

MIL-C-21567A (OS)  
26 October 1973  
SUPERSEDING  
MIL-C-21567 (NOrd)  
23 October 1958

## MILITARY SPECIFICATION

### COMPOUND, SILICONE, SOFT FILM

*This specification has been approved by the Naval Ordnance Systems Command,  
Department of the Navy.*

#### 1. SCOPE

1.1 This specification covers one grade of silicone compound with a corrosion inhibitor for application to unpainted threaded or nonthreaded mating surfaces of ferrous components between -65° Fahrenheit (F) and 160° F. It is also appropriate for use as a lubricant for components fabricated from rubber. (See 6.1.)

#### 2. APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on date of invitation for bids or requests for proposal form a part of this specification to the extent specified herein..

#### SPECIFICATIONS

##### Federal

|            |   |
|------------|---|
| QQ-A-250/4 | Aluminum Alloy 2024, Plate and Sheet  |
| QQ-B-613   | Brass, Leaded and Nonleaded, Flat Products<br>(Plate, Bar, Sheet and Strip)                   |
| QQ-C-502   | Copper Rods and Shapes, and Flat Products With<br>Finished Edges (Flat Wire, Strips and Bars) |
| QQ-L-201   | Lead Sheet  |
| QQ-M-44    | Magnesium Alloy Plate and Sheet (AZ31B)   |
| QQ-P-416   | Plating Cadmium (Electrodeposited)  |

FSC 6850

MIL-C-21567A (OS)

|          |  |
|----------|--|
| QQ-S-571 | Solder, Tin Alloy, Lead-Tin Alloy and Lead Alloy |
| QQ-S-698 | Steel, Sheet and Strip, Low Carbon               |
| QQ-Z-301 | Zinc Sheet and Strip                             |

Military

|            |   |
|------------|---|
| MIL-S-5059 | Steel, Corrosion-Resistant (18-8), Plate, Sheet and Strip |
|------------|---|

STANDARDS

Federal

|             |   |
|-------------|---|
| FED-STD-151 | Metals; Test Methods  |
| 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, Packing and Marking of Petroleum and Related Products |

(Copies of specifications, standards, drawings, and publications required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

3. REQUIREMENTS

3.1 Qualification. The silicone compound furnished under this specification shall be a product which is qualified for listing on the applicable qualified products list at the time set for opening of bids (see 4.3 and 6.4).

3.2 Materials. The materials used in the manufacture of this compound shall consist of components of a grade and quality which will formulate a compound that will conform to the requirements of this specification.

3.3 Penetration. The normal worked penetration of the compound shall be not less than 260 nor more than 320.

3.4 Oil separation and evaporation. The compound shall show not more than 4.0 percent oil separation and not more than 2.0 percent evaporation loss.

3.5 Acid number. The acid number of the compound shall be determined and this same acid number shall be used as the reference value required in 3.7.

3.6 Oxidation stability. The oxygen pressure drop shall not exceed 5.0 pounds per square inch (psi) in 100 hours at 210° F.

3.7 Change in acid number. The acid number of the compound after the oxidation stability test shall not exceed the value originally obtained in 3.5 by more than 5.

3.8 Apparent viscosity. The apparent viscosity of the compound at -65° F shall not exceed the maximum values shown in table I.

Table I

## APPARENT VISCOSITY

| Rate of shear<br>(sec <sup>-1</sup> ) | Apparent viscosity<br>(poises) |
|---------------------------------------|--------------------------------|
| 25                                    | 2500                           |
| 100                                   | 1000                           |
| 500                                   | 500                            |

3.9 Corrosive effect on metals. The compound shall produce no attack, as indicated by rusting or pitting, on aluminum alloy, copper, lead magnesium alloy, solder, steel, zinc, and cadmium-plated steel, and couples of each metal with each of the others. Slight darkening, as shown by comparison with freshly polished panels of the same metals, will be permitted.

3.10 Sea-water resistance. When tested for a minimum of 48 hours, there shall be no evidence of corrosion on at least two of the three panels. Corrosion on the edges of the panels or on the surfaces within one-eighth inch from the untaped edges and five-sixteenths inch in from the outside edges of the edge which had been taped shall be disregarded.

3.11 Flow point. The compound shall not flow at 160° F.

3.12 Insolubility. The compound shall show not more than 1.0 percent weight loss.

3.13 Abrasive. The compound shall show no abrasion.

3.14 Waterproof seal. The test paper from 3 of 5 tests shall show no pink coloration. Change in color within one-eighth inch of edges shall be discounted.

