

**INCH- POUND**  
MIL-C-18255E(SH)  
28 April 1989  
SUPERSEDING  
MIL-C-18255D(SHIPS)  
28 February 1966  
(See 6.10)

MILITARY SPECIFICATION  
CALKING COMPOUND, SYNTHETIC RUBBER BASE, WOODEN  
DECK SEAM APPLICATION

This specification is approved for use by the Naval Sea Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers synthetic rubber base calking compounds, 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.

1.2 Classification. Calking compound must be of the following types (see 6.2):

- Type I - Compound having a fluid consistency when first applied.
- Type II - Compound having a relatively viscous fluid consistency and thixotropic character.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 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).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Naval Sea Systems Command, SEA 5523, Department of the Navy, Washington, DC 20362-5101 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

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

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SPECIFICATIONS

FEDERAL

- PPP-F-320 - Fiberboard; Corrugated and Solid, Sheet Stock (Container Grade), and Cut Shapes.
- PPP-P-1892 - Paint, Varnish, Lacquer, and Related Materials; Packaging, Packing, and Marking of.

MILITARY

- MIL-L-19140 - Lumber and Plywood, Fire-Retardant Treated.

STANDARDS

FEDERAL

- FED-STD-313 - Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities.
- FED-STD-601 - Rubber: Sampling and Testing.

MILITARY

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

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Naval Publications and Forms Center, (ATTN: NPODS), 5801 Tabor Avenue, Philadelphia, PA 19120-5099.)

2.2 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.

3. REQUIREMENTS

3.1 Qualification. Type I calking compounds furnished under this specification shall be products which are authorized by the qualifying activity for listing on the applicable qualified products list at the time of award of contract (see 4.3 and 6.3).

3.2 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.3) in accordance with 4.4.

3.3 Material. Composition of the calking compound shall be as follows:

- (a) Calking material 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 elastomeric compound without addition of heat or pressure.
- (b) Priming materials shall be liquid that can be 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 contractor.

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3.3.1 Type I. Type I compound shall have a fluid consistency when first applied.

3.3.2 Type II. Type II compound shall have a relatively viscous fluid consistency and shall be thixotropic in character.

3.3.3 Toxicity. The material shall have no adverse effect on the health of personnel when used for its intended purpose. Questions pertinent to this effect (see MIL-STD-961) will be referred by the contracting activity to the Navy Medical Command (NAVMEDCOM) who will act as an advisor to the contracting activity.

3.3.4 Material safety data sheet (MSDS). The contracting activity shall be provided a material safety data sheet at the time of the contract award. The MSDS shall be provided in accordance with the requirements of FED-STD-313. The MSDS shall be included with each shipment of the material covered by this specification (see 6.8).

3.3.5 Color. Unless otherwise specified (see 6.2), the cured material shall be black in color.

3.4 Hardness. The material hardness shall meet the following (see 4.7.1):

	<u>Type I</u>	<u>Type II</u>
Hardness (durometer points), minimum	45	30

3.5 Shrinkage. The calking compound shall shrink not more than 3 percent (see 4.7.2).

3.6 Adhesive strength in tension. The adhesive strength in tension for both fir and teak shall be the average results for five of both fir and teak and as follows (see 4.7.3):

(a) Initial and aged:

	<u>Type I</u>	<u>Type II</u>
Breaking load, pounds per square inch (lb/in <sup>2</sup> ), minimum	100	40
Ultimate elongation, percent, minimum	150	150
Type break, percent cohesion	100	100

(b) Immersed:

	<u>Type I</u>	<u>Type II</u>
Breaking load, lb/in <sup>2</sup> , minimum	100	40
Ultimate elongation, percent, minimum	80	80

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3.7 Swell. The cured compound shall swell not more than 30 percent (see 4.7.4).

3.8 Viscosity. The viscosity of the accelerated compound shall be not less than 10 nor greater than 35 degrees angular deflection, using the Mac Michael viscosimeter for measurement, or between 450 and 1200 poise for type I and between 10,000 and 25,000 poise for type II if the Brookfield method is used for measurement (see 4.7.5).

3.9 Application life. Application life shall be as follows:

- (a) Type I. Viscosity after 2 hours shall not exceed 35 degrees angular deflection (see 4.7.6.1), if the Mac Michael viscosimeter is used for measurement, or 3000 poise if the Brookfield method is used.
- (b) Type II. Rate of material extrusion after 2 hours shall be not less than 15 grams per minute (see 4.7.6.2).

