INCH-POUND

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SUPERSEDING
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MILITARY SPECIFICATION

SOCKS, MEN'S, WINTER (WOOL AND COTTON)

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

1. SCOPE

1.1 Scope. This specification covers one type of seamless men's wool and cotton winter socks, the inside of which have terry or tuft stitches throughout.

1.2 Classification. The socks shall be of one type in the following sizes as specified (see 6.2):

Schedule of sizes

7	11
8	12
9	13
10	14

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 used in improving this document should be addressed to: U.S. Army Natick Research and Development Center, Natick, MA 01760-5014, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 8440

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SPECIFICATIONS

FEDERAL

A-A-203	-	Paper, Kraft, Untreated
V-T-276	-	Thread, Cotton
DDD-L-20	-	Label: For Clothing, Equipage, and Tentage, (General Use)
PPP-B-636	-	Boxes, Shipping, Fiberboard

MILITARY

MIL-L-35078	-	Loads, Unit: Preparation of Semiperishable Subsistence Items; Clothing, Personal Equipment and Equipage; General Specification For

STANDARDS

FEDERAL

FED-STD-191	-	Textile Test Methods
FED-STD-751	-	Stitches, Seams and Stitchings

MILITARY

MIL-STD-105	-	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129	-	Marking for Shipment and Storage
MIL-STD-147	-	Palletized Unit Loads
MIL-STD-1491	-	Glossary of Knitting Imperfections

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.1.2 Other Government documents, drawings, and publications. The following othe Government documents, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

U.S. DEPARTMENT OF AGRICULTURE

Methods of Test for Grades of Wool

(Copies are available from the U.S. Department of Agriculture, Agricultural Marketing Service, Washington, DC 20402.)

2.2 Non-Government publications. The following document forms a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DOD adopted are those listed in the issue of

the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

D 3951 - Standard Practice for Commercial Packaging

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.)

(Non-Government standards and other publications are normally available from organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 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 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.3) in accordance with 4.3.

3.2 Samples. Samples, when furnished, are solely for guidance and information to the contractor (see 6.4). Variations from this specification may appear in the sample, in which case this specification shall govern.

3.3 Material. It is encouraged that recycled material be used when practical as long as it meets the requirements of this specification.

3.3.1 Merino knitting yarn. The merino knitting yarn shall be made from fleece, pulled sheep's wool, or a combination of both not lower in grade than 50's U.S. Standard (see 4.4.2.1.1), and cotton, blended in such proportion that the finished socks contain not less than 75 percent wool on the dry weight basis when tested as specified in 4.4.5. Cotton core yarn will not be acceptable.

3.3.2 Cotton tie yarn. The cotton tie yarn used for backing or binding the terry or tuft stitch shall be unbleached, 2 ply, not finer than 20/2 and shall have a minimum breaking strength of 1.9 pounds when tested as specified in 4.4.1.

3.3.3 Looping yarn. The yarn for looping the toes shall be a 2 ply worsted yarn not finer than 20/2 worsted count, or a 2 ply cotton yarn not finer than 12/2 cotton count. Testing shall be as specified in 4.4.1.

3.3.4 Thread.

3.3.4.1 Overedging thread. The cotton thread for overedging the sock top shall conform to type IA1, ticket number 60, 3 ply of V-T-276.

3.3.4.2 Thread for seamed toes. The thread for seaming toes shall be, stretch nylon, natural white, 70 denier, 2 ply. The minimum length per pound shall be 63,000 yards, the minimum breaking strength shall be 0.60 pound, and the minimum elongation shall be 22 percent. (The testing shall be as specified in 4.4.1.)

3.4 Color. The color of the socks shall be natural (unbleached).

3.5 Label. Each sock shall have the size and fiber content marking applied just below the instep and centered between the ankle and toe. The marking shall conform to type III, class 9 of DDD-L-20. The marking shall be clearly legible and shall show good fastness to laundering transference (wool method). The size numerals shall be not less than 7/8 inch in height. All other letters and numerals shall be a minimum of 1/8 inch in height.

3.6 Shrink resistant treatment. All of the wool for the finished sock shall be treated for resistance to felting shrinkage in stock, top, yarn, or sock form by a controlled oxidation process approved by the contracting agency. The shrink resistant treatment shall not be identified by name or trademark on the socks or on the package.

3.6.1 Alkali solubility. The alkali solubility of the shrink resistant treated wool for the finished sock, in the form in which it has been treated (stock, top, yarn, or sock), shall not be increased by more than 6.0 percent (maximum) over the untreated material and shall not total more than 18.0 percent when tested as specified in 4.4.1 or 4.4.5.