3.15 Volume change, rubber. After complete immersion for 168 hours at 158° ± 2° F (70° ± 1° centigrade (C)) in the silicone compound, the volume change of elastomeric compounds, having low or medium volume swell in petroleum hydrocarbons, shall not exceed ±7 percent.

3.16 Workmanship and texture. The component materials shall be thoroughly mixed to form a product free from dirt, grit, water, or other foreign materials.

3.17 Compatibility. The silicone compound shall be tested for compatibility with the explosives and propellants prescribed by the Naval Ordnance Systems Command. (See 6.3.)

#### 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 this specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 Classification of inspections. 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. Qualification inspection shall consist of the examinations and tests specified in table II. Failure of the qualification sample to comply with the requirements of this specification shall result in the withholding of qualification.

4.4 Quality conformance inspection. Quality conformance inspection shall consist of the examinations and tests specified in table II. Failure of a sample to comply with the requirements of this specification shall be cause for rejection of the lot represented.

4.5 Sampling.

4.5.1 Qualification samples. The qualification samples shall be forwarded to the Aero Materials Department, NADC, Warminster, Pa. 18974. The test sample shall consist of 10 pounds of silicone compound. The sample shall be plainly identified by securely attached, durable tags or labels with the following information:

Sample for qualification inspection

Compound, Silicone, Soft Film

Name of manufacturer

Product code number

Date of manufacture

Submitted by (name) (date) for qualification inspection in accordance with the requirements of MIL-C-21567A (OS) under authorization of (reference authorizing letter) (see 6.3).

Table II

## INSPECTION REQUIREMENTS

| Examination or test            | Requirement paragraph | Test method        |             | Inspection applicability |                     |
|--------------------------------|-----------------------|--------------------|-------------|--------------------------|---------------------|
|                                |                       | This specification | FED-STD-791 | Qualification            | Quality conformance |
| Material                       | 3.2                   | -                  | -           | X                        | X                   |
| Penetration                    | 3.3                   | -                  | 311         | X                        | X                   |
| Oil separation and evaporation | 3.4                   | 4.6.1              | -           | X                        | X                   |
| Acid number                    | 3.5                   | 4.6.2              | -           | X                        |                     |
| Oxidation stability            | 3.6                   | -                  | 3453        | X                        |                     |
| Change in acid number          | 3.7                   | 4.6.3              | -           | X                        |                     |
| Apparent viscosity             | 3.8                   | -                  | 306         | X                        |                     |
| Corrosive effect on metals     | 3.9                   | 4.6.4              | -           | X                        |                     |
| Sea water resistance           | 3.10                  | 4.6.5              | -           | X                        |                     |
| Flow point                     | 3.11                  | 4.6.6              | -           | X                        | X                   |
| Insolubility                   | 3.12                  | 4.6.7              | -           | X                        |                     |
| Abrasive                       | 3.13                  | 4.6.8              | -           | X                        | X                   |
| Waterproof seal                | 3.14                  | 4.6.9              | -           | X                        |                     |
| Volume change, rubber          | 3.15                  | -                  | 3603        | X                        |                     |
| Workmanship and texture        | 3.16                  | 4.6.10             | -           | X                        | X                   |
| Compatibility                  | 3.17                  | 4.6.11             | -           | X                        |                     |
| Preparation for delivery       | Section 5             | 4.6.12             | -           | X                        | X                   |

#### 4.5.2 Quality conformance inspection sampling.

4.5.2.1 Lot. For the purpose of sampling, a lot shall consist of compound taken from the same batch and offered for acceptance at one time. Each single batch shall be produced by the same manufacturing process.

4.5.2.2 Sampling for tests. A sample of not less than 2 pounds shall be selected from each lot prior to packaging. The sampling procedures shall be in accordance with method 8001 of FED-STD-791.

4.5.2.3 Sampling for examination of filled containers. A random sample of filled containers shall be selected in accordance with MIL-STD-105, inspection level I, acceptable quality level 2.5 percent defective, to verify compliance with the requirements of this specification with regard to fill, closure marking, and other requirements not involving tests.

#### 4.6 Test methods.

4.6.1 Oil separation and evaporation. The oil separation shall be determined in accordance with method 321 of FED-STD-791 with the following exceptions:

- (a) The cone shall be suspended from a rod supported on the top edges of the beaker without covering the beaker.
- (b) The oven shall be maintained at a temperature of 302° F.
- (c) The time of the sample in the oven shall be 24 hours.