3.10 Bubble resistance. Calking compound shall exude out of the specimen holder not more than 10 percent (see 4.7.7).

3.11 Serviceability (type I only). The calking compound, applied in accordance with the manufacturer's recommendations, shall be tested in wood deck seams on board ship. The calking shall not blister, separate from the wood or show any signs of failure during the shipboard service test (see 4.7.8).

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor 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 ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of the manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

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4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

- (a) Qualification inspection (see 4.3).
- (b) First article inspection (see 4.4).
- (c) Quality conformance inspection (see 4.5).

4.3 Qualification inspection. Qualification inspection (type I only) shall be conducted at a laboratory satisfactory to the Naval Sea Systems Command (NAVSEA). Qualification inspection shall consist of the tests specified in table I.

TABLE I. Requirements, tests, and inspections.

Test	Requirements	Tests	Qualification (type I only)	First article (type II only)	Quality conformance
Examination of filled containers	5	4.6	-	-	X
Toxicity	3.3.3	4.7.9	X	X	X
Hardness	3.4	4.7.1	X	X	X
Shrinkage	3.5	4.7.2	X	X	-
Adhesion in tension	3.6	4.7.3	X	X	X
Swell	3.7	4.7.4	X	X	-
Viscosity	3.8	4.7.5(a)	X	-	X
		4.7.5(b)	-	X	X
Application life	3.9	4.7.6.1	X	-	-
		4.7.6.2	-	X	-
Bubble	3.10	4.7.7(c)	X	-	X
		(1)	-	-	-
		4.7.7(c)	-	X	X
Service- ability	3.11	(2)	-	-	-
		4.7.8	X	-	-

4.4 First article inspection. First article inspection shall consist of the examination and tests specified for type II only in table I.

4.4.1 Sampling for first article inspection (type II only). From the first lot of material and from one out of each 10 succeeding lots, two 1-quart samples shall be taken and sufficient curing agent shall be taken to cure the samples (see 6.6.1).

4.5 Quality conformance inspection. Quality conformance inspection shall consist of the examination and tests specified in table I.

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4.5.1 Lot.

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

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

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

4.5.2 Sampling for quality conformance inspection. Sampling for quality conformance inspection shall be as specified in 4.5.2.1 through 4.5.2.3 (see 6.6.2).

4.5.2.1 Base material. A representative sample of not less than 1 quart of base material shall be taken from each lot.

4.5.2.2 Curing agent. A representative sample of curing agent shall be taken from each lot to cure the sample of base material selected in accordance with 4.5.2.1.

4.5.2.3 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.

4.5.3 Sampling for examination 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 to verify conformance to all requirements regarding fill, closure, marking, and other requirements not requiring tests (see 6.6.2.1).

4.6 Examination of filled containers. Each sample-filled container selected in accordance with 4.5.3 shall be examined for defects of construction of the container and the closure, for evidence of leakage, and for marking defects (see 5.3); 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 (see 6.6.2.1).

4.7 Tests.

4.7.1 Hardness. The hardness shall be determined by the Rex hardness gauge in accordance with method 3021 of FED-STD-601. Tests shall be run on specimens similar to compression set discs 1/2 inch thick by 1 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 to 75 degrees Fahrenheit (°F)) immediately before testing.

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4.7.2 Shrinkage. The freshly mixed compound shall be poured into three brass open-end cylindrical tubes, 1-3/8 inches inside diameter (id) by 1 inch long. The tubes shall be filled level to 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.

4.7.3 Adhesion in tension. Douglas fir and teak test blocks of not more than 20 percent moisture content and as shown on 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 to 75°F). After the 96-hour set period, specimens shall be further conditioned as specified in (a), (b), and (c), inclusive, and then subjected to tensile load at a rate of 0.25 inch per minute.

- (a) One set of specimens shall be subjected to strain immediately after the 96-hour set period.
- (b) One set of specimens shall be placed in a hot air circulating oven at  $158 \pm 2^\circ\text{F}$  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.
- (c) One set of specimens shall be immersed for  $96 \pm 1/2$  hours at room temperature (70 to 75°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.

4.7.4 Swelling, immersion. The immersion test shall be in accordance with method 6211 of FED-STD-601. Medium no. 4 fuel as specified in method 6001 of FED-STD-601 shall be the immersion medium.