3.7 Design. The socks shall be seamless with a terry or tuft stitch to the inside of the entire sock and a top finished with a nonraveling welt, overedge stitching, or a rib stitch.

3.8 Construction.

3.8.1 Knitting. The socks shall be knit seamless on a circular machine having a cylinder diameter of either 4-1/2 inches or 5 inches and having not less than 48 nor more than 64 needles. The socks shall be knit with a terry or tuft stitch thrown to the inside using 3 ends of the merino yarn specified in 3.3.1 and one end of the cotton tie yarn specified in 3.3.2. For sizes 7 and 8, a minimum of 6 gore needles shall be used in knitting the heel and a minimum of 6 gore needles shall be used in knitting the toe. For the remaining sizes, a minimum of 8 gore needles shall be used. The socks shall be knit so as to conform to the requirements specified in tables I and II.

TABLE I. Number of courses

Sock size	Foot courses, minimum 1/ 4-1/2 inch cylinder	5 inch cylinder	Leg courses minimum 2/
7	-	45	80
8	-	50	80
9	50	55	80
10	55	60	80
11	60	65	80
12	65	70	80
13	70	75	80
14	75	80	80

1/ Foot courses shall be counted from first short butt toe gore needle to first short butt heel gore needle (D, figure 1).

2/ Leg courses shall be counted from first short butt heel gore needles to top of leg (E, figure 1).

3.8.2 Finishing top of sock. The top of the sock shall be finished with a nonraveling welt, overedge stitching, or a knitted mock rib elastic cuff.

3.8.2.1 Overedge stitching. When overedge stitching is used instead of the nonraveling welt or knitted mock rib, stitch type 503 conforming to FED-STD-751 shall be used. The sewing thread shall be as specified in 3.3.4.1 and minimum stitches per inch shall be 6. The finished overedging shall be as elastic as the leg fabric.

3.8.2.2 Mock rib elastic top. When a mock rib construction is used for the top of the sock, the yarns specified in 3.3.1 and 3.3.2 shall be used with one end of an elastic yarn laid in every course. There shall be a minimum of 14 elastic yarns in the cuff, excluding the top of the cuff. The top of the cuff shall have a minimum of 5 ends of elastic yarn. The elastic yarn shall be 100 (± 5) gage extruded or molded natural rubber core or a 112 (± 5) gage cut natural rubber core having a nominal 50/1 count cotton inner and a nominal 50/2 count cotton outer cover. The elastic yarn shall have 2600 (± 200) yards per pound. The width of the finished cuff shall be 3 (± 1/4) inches and the length shall be 1-1/4 (± 1/4) inches.

3.8.3 Closing toes. The toes shall be closed by looping as specified in 3.8.3.1 or seaming as specified in 3.8.3.2.

3.8.3.1 Looped toes. The toes shall be closed with a looper using not less than 2 ends of the looper yarn specified in 3.3.3. The looping line shall be as elastic as the knit fabric and shall be smooth and free from lumps, laps, cuts and bruises.

3.8.3.2 Seamed toes. The socks shall be seamed inside out with seam type SSa-1 and stitch type 521 with 23 to 27 stitches per inch using the thread specified in 3.3.4.2. The socks shall be turned right side out and the seam pulled flat. The edges of the toe opening shall abut as shown in seam type FSa-1. The seam shall be as elastic as the knit fabric and shall be pulled flat to lie smooth and shall be free of lumps, laps, cuts and bruises. A thread chain of 1/4 to 1/2 inch shall be left at the ends of the stitching to prevent raveling. All seams and stitch types shall conform to FED-STD-751 (see 6.6).

3.8.3.2.1 Stitches per inch. The number of stitches per inch is based on the socks being in a relaxed state. The stitches shall be counted along the left hand row toward the foot of the sock when the sock comes off the machine before being turned right side out or further processed. The seam in the socks may be marked off in a relaxed state and stretched to facilitate counting the number of stitches per inch.

3.8.4 Length of loose ends. Loose ends shall be trimmed to not less than 1/2 inch nor more than 1 inch.

3.8.5 Finishing. The socks shall be scoured, dyed and boarded on drying forms to their proper size and shape.

3.8.6 Pairing. The socks shall be matched and paired so that there will be no greater difference in overall foot length or leg length than 1/2 inch. Unless otherwise specified, the use of thread, twine, or staples to secure a pair of socks is prohibited.

3.9 Physical requirements.

3.9.1 Measurements and weights. The measurements and weights of the finished socks shall conform to table II. All measurements in table II shall be made with the socks laid out flat under no tension.