The loss of weight of the entire assembly, after 24 hours, at the test temperature, divided by the weight of the sample used, multiplied by 100, shall be reported as the percent evaporation. The gain in weight of the beaker divided by the weight of the sample used, multiplied by 100, shall be reported as the percent oil separation.

4.6.2 Acid number. Weigh approximately 10 grams of grease to the nearest 0.1 gram into a suitable flask, add 50 milliliters (ml) toluene, and shake until the sample is dissolved. Add 50 ml of a mixture of equal volumes of 95 percent ethyl alcohol and distilled water, to which has been added 0.5 ml of 1 percent phenolphthalein solution and sufficient standard alkali solution (0.1 N.KOH) to give a faint pink color.

Shake vigorously and heat to the boiling point of the alcohol-water layer. Titrate while hot with the standard alkali solution until a pink color persists after vigorous shaking. The presence of the color can be verified by allowing the flask to stand until separation into two layers occurs.

Calculation:

$$\text{Neutralization number} = \frac{V \times N \times 56}{w}$$

where

V = milliliters of standard alkali solution used

N = normality of alkali solution

w = weight of grease.

4.6.3 Change in acid number. Determine the acid number in accordance with 4.6.2 for the compound which has undergone the oxidation stability test.

4.6.4 Corrosion on metals. Clean, polished strips of metal of approximately the same size shall be coated with the compound. The metals used shall be aluminum alloy, copper, lead, magnesium alloy, solder, steel, zinc, cadmium-plated steel conforming to QQ-A-250/4, QQ-C-502, QQ-L-201, QQ-M-44, QQ-S-571, QQ-S-698, QQ-Z-301, and QQ-P-416 respectively, and the following couples: aluminum alloy and copper, aluminum alloy and cadmium-plated steel, magnesium alloy and steel, and brass and stainless steel. Brass used shall conform to requirements of QQ-B-613, and stainless steel shall be type 302 conforming to the requirements of MIL-S-5059. The coated strips shall be placed in a convection current air oven held at a temperature of  $212^{\circ} \pm 2^{\circ}$  F ( $100^{\circ} \pm 1.1^{\circ}$  C). After a period of 70 hours in the oven, the strips shall be removed, wiped gently with a clean, lintless dry cloth, and visually inspected for evidence of corrosion.

4.6.5 Sea-water resistance. The test panels shall be cold-rolled sheet steel, SAE 1020, approximately 2 by 4 by 1/8 inches. The panels may be supported by two wire prongs extending from the 2-inch edge and parallel to the 4-inch edges. The prongs may be fixed by inserting stiff steel wires (3/64 inch in diameter by 1-1/4 inch long) (or long finishing nails minus the heads) into two holes, one-fourth inch from each of and parallel to the 4-inch edges. Panels thus prepared shall be supported at a 45° angle on wooden bases, so constructed that the prongs can be inserted into holes drilled at a 45° angle in the bases. The



panels shall be prepared by first grinding all surfaces to a finish equal to a  $20 \pm 5$  microinch roughness and then rounding all edges slightly. The surfaces shall then be cleaned with No. 1G emery paper. The strokes shall be longitudinally back and forth, and care shall be taken to include all surfaces of the panel except the end from which the prongs project. As a final step each surface shall be cleaned with an unused piece of the paper in order to insure that the surface will be as uniform as possible. All roughness height readings may be taken at right angles to the lay by means of a standard profilometer. The panels then shall be rinsed in three separate washes of benzol and air-dried. The final polishing of the panels and the rinsing in benzene should be performed immediately before the compound is applied. In all the operations the panels shall be handled to avoid contamination with perspiration from the fingers. The compound shall be applied to three panels in the following manner:

A 4-inch length of 1/2-inch-width, pressure-sensitive tape, 0.002 to 0.003 inch thick, shall be placed over each long edge of the specimens to produce a 3/16-inch border of tape on both sides of each face of the specimens. A relatively thick coating of compound shall be spread over the face of each panel to be evaluated, and this coating shall be reduced to the thickness of the tape by drawing a piece of 10-millimeter-outside-diameter glass tubing (resting on the tapes) from one end of the specimen to the other until a smooth surface on the film is obtained. The tape shall then be removed and the areas where no grease is present shall be greased without disturbing the area which had been greased originally. The other surfaces of the specimens shall then be coated with a film of the compound to reduce corrosion.

