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PERFORMANCE SPECIFICATION

ANTISEIZE THREAD COMPOUND, MOLYBDENUM DISULFIDE-PETROLATUM

Comments, suggestions, or questions on this document should be addressed to HQ AFPET/PTPT, 2430 C Street, Bldg 70, Area B, Wright-Patterson AFB OH 45433-7632 or e-mailed to AFPET.AFTT@wpafb.af.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at https://assist.daps.dla.mil.

AMSC N/A FSC 8030

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 antiseize 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, 4, or 5 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 list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, or 5 of this specification, whether or not they are listed.

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 cited in the solicitation or contract.

FEDERAL SPECIFICATIONS

VV-P-236	Petrolatum, Technical

(Copies of these documents are available online at https://assist.daps.dla.mil/quicksearch or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094)

2.3 Non-government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

ASTM, INTERNATIONAL

ASTM D217	Cone Penetration Of Lubricating Grease (DoD Adopted)
ASTM D2709	Water and Sediment in Middle Distillate Fuels by Centrifuge (DoD Adopted)
ASTM D4057	Manual Sampling of Petroleum and Petroleum Products (DoD Adopted)

(Copies of these documents are available online at http://www.astm.org or the ASTM International, 100 Barr Harbor Drive, West Conshohocken PA 19428-2959)

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

SAE-AMS-M-7866	Molybdenum Disulfide, Technical – Lubrication Grade (DoD Adopted)

(Copies of these documents are available online at http://www.sae.org or SAE International, 400 Commonwealth Drive, Warrendale PA 15096-0001 USA)

2.4 Order of precedence. Unless otherwise noted herein or in the contract, 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.

3. REQUIREMENTS

3.1 Toxicity. The materials shall have no adverse effect on the health of personnel when used for their intended purpose.

3.2 Materials. The physical composition of the thread compound shall be such that the material passes requirements in section 3. The mixture of materials 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, SAE-AMS-M-7866	48	52
Petrolatum, VV-P-236	Balance	Balance

3.3 Properties of finished fluid. The properties of the finished fluid shall be as specified in 3.3.1 and 3.4 when tested as specified in section 4.

3.3.1 Worked Penetration. The worked penetration range (as measured in units of 0.1 mm) of the thread compound shall be a minimum of 170 and a maximum of 260 when tested as specified in 4.3.2.

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

3.4 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 225 kilograms (500 pounds) or less of compound manufactured at one time from one batch of compound (see 3.2) offered for delivery at one time.

4.2.2 Sampling plan. A sample of one pound of the compound (see 3.2) shall be selected at random from each inspection lot in accordance with ASTM D4057. The number of containers from each lot to be tested shall be determined in accordance with Table II of this document. The containers will be subjected to the tests specified in 4.3.

4.3 Methods of inspection.

4.3.1 Inspection. Refer to the contract or purchase order for specific inspection requirements.

Table II. Sampling plan

Number of Containers in Lot	Sample Size (Containers)
1-4	All
5-50	5
51-90	7
91-150	11
151-280	13
281-500	16
501 – 12,000	19

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 1,500 rpm for 30 minutes. An apparatus that can be used for this test is described in ASTM D2709. 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. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's system commands. 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 military aircraft engine spark plugs and threaded fasteners and fittings at temperatures below 427°C (800°F). This compound contains molybdenum disulfide which at higher temperature conditions [538°C (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:

a. Title, number, and date of this specification.
b. Grade and quantity of oil required.
c. Packaging requirements (see 5. 1)

6.3 Unit of Purchase. The material should be purchased by weight, the unit being one pound (0.45 kilograms).

6.4 Material Safety Data Sheets. Contracting officers will identify those activities that require copies of completed Material Safety Data Sheets (MSDS) prepared in accordance with FED-STD-313. The pertinent Government mailing addresses for submission of data are listed in FED-STD-313.

6.5 Shelf-life. This specification covers items where the assignment of a Federal shelf-life code is a consideration. Specific shelf-life requirements should be specified in the contract or purchase order, and should include, as a minimum, shelf-life code, shelf-life package markings in accordance with MIL-STD-129 or FED-STD-123, preparation of a material quality storage standard for type II (extendible) shelf-life items, and a minimum of 85 percent shelf-life remaining at the time of receipt by the Government. These and other requirements, if necessary, are in DoD 4140.27-M, Shelf-Life Management Manual. The shelf-life codes are the in Federal Logistics Information System Total Item Record. Additive information for shelf-life management may be obtained from DoD 4140.27-M, or the designated shelf-life Points of Contact (POC). The POC should be contacted in the following order: (1) the Inventory Control Points that manage the item and (2) the DoD Service and Agency administrators for the DoD Shelf-Life Program. Appropriate POCs for the DoD Shelf-Life Program can be contacted through the DoD Shelf-Life Management website: https://www.shelflife.hq.dla.mil/.

6.6 Subject term (key word) listing.

Grease
Molybdenum Disulphide
Petroleum Jelly
Type II
Shelf Life

6.7 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.

Custodians:
Army – MR
Navy – SH
Air Force - 68

Preparing activity:
Air Force – 68
(Project 8030-2010-001)

Review activities:
Air Force - 99

Note: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information using the ASSIST Online database at https://assist.daps.dla.mil.