

MIL-C-18255D(SHIPS)

28 February 1966

SUPERSEDING

MIL-C-18255C(SHIPS)

20 December 1961

(See 6.4)

## MILITARY SPECIFICATION

CALKING COMPOUND, SYNTHETIC RUBBER BASE, WOODEN

### DECK SEAM APPLICATION

#### 1. SCOPE

1.1 This specification covers calking compound complete with such primers as may be necessary for use on new wood decking or in regrooved seams of wood decking from which oil, sawdust, oakum, marine glue, or other foreign substances have been removed. The calking materials shall be suitable for sealing teak or fir decking.

#### 2. APPLICABLE DOCUMENTS

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

#### SPECIFICATION

##### MILITARY

MIL-P-116 - Preservation, Methods of.

#### STANDARDS

##### FEDERAL

FED-STD-601 - Rubber: Sampling and Testing.

##### MILITARY

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

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

2.2 Other publications. - The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

#### OFFICIAL CLASSIFICATION COMMITTEE

Uniform Freight Classification Rules.

(Application for copies should be addressed to the Official Classification Committee, 1 Park Avenue at 33rd Street, New York, N.Y. 10016)

**FSC 8030**

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## 3. REQUIREMENTS

3.1 Qualification - Calking compound furnished under this specification shall be products which are qualified for listing on the applicable qualified products list at the time set for opening of bids (see 4.2 and 6.2.).

3.2 Material.3.2.1 Composition

- a. Calking material which shall utilize a liquid polymer of the polysulfide type and a liquid curing agent which, when thoroughly mixed with the former will result in a solid elastometric compound without addition of heat or pressure.
- b. Priming materials shall be liquid and capable of being applied to the deck seams by brush or swab. This may involve the use of more than one material or more than a one part material. The use of a primer, however, is optional with the manufacturer.

3.2.2 Type I - Compound having a fluid consistency when first applied.

3.2.3 Type II - Compound having a relatively viscous fluid consistency and shall be thixotropic in character.

3.3 Hardness. - When tested as specified in 4.5.1 the material shall meet the following requirement:

	<u>Type I</u>	<u>Type II</u>
Hardness (durometer points), Minimum (min.)	45	30

3.4 Shrinkage. - The calking compound shall not shrink more than 3 percent when tested as specified in 4.5.2.

3.5 Adhesive strength in tension.

3.5.1 Initial and aged. - When tested as specified in 4.5.3.2 and 4.5.3.3 the average results for 5 of both fir and teak samples shall meet the following requirements:

	<u>Type I</u>	<u>Type II</u>
Breaking load, p.s.i., min.	100	40
Ultimate elongation, percent, min.	150	150
Type break, percent cohesion	100	100

3.5.2 Immersed - When tested as specified in 4.5.3.4 the average results for 5 of both fir and teak samples shall meet the following requirements:

	<u>Type I</u>	<u>Type II</u>
Breaking load p.s.i., min	100	40
Ultimate elongation, percent, min.	80	80

3.6 Swell - The cured compound shall swell not more than 30 percent when tested as specified in 4.5.4.

3.7 Viscosity. - The viscosity of the accelerated compound prepared as specified in 4.5.5.3 shall be not less than 10 nor more than 35 degrees angular deflection when run as specified in 4.5.5.1 and 4.5.5.2.

### 3.8 Application life.

3.8.1 Type I. - When tested as specified in 4.5.6.1 the viscosity after 2 hours shall not exceed 35 degrees angular deflection.

3.8.2 Type II - When tested as specified in 4.5.6.2 the rate of material extrusion after 2 hours shall be not less than 15 grams per minute.

3.9 Bulbing resistance. - When tested as specified in 4.5.7 the calking compound shall not exude out of the specimen holder more than 10 percent.

3.10 Serviceability. - The calking material shall perform satisfactorily for a minimum of six months when applied in wood deck seams aboard ship. The calking shall not blister, separate from the wood or show any other signs of failure during the shipboard service test.

## 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, the supplier may utilize his own facilities or any commercial laboratory acceptable to 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 services conform to prescribed requirements.

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4.1.1 Test data. - Copies of inspection records of all the examinations and tests under the contract or order shall be forwarded to the procuring activity.

4.2 Qualification tests. - 1/ Qualification tests shall be conducted at a laboratory satisfactory to the Bureau of Ships. Qualification tests shall consist of all the tests specified in 4.5.