The coated panels shall be exposed to synthetic sea-water spray for a minimum of 48 hours at  $95^{\circ} + 2^{\circ} - 3^{\circ}$  F. The spray cabinet and solution shall conform to FED-STD-151, methods 811 and 812, respectively.

4.6.6 Flow point. Three test panels, 2 by 4 by 1/8 inches, prepared and coated as specified in 4.6.5 shall be allowed to stand vertically at room temperature for 24 hours. At the end of this period, the coating shall be removed from the bottom half of one face of each panel and a line scribed across the panels one-eighth inch below the parallel to the bottom edge of the coating remaining on the panel. The panel thus prepared shall be placed in a vertical position in the oven and maintained at a temperature of  $160^{\circ}$  F. At the end of 4 hours, the panels shall be removed and examined for any evidence of flow of the compound.

4.6.7 Insolubility. An accurately weighed portion of approximately 3.0 grams of the compound shall be smeared around the inside of a 250-ml weighed glass beaker. Approximately 100 ml of distilled water, or enough to completely immerse the compound, shall be poured into the beaker. The beaker shall be tightly capped with metal foil and left to stand for a period of 7 days at a temperature of  $77^{\circ} \pm 5^{\circ}$  F. At intervals of approximately 24 hours, the water shall be stirred by moderate manual rotation of the beaker. At the end of 7 days, the water shall be poured off. The beaker and compound shall be dried for 20 hours in an oven at  $160^{\circ}$  F followed by desiccation for approximately 4 hours over calcium chloride. A blank shall be run to determine the loss due to evaporation which occurs during the drying treatment. A final weight less than the original weight of beaker and compound will indicate removal of soluble constituents.

4.6.8 Abrasive. Approximately 75 ml of compound shall be mixed with 200 ml of benzene and stirred until all soluble matter is in solution. The solution shall be allowed to stand for 1 hour at room temperature to permit any insoluble matter to settle. The solution shall then be carefully decanted and the residue washed with 100 ml of benzene and again carefully decanted. This procedure shall be repeated with successively smaller portions of benzene until the solution is practically colorless. The residue after the last decantation shall be rubbed between two pieces of flat, clean glass plate. The appearance of scratches on the glass plate shall be considered evidence of the presence of abrasive material.

4.6.9 Waterproof seal. Five 7/8-inch disks of filter paper shall be dipped in a 25-percent solution of cobaltous chloride, blotted off to remove excess solution; and then dried at  $212^{\circ}$  F until completely blue. The test paper disks shall then be placed in five Norma-Hoffman oxidation dishes and filled with the compound to be tested, avoiding incorporation of air bubbles. After leveling off the compound to the height of each dish, the latter shall be immersed in water at  $77^{\circ} \pm 5^{\circ}$  F for 24 hours. At the end of this period, the test paper disks shall be examined for development of a pink color.

4.6.10 Workmanship and texture. A steel test panel, 1 by 3 by 1/8 inches, prepared in accordance with 4.6.5 shall be dipped in the vertical position into a beaker filled with the compound from a well stirred original container. The panel shall be removed with a smooth vertical motion and examined for lumps, nonhomogeneities, and foreign matter.

4.6.11 Vacuum compatibility reactivity. The reactivity with explosives shall be determined for the silicone compound in accordance with vacuum compatibility test procedures below.

4.6.11.1 Vacuum compatibility test. The vacuum compatibility test is carried out in a glass unit, figure 1. The vacuum compatibility test chamber may consist of an aluminum block or oil bath with thermo-regulator capable of maintaining a test temperature of  $100^{\circ} \pm 0.5^{\circ}$  C.