4.7.5 Viscosity. The sample of base material and curing agent shall be preconditioned for 3 hours at  $80 \pm 2^\circ\text{F}$ . Specified proportions of base material and curing agent to yield approximately 10 ounces (oz) 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  $80 \pm 2^\circ\text{F}$  before determining initial viscosity. Viscosity shall be measured as follows:

- (a) 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 revolutions per minute (r/min). The plunger shall be immersed to a depth of 4 centimeters in approximately 10 oz of the compound which is contained in a 1/2-pint can 2-3/4 inches in diameter by 3 inches in height. Alternatively, viscosity may be measured by a standard Brookfield viscosimeter, model RVF using spindle number 6. Place the sample so that the spindle is in the center of the material, and

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the material level is within the center of the spindle indentation. Select a spindle speed, usually 4 r/min, such that the viscosimeter readings are as close as possible to mid range on the moving scale. Recordings shall be taken while the scale is rotating.

- (b) 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/min. The plunger shall be immersed to a depth of 4 centimeters in approximately 10 oz of the compound which is contained in a 1/2-pint can 2-3/4 inches in diameter by 3 inches in height. Alternatively, the Brookfield viscosimeter may be used. Measure as specified for type I, using Brookfield, except use spindle number 7 at a speed of 2 r/min. For initial viscosities exceeding 20,000 poise, use Brookfield viscosimeter model HBF, spindle number 7 at a speed of 10 r/min.

4.7.6 Application life. Application life test shall be as specified in 4.7.6.1 through 4.7.6.2.

4.7.6.1 Type I. The sample prepared as specified in 4.7.5 shall be used. A temperature of  $80 \pm 2^\circ\text{F}$  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 1-hour period and at 1/2-hour intervals after this measurement until the viscosity reading exceeds 35 degrees Mac Michael. Before making each viscosity determination, the compound shall be stirred slowly for 1 minute using a narrow blade spatula. If using the alternate Brookfield method, the sample shall be conditioned as specified above. Brookfield measurements shall be taken at the end of 1 hour and at 1/4-hour intervals after until the viscosity reaches 3000 poise.

4.7.6.2 Type II. Type II application test shall be as follows:

- (a) Conditioning and mixing. The base compound, accelerator and calking compound application gun shall be stabilized at  $73.5 \pm 3.6^\circ\text{F}$  and a relative humidity of  $50 \pm 5$  percent for not less than 8 hours before an approximately 13 oz lot of base compound is mixed with a proper amount of accelerator. The mixed calking compound shall be promptly used to fill a standard calking compound gun cartridge having a nozzle with a length of 4 inches and an inside diameter (id) of 1/8 inch. The gun and calking compound shall be maintained at the above temperature and relative humidity throughout the test.
- (b) Procedure. The gun shall be attached to a constant air supply of  $90 \pm 5 \text{ lb/in}^2$ . Two to 3 inches of calking compound shall be extruded initially to clear trapped air, and not less than 1 inch of calking compound shall be extruded prior to each observation.
- (c) 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 1/2 oz of calking compound are extruded.



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The extruded calking compound shall be weighed, and the ounces 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 1/2 oz 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 1/2 oz-per-minute line shall be taken as the application time. Results shall be expressed in ounces per minute.

4.7.7 Bubble. Bubble test shall be conducted as follows:

- (a) Apparatus. The apparatus shall consist of 1/2-inch id copper tubing, 3/8 inch in length, a rubber stopper (size no. 9) with a smooth 1/2-inch id hole; an 8-ounce capacity jar with 1-9/16 inch diameter open top, a dial thickness gauge, which shall be accurate to 0.001 inch; and an oven that shall maintain a uniform temperature of  $130 \pm 2.5^{\circ}\text{F}$ .
- (b) 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 id 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 to 80°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 shall occur past the outside of the tubing.
- (c) Procedure. Procedure shall be as follows:
  - (1) Type I. Three specimens shall be conditioned in an oven for 24 hours at  $130 \pm 2.5^{\circ}\text{F}$ . 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°F, the increase in height of the calking compound shall be computed. Figure 3 is an example of unsatisfactory material.

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- (2) Type II. Three specimens shall be conditioned in an oven for 24 hours at  $100 \pm 2.5^\circ\text{F}$ . 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.

4.7.8 Serviceability (type I only). The calking material (including primer, if required) shall be used in accordance with the manufacturer's instructions to calk wood deck seams aboard ship. The test seams shall undergo normal shipboard service and weathering for not less than 6 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.

4.7.9 Toxicity. A manufacturer of material shall disclose the formulation of his product to the Naval Medical Command, MEDCOM 42, Washington, DC 20372. The disclosure of proprietary information, which shall be held in confidence by the Naval Medical Command, shall include: the name, formula, and approximate percentage by weight and volume of each ingredient in the product; the results of any toxicological testing of the product; identification of its pyrolysis products; and any such other information as may be needed to permit an accurate appraisal of any toxicity problem associated with the handling, storage, application, use, or disposal of the material.