4.3 Sampling. -

4.3.1 Lot. -

4.3.1.1 Base material. - For purposes of sampling, a lot shall consist of a batch, but shall not exceed 500 gallons.

4.3.1.2 Curing agent. - For purposes of sampling, a lot shall consist of all curing agents furnished for mixing with a lot of base material.

4.3.1.3 Primer. - If a primer or primer system is furnished, a lot shall consist of a batch, but shall not exceed 500 gallons.

4.3.2 Sampling procedure for quality conformance inspection and tests. -

4.3.2.1 Base material. - From each lot, a representative sample of not less than 1-quart of base material shall be taken.

4.3.2.2 Curing agent. - From each lot a representative sample of curing agent shall be taken sufficient to cure the sample of base material selected in accordance with 4.3.2.1.

4.3.2.3 Primer. - If a primer is furnished, a representative 1-pint sample shall be taken of each lot of primer or 1-pint of each primer if more than one primer is required.

4.3.3 Sampling for inspection of filled containers of base material, curing agent or primer. - A random sample of filled containers shall be selected in accordance with MIL-STD-105 at inspection level S-1, and acceptable quality level = 2.5 percent defective to verify compliance with all requirements regarding fill, closure, marking and other requirements not requiring tests.

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1/ Application for Qualification tests shall be made in accordance with "Provisions Governing Qualification" (see 6.2 and 6.3).

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4.3.4 Sampling for production check tests. - From the first lot of material offered for delivery under a contract or order and thereafter from one lot out of each 10 lots the following samples shall be taken for the production check tests specified in 4.4.3:

4.3.4.1 Base material. - Two 1-quart samples.

4.3.4.2 Curing agent. - Sufficient material to cure the samples taken in 4.3.4.1.

4.4 Inspection and tests. -

4.4.1 Quality conformance inspection of containers. - Each sample filled container selected in accordance with 4.3.3 shall be examined for defects of construction of the container and the closure, for evidence of leakage, and for unsatisfactory markings (see 5.1.1.3 and 5.2.1.3); 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.

4.4.2 Quality conformance tests. - The following tests shall be conducted on each sample selected in accordance with 4.3.2, as applicable:

<u>Tests</u>	<u>Paragraph</u>
Hardness	4.5.1
Adhesion in tension (initial only)	4.5.3.2
Viscosity	4.5.5.1, 4.5.5.2, 4.5.5.3
Bulbing resistance	4.5.7

4.4.2.1 Rejection. - If a sample representing a lot is found not to be in conformance with this specification the entire lot shall be rejected.

4.4.3 Production check tests. -

4.4.3.1 Test procedures. - The samples selected in accordance with 4.3.4 shall be subjected individually to the tests specified in 4.5.2, 4.5.3.3, 4.5.3.4, 4.5.4, and 4.5.6.

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4.4.3.2 Action in case of failure. - If any one of the samples is found not to be in conformance with the requirements of this specification, the lot which it represents shall be rejected. Furthermore, additional samples shall be selected from each subsequent lot and shall be subjected to the tests wherein the failure occurred. A lot shall then be accepted only upon satisfactory completion of the tests by the samples selected to represent the lot. This additional testing shall be discontinued when four successive lots have passed the tests.

4.5 Test procedures. -

4.5.1 Hardness. - The hardness shall be determined by the Rex hardness gage in accordance with method 3021 of FED-STD-601. Tests shall be run on specimens similar to compression set discs one-half inch thick by one inch in diameter. These discs shall have been prepared from freshly mixed compound and allowed to set for 96 hours in air at room temperature (70 - 75°F.) immediately prior to testing.

4.5.2 Shrinkage. - The freshly mixed compound shall be poured into three brass open-end cylindrical tubes, 1-3/8 inches inside diameter by 1 inch long, the tubes shall be filled level with the brim to obtain a definite volume of compound. After the compound has set for 96 hours the volume shall be determined by immersion of the filled tubes in water. Shrinkage shall be expressed as the percentage of loss in volume with respect to the original volume of the compound. The original volume shall be taken as the internal volume of the brass tube.

4.5.3 Adhesion in tension. -

4.5.3.1 Test procedure. - Douglas fir and teak test blocks of not more than 20 percent moisture content and as shown in figure 1 shall be halved and primed with the primer. A 1/4 inch layer of freshly mixed compound shall then be introduced between the halves. The compound in the prepared specimen shall set for 96 hours in air at room temperature (70 - 75°F.). After the 96-hour set period, specimens shall be further conditioned as specified in 4.5.3.2, 4.5.3.3, and 4.5.3.4, inclusive, and then subjected to tensile load at a rate of 0.25 inch per minute.