4.6.11.1.1 Calibration of glass tube. Determine the volume in milliliters of the 15.5-centimeter (cm) heating tube (Scientific Glass Apparatus, Cat. No. JV-6850 or equivalent) by running in mercury from a burette until the tube is filled to the level at which the ground glass joint of the capillary tube will make contact with the mercury. Subtract from the indicated burette readings the volume of explosive used in the test. The difference shall be represented by the symbol A. Transfer 7.0 ml of mercury to the cup at the lower end of the capillary tube. Clamp the tube in an upright vertical position and measure the height in millimeters (mm) of the mercury column in the capillary tube (approximately 25 mm). Measure the length in millimeters of each of the three parts of the capillary tube and add these values to obtain total length. From the total length subtract the height of the mercury column in the cup as previously obtained. Represent this difference by the symbol  $B_1$ . From the total length subtract the height of the column of mercury in the cup measured at the end of the test described in 4.6.11.1.2. Represent this difference by the symbol B. Determine the capacity of the capillary tube per unit of length as follows: Transfer an accurately weighed sample of approximately 10 grams of mercury to the cup at the lower end of the capillary tube. Manipulate the tube so that when it is horizontal, mercury is contained in a continuous section of the longest part of the tube and measure the length of the mercury column. Repeat this twice with the mercury in two other parts of the long section of the tube. Calculate the average of the three measured lengths of the mercury column. Represent the unit capacity in ml/mm of the capillary tubing by the symbol C. This can be obtained from the formula:

$$C = \frac{W}{DL}$$

where

- C = unit capacity of capillary tubing, ml/mm
- W = weight of mercury, grams.
- D = density of mercury at temperature of determination, grams/ml
- L = average measured lengths of mercury column, mm.