4.8 Inspection of packaging. Sample packages and packs, and the inspection of the preservation, packing and marking for shipment, stowage, and storage shall be in accordance with the requirements of section 5 and the documents specified therein.

## 5. PACKAGING

(The packaging requirements specified herein apply only for direct Government acquisition.)

### 5.1 General.

#### 5.1.1 Navy fire-retardant requirements.

- (a) Lumber and plywood. When specified (see 6.2), all lumber and plywood including laminated veneer material used in shipping container construction members, blocking, bracing, and reinforcing shall be fire-retardant treated material conforming to MIL-L-19140 as follows:

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Levels A and B - Type II - weather resistant.  
Category 1 - general use.

Level C - Type I - non-weather resistant.  
Category 1 - general use.

- (b) Fiberboard. When specified (see 6.2), fiberboard used in the construction of class-domestic, non-weather resistant fiberboard and cleated fiberboard boxes including interior packaging forms shall meet the flamespread and the specific optic density requirements of PPP-F-320 and amendments thereto.

5.2 Packaging requirements. The calking shall be preserved level A or C, packed level A, B, or C as specified (see 6.2), and marked in accordance with PPP-P-1892 and as specified in 5.3. Packaging shall include bar coding and applicable packaging acquisition options therein as specified (see 6.2). Preservation shall be in 1-gallon or 5-quart cans or 5-gallon pails (type II, class 3) as specified in the contract or order (see 6.2).

5.2.1 Packaging of kits. The compound shall be packaged as a kit having the necessary number of parts needed consisting of the base compound, the curing agent, and the primer necessary for application of the resulting calking compound. The volume or weight ratio of the base compound and curing agent shall be in agreement with the contractor's mixing ratio. The required amount of the base compound shall be loaded into resealable, resin lined 1-gallon cans in accordance with PPP-P-1892. The required amount of curing agent shall be furnished in a metal container in accordance with PPP-P-1892. The primer, when furnished, shall be packaged in a metal can conforming to PPP-P-1892. The packaged units shall be wrapped, boxed or containerized together as a complete unit in kit form so they shall not accidentally separate during shipment, handling, storage and redistribution.

5.3 Marking. In addition to the markings required by PPP-P-1892 (see 6.2), the calking materials shall include the following information:

5.3.1 Unit containers.

5.3.1.1 Polymer and curing agent. 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 curing 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.
- (d) Required safety procedures and precautions.

5.3.1.2 Primer. Unit packages of primer (when furnished) shall have a label or tag listing the instructions for use and any required safety procedures and precautions.

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5.4 Material safety data sheet. A copy of the material safety data sheet shall be attached to the shipping document for each destination (see 3.3.4).

## 6. NOTES

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

6.1 Intended use. The calking materials are used for sealing seams or joints in teak or fir decking.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- (a) Title, number, and date of this specification.
- (b) Type of calking compound required (see 1.2).
- (c) Issue of DoDISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1).
- (d) When first article sample is required (see 3.2).
- (e) Color, if other than black (see 3.3.5).
- (f) When fire retardant materials are required (see 5.1.1).
- (g) Level of preservation and packing required (see 5.2).
- (h) Packaging acquisition options (see 5.2).
- (i) Size and type container required (see 5.2).
- (j) Special marking required (see 5.3).
- (k) Quantity of base material, with curing agent and primer.

6.3 First article. When first article inspection is required, the contracting officer should provide specific guidance to offerors whether the items should be a sample selected from the first lot of material or otherwise, as specified in 4.4.1. The contracting officer should also include specific instructions in acquisition documents regarding arrangements for examinations, approval of first article test results, and disposition of first articles. Invitations for bids should provide that the Government reserves the right to waive the requirement for samples for first article inspection to those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract. Bidders should not submit alternate bids unless specifically requested to do so in the solicitation.

6.4 Qualification. With respect to products requiring qualification, awards will be made only for products which are, at the time of award of contract, qualified for inclusion in Qualified Products List No. 18255 whether or not such products have actually been so listed by that date. The attention of the contractors is called to these 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 purchase orders for the products covered by this specification. The activity responsible for the Qualified Products List is the Naval Sea Systems

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Command, SEA 5523, Department of the Navy, Washington, DC 20362-5101 and information pertaining to qualification of products may be obtained from that activity. Application for qualification tests must be made in accordance with "Provisions Governing Qualification SD-6" (see 6.4.1).