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4.5.3.2 Initial. - One set of specimens prepared as specified in 4.5.3.1 shall be subjected to strain immediately after the 96-hour set period.

4.5.3.3 Aged. - One set of specimens prepared as specified in 4.5.3.1 shall be placed in a hot air circulating oven at  $158^{\circ} \pm 2^{\circ}\text{F}$ . immediately after the 96 hour set period. It shall be kept in the oven for  $166 \pm 1$  hours and removed and subjected to strain within 3 minutes after removal from the oven.

4.5.3.4 Immersed. - One set of specimens prepared as specified in 4.5.3.1 shall be immersed for  $96 \pm 1/2$  hours at room temperature ( $70 - 75^{\circ}\text{F}$ .) in a 10 percent solution of NaCl agitated with a continuous stream of air. The specimens shall then be removed from the solution, rinsed with fresh water, wiped dry, and subjected to strain within 5 minutes after removal from the salt solution.

4.5.4 Swelling test. - The immersion test shall be in accordance with method 6211 of FED-STD-601. Medium No. 4 fuel as referred to in method 6001 of FED-STD-601 shall be the immersion medium.

4.5.5 Viscosity. -

4.5.5.1 Type I. - The test apparatus for viscosity measurements shall be a standard Mac Michael viscosimeter which has a plunger 1 centimeter in diameter attached to a certified number 20 wire. Rotation at constant speed shall be 20 r.p.m. The plunger shall be immersed to a depth of 4 centimeters in 280 grams of the compound which is contained in a  $1/2$  pint can  $2-3/4$  inches in diameter by 3 inches in height.

4.5.5.2 Type II. - The test apparatus for viscosity measurements shall be a standard Mac Michael viscosimeter which has a plunger 1 centimeter in diameter attached to a certified number 18 wire. Rotation at constant speed shall be 20 r.p.m. The plunger shall be immersed to a depth of 4 centimeters in 280 grams of the compound which is contained in a  $1/2$  pint can  $2-3/4$  inches in diameter by 3 inches in height.

4.5.5.3 Initial viscosity of accelerated mixture. - The sample of base material and curing agent shall be preconditioned for 3 hours at  $80^{\circ} \pm 2^{\circ}\text{F}$ . ( $27 \pm 1.1^{\circ}\text{C}$ .). Specified proportions of base material and curing agent to yield approximately 280 grams of finished compound shall be weighed into a  $1/2$  pint can. The two components shall be mixed thoroughly with a spatula for 5 minutes to completely disperse the curing agent in the base material. At the completion of the mixing period the sample shall be allowed to stand for 10 minutes at  $80^{\circ} \pm 2^{\circ}\text{F}$ . before determining initial viscosity.



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4.5.6 Application life. -

4.5.6.1 Type I. - The sample prepared as specified in 4.5.5.3 shall be used. A temperature of  $80^{\circ} \pm 2^{\circ}\text{F.}$  ( $27 \pm 1.1^{\circ}\text{C.}$ ) shall be maintained during the period of this test. The time measurement shall commence at the end of the 5 minute mixing period. Viscosity shall be measured at the end of a one hour period and at 1/2 hour intervals after this measurement until the viscosity reading exceeds 35 degrees Mc Michael; prior to making each viscosity determination the compound shall be stirred slowly for 1 minute using a narrow blade spatula.

4.5.6.2 Type II. -

4.5.6.2.1 Conditioning and mixing. - The base compound, accelerator and calking compound application gun shall be stabilized at  $73.5^{\circ} \pm 3.6^{\circ}\text{F.}$  ( $23 \pm 1.1^{\circ}\text{C.}$ ) and a relative humidity of  $50 \pm 5$  percent for at least 8 hours before a 350-gram lot of base compound is mixed with a proper amount of accelerator. The mixed calking compound shall be promptly used to fill a standard Semco calking compound gun cartridge having a Semco No. 250 N-4-4 nozzle. The gun and calking compound shall be maintained at the above temperature and relative humidity throughout the test.

4.5.6.2.2 Test procedure. - The gun shall be attached to a constant air supply of  $90 \pm 5$  p.s.i. From 2 to 3 inches of calking compound shall be extruded initially to clear trapped air, and at least 1 inch of calking compound must be extruded prior to each observation.