TABLE II. Measurements and weights

Size	Leg length (inches) A1/	Foot length (inches) F 1/	Conditioned weight per dozen pairs (ounces)
7	12-1/2	7	52
8	12-1/2	8	56

TABLE II. Measurements and weights (cont'd)

Size	Leg length (inches) A1/	Foot length (inches) F 1/	Conditioned weight per dozen pairs (ounces)
9	12-1/2	9	62
10	12-1/2	10	64
11	12-1/2	11	66
12	12-1/2	12	68
13	12-1/2	13	70
14	12-1/2	14	72
Tolerance	± 1/2	-0, + 3/4	Minimum

1/ See figure 1.

3.9.2 Stretch. When tested as specified in 4.4.5, the finished socks shall be capable of being stretched to not less than 7 inches crosswise on the leg and not less than 6-1/2 inches on the foot (see figure 1, B and C, respectively).

3.9.3 Bursting strength. The fabric of the finished sock shall have a bursting strength of not less than 70 pounds when tested as specified in 4.4.5.

3.9.4 Nonfibrous material content. The starch and protein content including chloroform-soluble and water-soluble material of the finished sock shall not exceed 4.0 percent when tested as specified in 4.4.5.

3.9.5 Dimensional stability. The finished sock shall not shrink or elongate more than a total of 8.0 percent when tested as specified in 4.4.5.

3.10 Workmanship. The finished socks shall conform to the quality of product established by this specification, and the occurrence of defects shall not exceed the applicable acceptable quality levels.

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 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.

4.1.2 Responsibility for dimensional requirements. Unless otherwise specified in the contract or purchase order, the contractor is responsible for ensuring that all specified dimensions have been met. When dimensions cannot be examined on the end item, inspection shall be made at any point, or at all points in the manufacturing process necessary to ensure compliance with all dimensional requirements.

4.1.3 Certification of compliance. Where certificates of compliance are submitted, the Government reserves the right to inspect such items to determine the validity of the certification.

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

a. First article inspection (see 4.3).
b. Quality conformance inspection (see 4.4).

4.3 First article inspection. When a first article is required (see 3.1 and 6.2), it shall be examined for the defects specified in 4.4.3 and 4.4.4 and tested for the characteristics specified in 4.4.5.

4.4 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be in accordance with MIL-STD-105.

4.4.1 Component and material inspection. In accordance with 4.1, components and materials shall be inspected in accordance with all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document. In addition, testing shall be performed on components listed in table III for the noted characteristics. Wherever applicable, tests shall be conducted in

accordance with methods prescribed in FED-STD-191. All test reports shall contain the individual values used in expressing the final results. Sampling shall be in accordance with the following:

Lot size	Sample size (sample units)
800 or less	2
801 to 22,000 inclusive	3
22,001 and over	5

The lot shall be unacceptable if one or more sample units fail to meet any test requirement specified. The unit for expressing lot sizes and sample unit for testing each component shall be in accordance with table IV.

TABLE III. Component tests

Component	Characteristics	Requirement paragraph	Test method
Cotton tie yarn	Material identification	3.3.2	1/
	Ply	3.3.2	Visual 2/
	Count	3.3.2	4021
	Breaking strength	3.3.2	4100
Worsted looping yarn	Material identification	3.3.3	1/
	Ply	3.3.3	Visual 2/
	Count	3.3.3	4021
Cotton looping yarn	Material identification	3.3.3	1/
	Ply	3.3.3	Visual 2/
	Count	3.3.3	4021
Nylon seaming thread (for toe closure)	Material identification	3.3.4.2	1/
	Ply	3.3.4.2	Visual 2/
	Yards per pound	3.3.4.2	4010
	Breaking strength	3.3.4.2	4100
	Elongation	3.3.4.2	4100
Wool	Alkali solubility	3.6.1	2800 3/

1/ Unless otherwise specified, a certificate of compliance shall be submitted and will be acceptable for the stated requirements.

2/ One determination per sample unit and the results reported as pass or fail.

3/ The wool shall be tested for alkali solubility in the form in which it was treated, and the sample unit shall consist of both treated and untreated material.

TABLE IV. Sampling requirements

Component	Lot size expressed in	Sample unit for testing
Wool		
Stock	Pounds	1/4 pound 1/
Top	Pounds	1 yard 1/
Yarn	Pounds	1/4 pound 1/
Cotton yarn	Pounds	1/4 pound
Worsted yarn	Pounds	1/4 pound
Nylon thread	Spools, cones, or tubes	1 spool, cone, or tube

1/ An equal quantity of untreated material is required for the alkali solubility test.