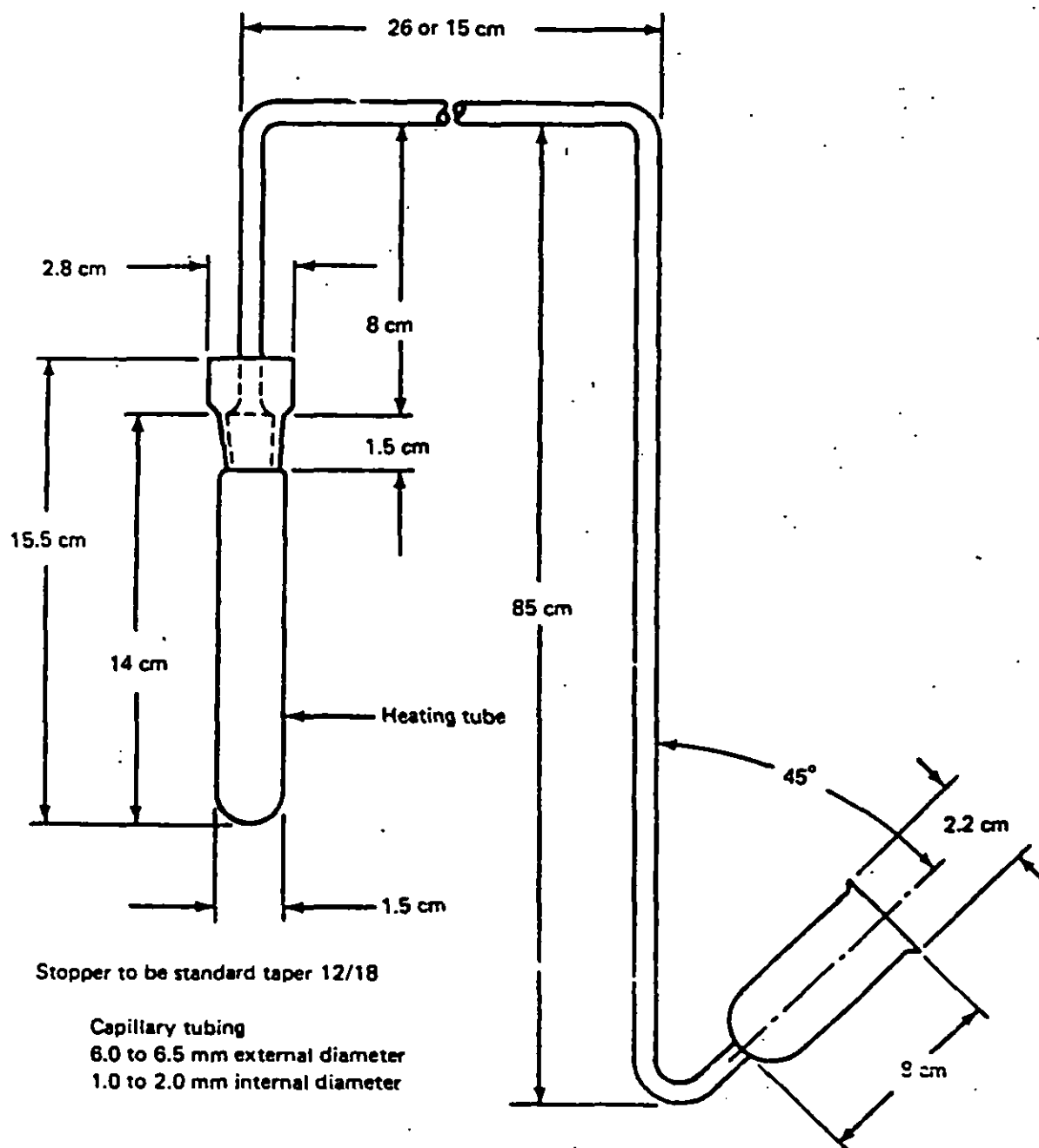


FIGURE 1. APPARATUS FOR VACUUM COMPATIBILITY TEST

4.6.11.1.2 Test procedure. Use  $2N + 1$  (where  $N$  equals the number of explosives used) tubes similar to the heating tube portion of the apparatus shown in the vacuum compatibility test method. For controls, add 0.2 gram of the inert compound to one tube and 0.2 gram of each explosive to additional individual tubes. Place uniform mixtures of 0.2/0.2 gram of the inert compound and each of the explosives specified in the test in single separate tubes. Clamp the apparatus so that the long section of the capillary tube is in a nearly vertical position. Transfer 7.0 ml of mercury to the cup at the lower end of the capillary tube. Connect a vacuum pump to the lower end of the capillary tube and evacuate the system until the pressure is reduced to approximately 5 mm of mercury. (Evacuation of the capillary tube is facilitated by placing the cup of the tube in a horizontal position so that mercury does not block the capillary opening.) After evacuation, disconnect the pump. Seal the connection between the capillary tube and the heating tube with 1 ml of mercury. Measure the total vertical height of the column of mercury in the capillary tube. Measure and subtract the vertical height of the mercury in the cup. The difference shall be represented by the symbol  $H_1$ . Note the room temperature ( $t_1$ ) and the barometric pressure. Subtract the value  $H_1$  from the barometric pressure in mm. Represent this difference by the symbol  $P_1$ . Insert the heating tube in the vacuum stability test chamber. Maintain at the proper test temperature for 48 hours. Remove the heating tube and capillary tube assembly from the bath and allow to cool to room temperature. Measure the total vertical height of the column of mercury in the capillary tube and subtract the vertical height of the mercury in the cup. This difference shall be represented by the symbol  $H$ . Note the room temperature ( $t$ ) and the barometric pressure in mm. Subtract the value  $H$  from the final barometric pressure in mm; represent this difference by the symbol  $P$ .

4.6.11.1.3 Calculation of liberated gas volume. Calculate the volume of gas in ml liberated in the test, at standard conditions, using the following formula:

$$V = \frac{[A + C(B - H)]273P}{760(273 + t)} - \frac{[A + C(B_1 - H_1)]273P_1}{760(273 + t_1)}$$

where

- A = volume of heating tube minus volume of explosive in test, ml
- B = total length of capillary tube minus height of mercury column in the cup measured at end of test, mm
- $B_1$  = total length of capillary tube minus height of mercury column in the cup measured before the test, mm

- C = unit capacity of capillary tubing, ml/mm
- H = total vertical height of column of mercury in capillary tube minus the vertical height of the mercury in the cup after test, mm
- H<sub>1</sub> = total vertical height of column of mercury in capillary tube minus the vertical height of the mercury in the cup before test, mm
- P = the value H subtracted from the final barometric pressure, mm
- P<sub>1</sub> = the value H<sub>1</sub> subtracted from the initial barometric pressure, mm
- t = temperature of the room after test, °C
- t<sub>1</sub> = temperature of the room before test, °C.

4.6.11.1.4 Calculation of reactivity. Calculate the reactivity gas of each of the explosive materials with each inert compound as follows; convert all individual volumes (x, y, and z) to a 1-gram basis:

$$\text{Reactivity gas, ml} = X - \frac{(Y + Z)}{2}$$

where

- X = gas produced by the mixture of explosive material and inert compound, ml
- Y = gas produced by the explosive material alone, ml
- Z = gas produced by the inert compound alone, ml.

4.6.12 Examination of filled containers. Each sample filled container as specified in 4.5.2.3 shall be examined for defects of construction of the container and the closure, for evidence of leakage, and for unsatisfactory markings; each filled container shall also be weighed to determine the amount of contents. Any container in the sample having one or more defects, or under required fill, shall be rejected, and if the number of defective containers in any sample exceeds the acceptance number for the appropriate sampling plan of MIL-STD-105, the lot represented by the sample shall be rejected. Rejected lots may be resubmitted for acceptance tests, provided the contractor has removed (or reworked) all nonconforming products.