4.5.6.2.2.1 Flow rate observation - Flow rate observations shall be conducted as follows: Within 15 minutes after the start of mixing, the calking compound shall be extruded into a tared sheet of cellophane, using the specified gun pressure, for an exactly measured time interval which may vary from 10 to 60 seconds, in order that approximately 10 grams of calking compound are extruded. The extruded calking compound shall be weighed, and the grams flow per minute calculated. This observation shall be repeated at the end of time intervals equivalent to one-third and two-thirds of the minimum specified application time of the calking compound, and continued until 15 grams per minute or less are extruded. A graph of extrusion rate versus time shall be prepared, and the time at which the resultant curve crosses the 15-gram-per-minute line shall be taken as the application time. Results shall be expressed in grams per minute.



#### 4.5.7 Bubble test. -

4.5.7.1 Apparatus. - The apparatus shall consist of 1/2 inch inside diameter copper tubing, 3/8 inch in length, a rubber stopper (size No. 9) with a smooth 1/2 inch inside diameter hole; an 8 ounce capacity jar with 1-9/16 inch diameter open top, a dial thickness gage, which shall be accurate to 0.001 inch, and an oven capable of maintaining a uniform temperature of  $130^{\circ} \pm 2.5^{\circ}\text{F}$ .

4.5.7.2 Test specimens. - Test specimens shall be prepared in the form of a disc, 1/2 inch diameter and 3/8 inch in height, cast inside the 1/2 inch inside diameter copper tubing, as shown on piece No. 1 of figure 2. The calking compound shall be catalyzed and poured into the copper tubing (closed at one end with cellophane and laid on a flat surface), (see piece No. 2 of figure 2), and cured for 4 days at  $75^{\circ}$  to  $80^{\circ}\text{F}$ . in a glass desiccator maintained at 44 percent relative humidity with potassium carbonate. The cellophane shall be removed from the bottom of the specimen, and the top face of the specimen shall be buffed on a belt sander to remove the excess material overflowing the copper tubing to produce a flat parallel specimen as shown on piece No. 3 of figure 2. The thickness of the specimen in the copper tubing shall then be measured to the nearest 0.001 inch. The specimens shall be inserted into the hole in the rubber stopper (see piece No. 4 of figure 2), and the assembly shall then be placed in a dry glass jar as shown on piece No. 5 of figure 2. The specimens shall fit into the stopper snugly so that no air leakage will occur past the outside of the tubing.

#### 4.5.7.3 Test. -

4.5.7.3.1 Type I. - Three specimens shall be conditioned in an oven for 24 hours at  $130^{\circ} \pm 2.5^{\circ}\text{F}$ . At the end of the 24-hour conditioning period, the specimens shall be removed from the oven and cooled for 30 minutes at room temperature, and the height of the rubber shall then be measured from the bottom side of the tubing to the top of the material. From the heights of the cured calking compound inside the copper tubing before, nominally 3/8 inch, and after conditioning for 24 hours at  $130^{\circ}\text{F}$ ., the increase in height of the calking compound shall be computed. Figure 3 is an example of unsatisfactory material.

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4.5.7.3.2 Type II. - Three specimens shall be conditioned in an oven for 24 hours at  $100^{\circ} \pm 2.5^{\circ}\text{F}$ . At the end of the 24-hour conditioning period, the specimens shall be removed from the oven and cooled for 30 minutes at room temperature, and the height of the rubber shall then be measured from the bottom side of the tubing to the top of the material. From the heights of the cured calking compound inside the copper tubing before, nominally  $3/8$  inch, and after conditioning for 24 hours at  $100^{\circ}\text{F}$ ., the increase in height of the calking compound shall be computed. Figure 3 is an example of unsatisfactory material.

4.5.8 Serviceability. - The calking material shall be used aboard ship to calk wood deck seams for a minimum period of six months. During and immediately after this service period the calking shall be examined for blisters, separation from the wood, or any other signs of failure.

4.6 Inspection of preparation for delivery. - Sample packages and packs shall be selected and inspected in accordance with MIL-P-116 to verify conformance to the requirements of Section 5 herein.

## 5. PREPARATION FOR DELIVERY

### 5.1 Domestic shipment and early material use. -

#### 5.1.1 Compound. -

5.1.1.1 Packaging. - Packaging shall be sufficient to afford adequate protection against corrosion, deterioration and physical damage during shipment from the supply source to the using activity and until early material use.

5.1.1.2 Packing. - Packing shall be accomplished in a manner which will insure acceptance by common carrier and will afford protection against physical or mechanical damage during direct shipment from the supply source to the using activity for early installation. The shipping containers or method of packing shall conform to the Uniform Freight Classification Rules and Regulations or other carrier regulations as applicable to the mode of transportation.