6.4.1 Copies of "Provisions Governing Qualification SD-6" may be obtained upon application to Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

6.5 Primer. A primer is not required by this specification; however, generally one is needed by the manufacturers to obtain satisfactory adhesion. The primer used by one manufacturer may not be satisfactory for use with another manufacturer's calking. The calking, therefore, should be purchased as a kit (base compound with an appropriate amount of curing agent and primer) and should be applied as a kit using only the components from one manufacturer as prescribed by him.

6.6 Lot acceptance and rejection criteria.

6.6.1 First article inspection. If any one of the samples is found not to conform to the requirements of this specification, the lot which it represents should be rejected. Furthermore, additional samples should be selected from each subsequent lot and subjected to the tests wherein the failure occurred. A lot should then be accepted only upon satisfactory completion of the tests by the samples selected to represent the lot. This additional testing should be discontinued when four successive lots have passed the tests.

6.6.2 Quality conformance inspection. If a sample representing a lot is found not to conform to this specification, the entire lot should be rejected.

6.6.2.1 Examination of filled containers. The Acceptable Quality Level (AQL) for filled container samples should be 2.5 percent defective. 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 should be rejected.

6.7 Material disposal. Disposal of the material components or the reacted compound should conform to applicable Federal, state and local regulations.

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

6.9 Subject term (key word) listing.

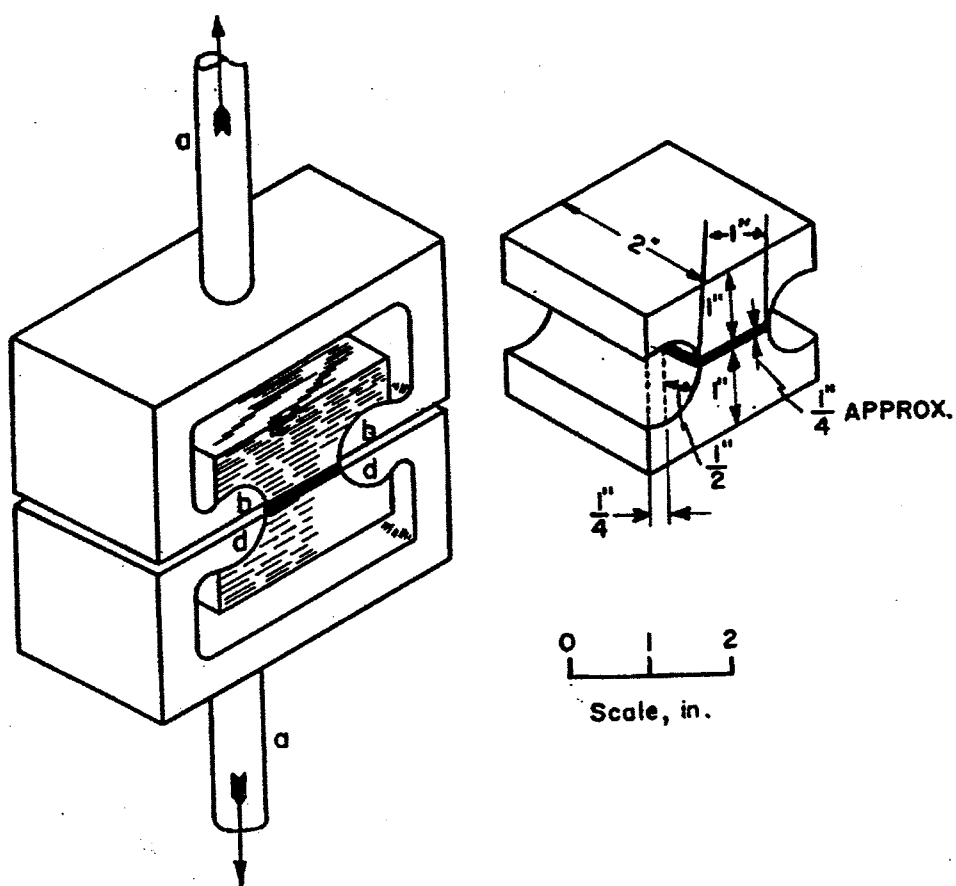
Desiccator  
Polymer  
Polysulfide  
Thixotropic  
Viscosimeter  
Viscosity

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6.10 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Preparing activity:  
Navy - SH  
(Project 8030-N098)

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SH 2834

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

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



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FIGURE 3. Blister formation.