## 5. PREPARATION FOR DELIVERY

5.1 Packaging, packing, and marking. The silicone compound (only when Government procurement is involved) shall be packaged, packed, and marked in accordance with the provisions of MIL-STD-290 and in accordance with the details specified by the procuring activity with respect to the various options, choices, and alternatives indicated in MIL-STD-290 (see 6.2).

## 6. NOTES

6.1 Intended use. The compound covered by this specification is intended for use as an inhibitor and lubricant for mating threaded or nonthreaded surfaces of ferrous components. It is also intended for use as a lubricant for rubber components such as O-rings and gaskets associated with ammunition or other ordnance equipment. It can be used under extreme conditions of service and storage, wherein freezing at  $-65^{\circ}$  F or exudation and deterioration at  $160^{\circ}$  F is not permissible, and wherein water insolubility and sealing properties are essential.

6.2 Ordering data. Procurement documents should specify the following:

- (a) Title, number, and date of this specification
- (b) Quantity required
- (c) Size and type of container in which silicone compound is to be furnished
- (d) Levels of packaging and packing
- (e) Other options, choices, and alternatives of MIL-STD-290.

6.3 Compatibility with explosives. Suitability of the silicone compound for use with a particular explosive or propellant shall be determined by application to the Naval Ordnance Systems Command, Department of the Navy, Washington, D. C. 20360. When authorized by the Naval Ordnance Systems Command, samples for compatibility tests shall be forwarded to the Commanding Officer, Naval Ordnance Station, Indian Head, Md. 20640, Attention: Chemical Analysis Branch. The samples shall consist of 10 pounds of the material, and the containers shall be labeled with the following information:

MIL-C-21567A (OS)

- (a) Type of material
- (b) Name and address of manufacturer
- (c) Manufacturer's material designation
- (d) Date
- (e) Naval Ordnance Systems Command's test authorization letter file number and date.

6.3.1 The silicone materials listed on the Qualified Products List have been tested with the following explosives and have shown no evidence of incompatibility:

Dow Corning Compound -

- DC-6 plus PBXN-101 (Cured)
- DC-6 plus PBXN-101 (Uncured)
- DC-6 plus Cyclotol 29/71<sup>1</sup> stabilized
- DC-6 plus Explosive D
- DC-6 plus Composition A-3<sup>1</sup>

General Electric Compound -

- G-69<sup>7</sup> Silicone grease plus H-6.

6.4 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 the applicable qualified products list whether or not such products have actually been so listed by that date. The attention of the suppliers is called to this requirement, 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 orders for the products covered by this specification. The activity responsible for the qualified products list is the Naval Ordnance Systems Command and information pertaining to qualification of products may be obtained from that activity.

Custodian:  
Navy - OS

Preparing activity:  
Navy - OS  
(Project No. 6850-N517)

<sup>1</sup>A compound that is compatible with these explosives would be judged satisfactory for use with H-6.



**INSTRUCTIONS:** In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (*DO NOT STAPLE*), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

**NOTE:** This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification 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.

(Fold along this line)

(Fold along this line)

DEPARTMENT OF THE NAVY

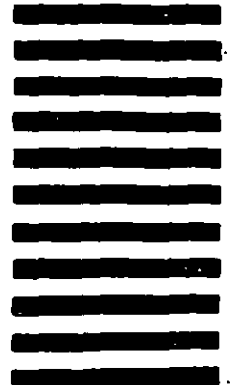


NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300

**BUSINESS REPLY MAIL**  
FIRST CLASS PERMIT NO. 12503 WASHINGTON D. C.  
POSTAGE WILL BE PAID BY THE DEPARTMENT OF THE NAVY

Chief of Naval Material  
ATTN: MAT 0434  
Washington, DC 20360



# STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER

2. DOCUMENT TITLE

3a. NAME OF SUBMITTING ORGANIZATION

4. TYPE OF ORGANIZATION (Mark one)

VENDOR

USER

MANUFACTURER

OTHER (Specify): \_\_\_\_\_

b. ADDRESS (Street, City, State, ZIP Code)

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER (Last, First, MI) - Optional

b. WORK TELEPHONE NUMBER (Include Area Code) - Optional

c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional

8. DATE OF SUBMISSION (YYMMDD)