5.1.1.3 Marking. - Shipment marking information shall be provided on interior packages and exterior shipping containers in accordance with the contractor's commercial practice. The information shall include nomenclature, Federal stock number, manufacturer's product number and batch number, contract or order number, date of manufacture, contractor's name and destination.

#### 5.1.1.3.1 Unit containers. -

5.1.1.3.1.1 Unit packages of liquid polymer and curing agent shall have a label or tag attached with the following instructions:

- a. Instructions for preparation of the compound including the proportioning of the curing agent.
- b. Instructions for working procedure and proper use of the compound together with any limitations on the working life.
- c. Instructions for cleaning of equipment used for installation of the compound.

5.1.1.3.1.2 Unit packages of primer (when furnished) shall have the following information complete:

Directions for use \_\_\_\_\_.

5.2 Domestic shipment and storage or overseas shipment. - The requirements and levels of packaging, packing and marking for shipment shall be specified by the procuring activity (see 6.1).

(5.2.1 The following provides various levels of protection during domestic shipment and storage or overseas shipment, which may be required when procurement is made by a Government activity (see 6.1).

#### 5.2.1.1 Packaging. -

5.2.1.1.1 Level A. - The calking compound shall be furnished in 1-gallon cans or 5-gallon pails as specified (see 6.1). The liquid curing agent shall be packaged in cans or glass containers in the quantity required for mixing with the compound. The primer, when furnished, shall be packaged in cans or glass containers specified for curing agents.

5.2.1.1.1.1 Cans. - Cans of 1-gallon capacity or less shall conform to type V, class 2 of PPP-C-96. Exterior plan B coating and side seam striping shall be required. Cans of 1-gallon capacity shall be provided with wire handles which shall be galvanized or protectively coated to resist corrosion.

5.2.1.1.1.2 Pails - The 5-gallon pails shall conform to type II of PPP-P-704. Wire handles or pails shall be galvanized or protectively coated to resist corrosion.

5.2.1.1.1.3 Glass containers. - A commercial wide-mouth glass container shall be used. The container shall be provided with a screw cap closure fitted with a non-absorbent liner. A gasket which does not affect and is not affected by the packaged contents shall be provided to assure an airtight seal between the screw cap and the glass container.

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5.2.1.1.1.3.1 Intermediate packaging - Glass containers shall be intermediate packaged in fiberboard boxes conforming to PPP-B-636. Boxes shall have partitions, liners, full size top and bottom pads and separators constructed of the same material as used in the box. Separators shall be placed between all layers of unit packages. The cells formed by the partitions shall be snug fitting and shall prevent movement of the glass container. If necessary, additional cushioning shall be used to prevent movement within the boxes. One gallon containers shall be individually intermediate packaged. Closures of the boxes shall be in accordance with the appendix of the box specification. Gross weight shall not exceed 20 pounds.

5.2.1.1.2 Level C. - Packaging shall be sufficient to afford adequate protection against corrosion, deterioration and physical damage during shipment from the supply source to the using activity and until early material use.

5.2.1.2 Packing -

5.2.1.2.1 Level A. -

5.2.1.2.1.1 Cans. - Cans of 1-gallon capacity or less shall be arranged and packed for overseas shipment in accordance with appendix to PPP-C-96. Cans when packed in tiers shall have a fiberboard pad placed between the tiers. Fiberboard pads shall conform to PPP-B-636, compliance symbol W6.

5.2.1.2.1.2 Pails. - Five-gallon pails need not be further packed. When specified (see 6.1) pails shall be palletized in accordance with MIL-STD-147.

5.2.1.2.1.3 Glass containers. - Glass containers shall be packed in containers conforming to any one of the following specifications at the option of the contractor:

<u>Specification</u>	<u>Type or Class</u>
PPP-B-576	Class 2
PPP-B-585	Class 3 use
PPP-B-591	Overseas type
PPP-B-601	Overseas type
PPP-B-621	Class 2
PPP-B-636	Class 2
PPP-B-640	Class 2

Box closure, strapping or banding shall be in accordance with the applicable box specification or appendix thereto. The gross weight of wood or wood-cleated boxes shall not exceed 200-pounds; fiberboard boxes shall not exceed the weight limitations of the applicable fiberboard box specification.

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5.2.1.2.2 Level B. -

5.2.1.2.2.1 Cans. - Cans of 1-gallon capacity or less shall be arranged and packed for domestic shipment in accordance with the appendix to PPP-C-96. Cans packed in tiers shall have a 200 pound minimum bursting strength fiberboard pads placed between tiers. Fiberboard pads shall conform to PPP-B-636, class 1.

