicon carbide abrasive, with either cloth or paper backing. Do not use "wet or dry", waterproof, or iron oxide abrasives. After abrading, clean the strips immediately, using the following procedure:

CAUTION. Naphtha and methanol are flammable and toxic. Do not heat either solvent with an open flame. Avoid contact with skin and inhalation of vapors. Perform procedures b, c, and d in an efficient laboratory hood.

a. Wipe the abraded faces of the strips with clean surgical gauze to remove superficial dust.
b. Remove the remaining residue and contamination by holding the strips in a rack at 20 degrees from the vertical and spraying downward with naphtha. Flush the surfaces progressively downward, spraying first the test surfaces, then the backs of the strips and finally the test surfaces again.
c. Heat the strips in boiling naphtha for 5 to 10 minutes.
d. Rinse the strips in hot anhydrous methanol.
e. Inspect the strips carefully under a bright light to determine if any surface residues remain.
f. Desiccate the strips at 25° ±3° C (77° ±5° F) and place in test within 2 hours.

"4.10.7.3 Test apparatus. Use the test apparatus specified for the vapor-phase protection test (see 4.10.2.3).

"4.10.7.4 Cleaning of apparatus prior to test. Clean the test apparatus in accordance with the procedure specified for the vapor-phase protection test (see 4.10.2.4).

"4.10.7.5 Test procedure. Prepare three test assemblies for each oil to be tested. Weigh a quantity of oil, as listed in table II, onto a small, cleaned and tared watch glass, 51 to 64 mm (2.0 to 2.5 inch) diameter. The temperature of the oil and the test assemblies shall be 25° ± 3° C (77° ± 5° F) prior to the test. Immediately after weighing, place the watch glass and oil in the test jar and add 50.0 ± 0.5 ml of reagent water. Place the lid on the jar, then swirl the jar and contents vigorously for one minute. Exercise care to prevent any of the mixture from splashing onto the inside of the jar lid. Mount the copper strips on the monel metal framework, place the strip in the jar and replace the

jar lid immediately. Mount the strip so that the polished side faces the center of the jar. Maintain the temperature of the test unit at 25° ±3° C (77° ±5° F) for 10 to 15 minutes, place the unit in a mechanical convection oven at 54° ±3° C (130° ±5° F) for 16 hours, then expose it as follows:

6 hours at 4° ±3° C (40° ±5° F)
18 hours at 54° ±3° C (130° ±5° F)

Position the jars in the oven so that the polished surface of the strip is facing toward the direction of air flow. At the completion of the test, rate the strips according to ASTM method D130 paragraph 10."

The margins of this amendment are marked with an asterisk to indicate where changes (additions, modifications, corrections, deletions) from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

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