

INCH-POUND

MIL-PRF-83483C
20 February 1998
SUPERSEDING
MIL-T-83483B
27 May 1994

PERFORMANCE SPECIFICATION

THREAD COMPOUND, ANTISEIZE, MOLYBDENUM DISULFIDE-PETROLATUM

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

1. SCOPE

1.1 Scope. This specification presents requirements for one type of thread compound composed of molybdenum disulfide and petrolatum.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in *sections 3* and *4* of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this lists, document users are cautioned that they must meet all specified requirements documents cited in *sections 3* and *4* of this specification, whether or not they are listed.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: ASC/ENSI, 2530 Loop Road W, Wright-Patterson AFB OH 45433-7101, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document, or by letter.

AMSC N/A

FSC 8030

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

MIL-PRF-83483C**2.2 Government documents**

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks 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).

SPECIFICATIONS**FEDERAL**

VV-P-236 Petrolatum, Technical

MILITARY

MIL-M-7866 Molybdenum Disulfide, Technical - Lubrication Grade

STANDARDS**FEDERAL**

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

(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, phone (215) 697-2667.)

2.3 Non-Government publications. The following document(s) form a part of this standard to the extent specified herein. Unless otherwise specified, the issues of the documents that are DoD adopted will be those listed in the issue of the *DoDISS* specified in the solicitation. The issues of documents that have not been adopted will be those in effect on the date of the cited *DoDISS*.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D217 Cone Penetration Of Lubricating Grease

ASTM D4057 Manual Sampling of Petroleum and Petroleum Products

(Application for copies should be addressed to the Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale PA 15096; phone (412) 776-4841.)

(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 information services.)

2.4 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.

MIL-PRF-83483C**3. REQUIREMENTS**

3.1 Material. The physical composition of the thread compound shall be such that the material passes requirements in *section 3*. Material specified in *table I* has been known to pass the requirements of this specification but is not mandatory.

TABLE I. Physical composition

| Ingredient | Percent by weight | |
|-----------------------------------------|-------------------|-----------|
| | (minimum) | (maximum) |
| Molybdenum disulfide, <i>MIL-M-7866</i> | 48 | 52 |
| Petrolatum, <i>VV-P-236</i> | Balance | Balance |

3.2 Functional characteristics.

3.2.1 Worked Penetration. The worked penetration of the thread compound shall be 170 or above penetration range, but not to exceed 260 when tested as specified in *4.2.1*.

3.2.2 Stability. The thread compound shall show no separation when tested as specified in *4.3.3*.

3.3 Workmanship. The thread compound shall be free from cakes or lumps and hard, gritty particles. There shall be no separation of the mixture when tested as specified in *section 4*.

4. VERIFICATION

4.1 Classification of inspection. The inspection requirements specified herein are classified as quality conformance inspection (see *4.2*).

4.2 Quality conformance inspection. Quality conformance inspection shall consist of a sampling plan (see *4.2.2*).

4.2.1 Batch lot. A lot shall consist of 500 pounds or less of compound manufactured at one time from one batch of compound (see *3.1*) offered for delivery at one time.

4.2.2 Sampling plan. A one-pound sample of the compound (see *3.1*) shall be selected at random from each inspection lot in accordance with *ASTM D4057*, *FED-STD-791*, and subjected to the tests specified in *4.3*.

4.3 Methods of inspection.

4.3.1 Inspection. Inspection shall be in accordance with *Method 9601* of *FED-STD-791*.

MIL-PRF-83483C**TABLE II. Sampling plan**

| Lot Size | Sample Size |
|--------------------------------------|--------------------|
| 1-4 | all |
| 5-50 | 5 |
| 51-90 | 7 |
| 91-150 | 11 |
| 151-280 | 13 |
| 281-500 | 16 |
| 501-12,000 | 19 |
| [acceptance number is zero, (c + 0)] | |

4.3.2 Penetration. The normal worked penetration of the thread compound shall be determined in accordance with *ASTM D217*.

4.3.3 Stability. The stability of the thread compound shall be determined by placing 100 grams of the compound in each of the two cone-shaped centrifuge tubes, and centrifuging at 1500 rpm for 1/2 hour. The apparatus to be used for this test is described in *FED-STD-791, Method 3003*. Separation shall be defined as droplets or layer of oil appearing on the surface of the compound after centrifuging.

4.3.4 Rejection. Failure of any sample selected in accordance with 4.2.2 to pass any of the tests of 4.3 shall be cause for rejection of the lot represented.

5. PACKAGING

5.1 Packaging and packing. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity with the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

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

6.1 Intended use. This compound is particularly suitable for use on aircraft engine spark plugs and threaded fasteners and fittings at temperatures below 800°F. This compound contains molybdenum disulfide which at

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higher temperature conditions (1000°F and above) may induce hot corrosion of fastener or contiguous materials. Accordingly, its use at higher temperatures will be avoided. *AMS 2518* thread compound should be used in lieu of products directed by this specification in these high temperature applications for Air Force use. It should not be used in lieu of sealing compound, pipe joint and thread, lead free, general purpose conforming to *TT-S-1732*.

6.2 Acquisition requirements. Acquisition documents should specify the following information:

- a. Title, number, and date of this specification.
- b. Applicable levels of packaging and packing (see 5.1).

6.3 Unit of Purchase. The material should be purchased by weight, the unit being one pound.

6.4 Subject term (key word) listing.

Molybdenum
Thread compound
Petrolatum

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 extent of the changes. The changes are due to Acquisition Reform initiatives requiring Government specifications to be performance-based.

Custodian:

Army - MR
Navy - SH
Air Force - 11

Preparing Activity:

Air Force 11

(Project 8030-0744)

Review activities:

Air Force - 99

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.
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I RECOMMEND A CHANGE:

1. DOCUMENT NUMBER
MIL-PRF-83483C

2. DOCUMENT DATE (YYMMDD)
98/02/20

3. DOCUMENT TITLE

THREAD COMPOUND, ANTISEIZE, MOLYBDENUM DISULFIDE-PETROLATUM

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, Middle Initial)

b. ORGANIZATION

c. ADDRESS (include Zip Code)

d. TELEPHONE (Include Area Code
(1) Commercial

e. DATE SUBMITTED
(YYMMDD)

(2) AUTOVON
(If applicable)

8. PREPARING ACTIVITY

a. NAME

ASC/ENSI
Air Force Code 11

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2530 Loop Road West
Wright-Patterson AFB OH 45433-7101

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

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