5.2.1.2.2.2 Pails. - Five-gallon pails need not be further packed. When specified (see 6.1) pails shall be palletized in accordance with MIL-STD-147.

5.2.1.2.2.3 Glass containers. - Class containers shall be packed in containers conforming to any one of the following specifications at the option of the contractor:

<u>Specification</u>	<u>Type of class</u>
PPP-B-576	Class 1
PPP-B-585	Class 1 or 2 use
PPP-B-591	Domestic type
PPP-B-601	Domestic type
PPP-B-621	Class 1
PPP-B-636	Class 1
PPP-B-640	Class 1

Box closure shall be as specified in the applicable box specification or appendix thereto.

5.2.1.3 Marking. - In addition to any special marking required by the contract or order or herein, interior packages, shipping containers and palletized loads shall be marked in accordance with MIL-STD-129. The date of manufacture and both the manufacturer's product number and batch number shall be included in the marking information.

5.2.1.3.1 Unit containers. -

5.2.1.3.1.1 Unit packages of liquid polymer and curing agent shall have a label or tag attached with the following instructions:

- a. Instructions for preparation of the compound including the proportioning of the curing agent.
- b. Instructions for working procedure and proper use of the compound together with any limitations on the working life.
- c. Instructions for cleaning of equipment used for installation of the compound.

5.2.1.3.1.2 Unit packages of primer (when furnished) shall have the following information completed:

Directions for use\_\_\_\_\_.

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## 6. NOTES

6.1 Ordering data. - Procurement documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Quantity of base material, curing agent, and primer (if furnished) required.
- (c) Size and type container required (see 5.2.1.1.1).
- (d) Packaging, packing and marking requirement, if other than required by 5.1 (see 5.2).
- (e) Palletization if required (see 5.2.1.2.1.2 and 5.2.1.2.2.2).
- (f) Special marking required (see 5.2.1.3).

6.2 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 Qualified Products List QPL-18255. The attention of suppliers is called to this 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 orders for the products covered by this specification. The activity responsible for the qualified products list is the Bureau of Ships, Department of the Navy, Washington, D.C. 20360, and information pertaining to qualification of products may be obtained from that activity. Application for Qualification tests shall be made in accordance with "Provisions Governing Qualification" (see 6.3).

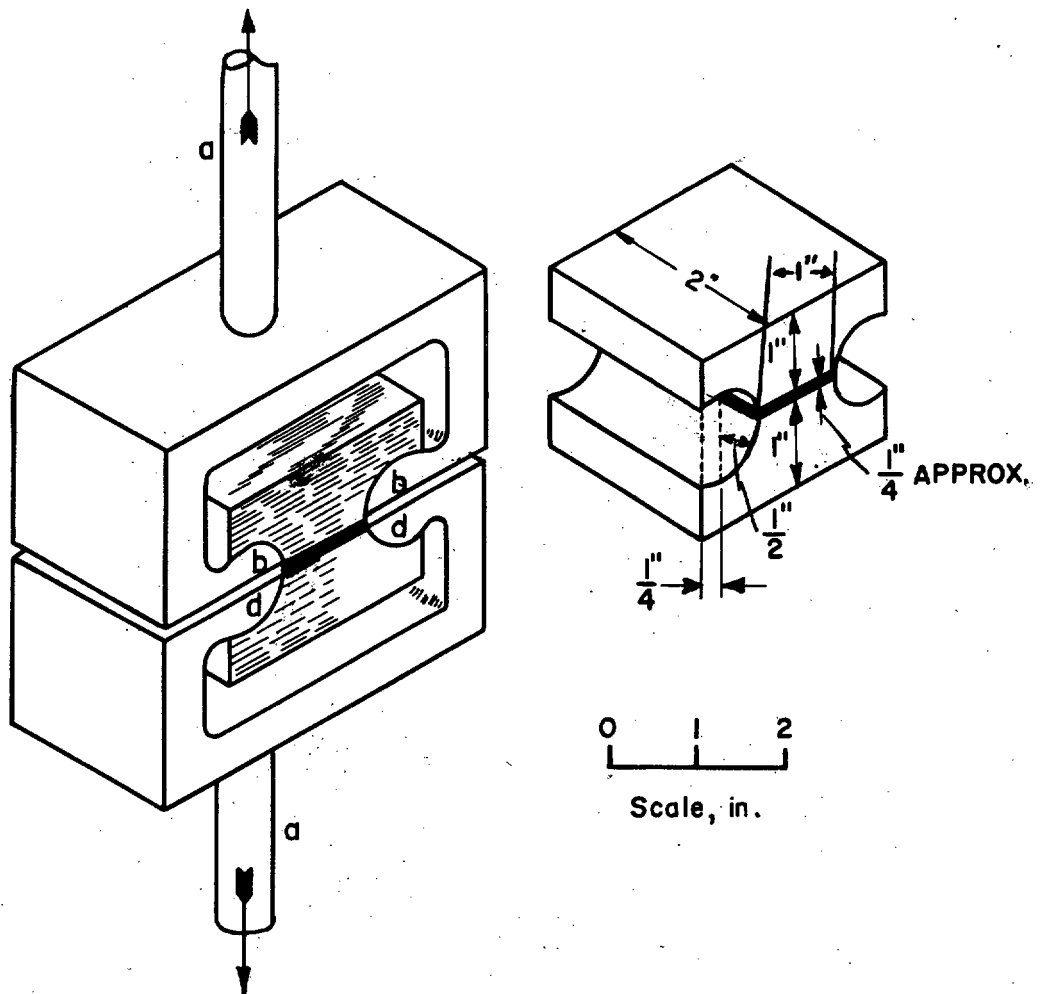
6.3 Copies of "Provisions Governing Qualification" may be obtained upon application to Commanding Officer, Naval Supply Depot, 5801 Tabor Avenue, Philadelphia, Pennsylvania 19120.

6.4 Changes from previous issue. - The extent of changes (deletions, additions, etc.) preclude the annotation of the individual changes from the previous issue of this document.

Preparing activity:

Navy - SH

(Project 8030-NO53Sh)

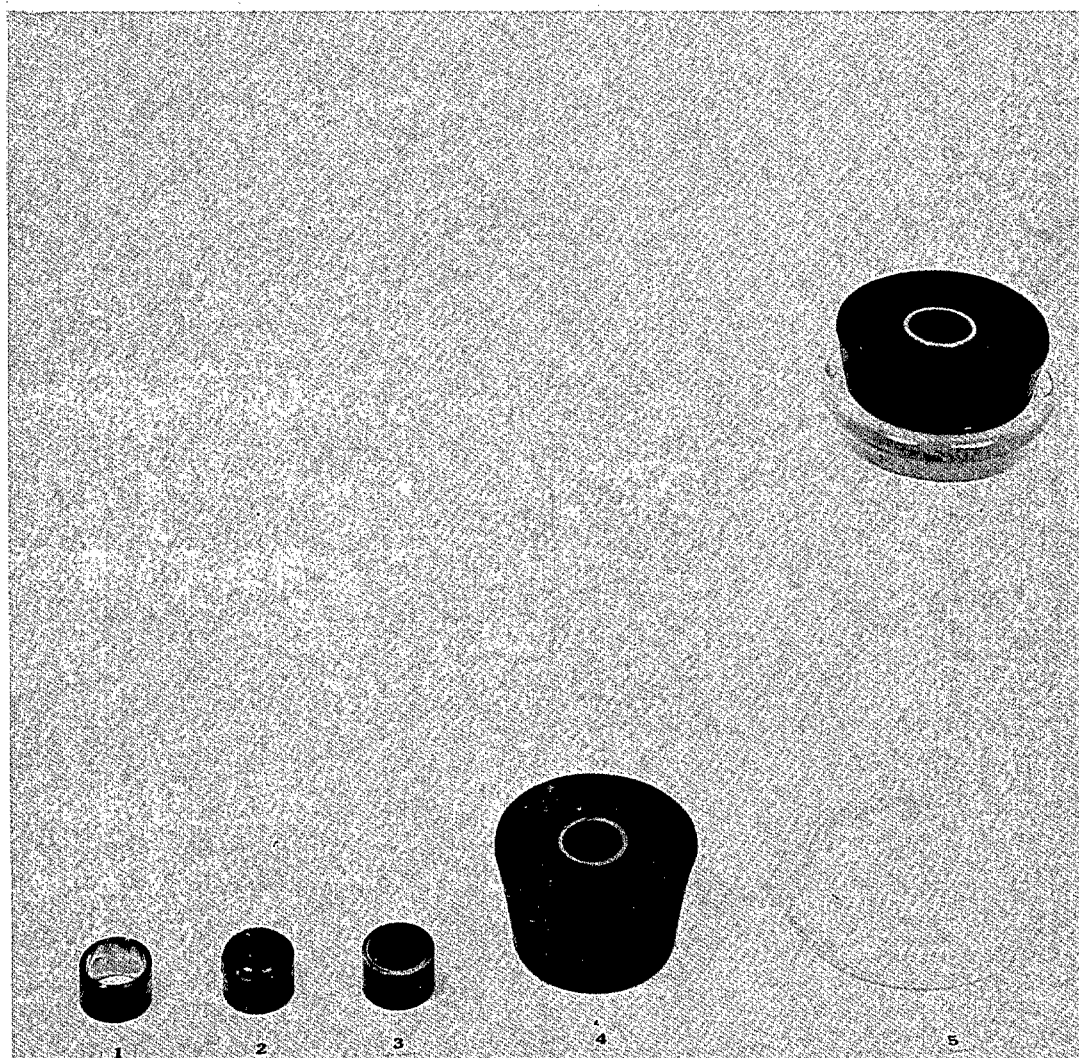


SH2834

Figure 1 - Diagrammatic sketch of method of conducting tension-perpendicular-to-grain, test, with details of test specimen.

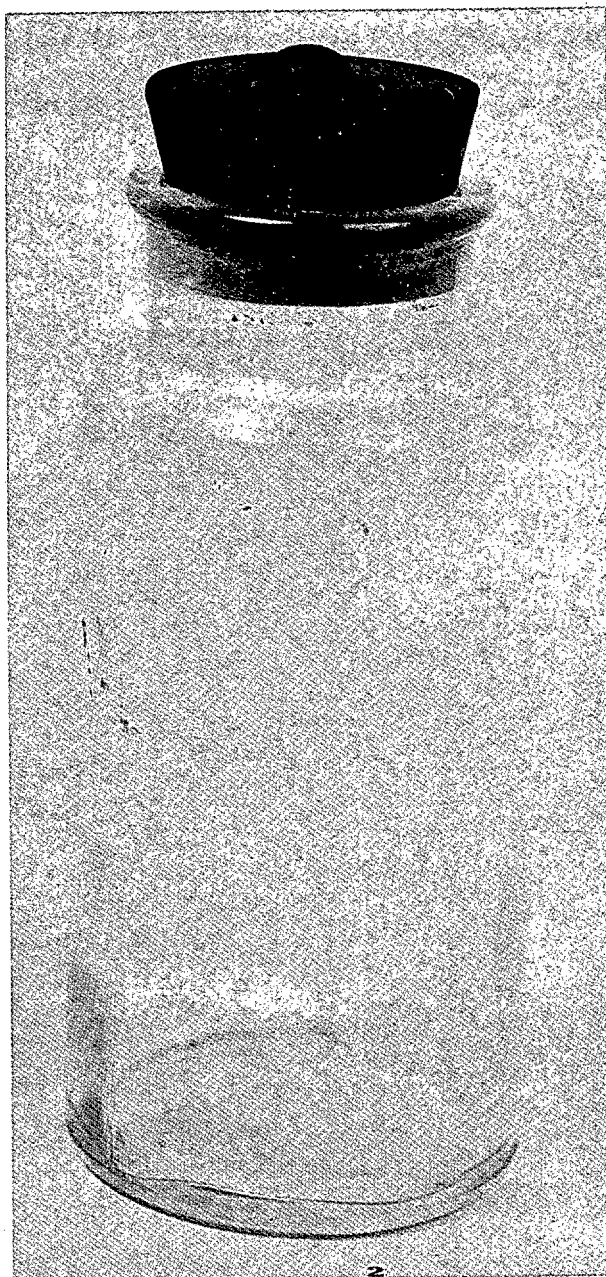


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SH2835

Figure 2 - Preparation of test specimen for evaluating blister formation tendency of deck calking compound.



SH2836

Figure 3 - Blister formation.

## SPECIFICATION ANALYSIS SHEET

Form Approved  
Budget Bureau No. 119-R004

## INSTRUCTIONS

This sheet is to be filled out by personnel either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity (as indicated on reverse hereof).

## SPECIFICATION

ORGANIZATION (of submitter)

CITY AND STATE

CONTRACT NO.

QUANTITY OF ITEMS PROCURED

DOLLAR AMOUNT

\$

## MATERIAL PROCURED UNDER A

☐

DIRECT GOVERNMENT CONTRACT

☐

SUBCONTRACT

1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?

A. GIVE PARAGRAPH NUMBER AND WORDING.

B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES.

2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID

3. IS THE SPECIFICATION RESTRICTIVE?

☐ YES☐ NO

IF "YES", IN WHAT WAY?

4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)

SUBMITTED BY (Printed or typed name and activity)

DATE