4.4.2 In-process inspection. Inspection of subassemblies shall be made to ascertain that construction details which cannot be examined in the finished product are in accordance with specified requirements. The Government reserves the right to exclude from consideration for acceptance, any material or service for which in-process inspection has indicated nonconformance.

4.4.2.1 Determination of wool grade.

4.4.2.1.1 Stock form. The wool shall be visually examined for grade (see 3.3.1) in grease or scoured and untreated form (prior to picking or carding) by comparison with the applicable U.S. Standard. In the event of dispute resulting from the above comparison, the wool grade shall be determined by the width method (wedge) approved by the Government. The examination for grade shall be performed on a composite sample of one pound of wool from each 10,000 pounds or fraction thereof in the lot. The composite sample shall be selected from not less than 10 percent of the bales or boxes in the lot. The lot shall be unacceptable if the sample does not conform to the wool requirements of 3.3.1.

4.4.2.1.2 Top form. When tested in top form, the grade shall be determined by comparison with the applicable U.S. Standard. In the event of dispute resulting from the above examination, the wool grade shall be determined by the width method (wedge) approved by the Government. The sample unit shall be one yard of untreated top. The results of each sample unit shall be reported separately. The sampling size shall be as specified in 4.4.1.

4.4.3 End item visual examination. The socks shall be examined for the defects listed in table V. Applicable material knitting defects shall be as defined in MIL-STD-1491. The lot size shall be expressed in units of one sock. The sample unit shall be one sock, and the selection shall be by pairs. Defects of pairing shall be classified as a single defect. The inspection level shall be II, and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 1.5 for major defects and 4.0 for total defects.

TABLE V. End item visual defects

Defect	Classification	
	Major	Minor
Any holes, runs, or dropped stitches, including holes in looping holes	101	
Thin areas, mends	102	
Loose or floated ends (other than looping ends) untrimmed or more than 1 inch in length		201
Welt omitted, cut, frayed, or raveling; or overedge stitching incorrect, omitted, broken	103	
Welt or overedging uneven or not clearly defined or less than six stitches per inch when top is finished by overedging		202
Mock rib construction when applicable, less than 2-3/4 inches or more than 3-1/4 inches in width or less than 1 inch or more than 1-1/2 inches in length	104	
Poor looping or seaming resulting in tight tension, lumps and dog ears that will not level out	105	

TABLE V. End item visual defects - Continued

Defect	Classification	
	Major	Minor
Applicable to seamed toes:		
Wrong seam or stitch type	106	
Thread chain less than 1/4 inch or more than 1 inch		203
Skipped stitches, runoffs, broken thread resulting in:		
- open seam up to 1/8 inch inclusive		204
- open seam more than 1/8 inch	107	
Edges of toe do not abut or are overlapped 2/	108	
Seams not flat or smooth 2/	109	
Not seamed inside out		205
Stitches per inch less than 35 or more than 40		206
Tie yarn omitted on two or more courses or improperly inserted	110	
Terry or tuft stitching omitted on three or more courses or improperly inserted	111	
Not uniform in overall appearance, not well shaped	112	
Yarn or slub more than three times the normal diameter, clearly visible 1/	113	
Single spots, stains, or streaks more than 1 inch in combined directions, or two or more of any size, clearly visible 1/		207
Rancid or bad odor	114	
Overall uncleanness or population of burrs, shives, or other foreign matter on inside or outside of sock and clearly visible	115	
Loose ends less than 3/8 inch long	116	
Loose ends less than 1/2 inch but not less than 3/8 inch long		208
Loose ends more than 1 inch long		209

TABLE V. End item visual defects - Continued

Defect	Classification	
	Major	Minor
Burn or scorch in fabric	117	
Marking missing, incorrect, incomplete, illegible; characters of improper dimensions		210
Preshrinking process identified by name or trademark on socks	118	

1/ At normal inspection distance (approximately 3 feet).

2/ Samples can be obtained from the contracting agency for guidance.

4.4.4 End item dimensional examination. The end items shall be examined for conformance to the dimensions specified in table II. Any dimension not within the specified tolerance shall be classified as a defect. Any pair of socks mismated by more than 1/2 inch for overall foot or leg length shall be classified as a defect. The lot size shall be expressed in units of socks. The sample unit shall be one sock and the selection shall be by pairs. The inspection level shall be S-3 and the AQL, expressed in terms of defects per hundred units, shall be 4.0.

4.4.5 End item testing. The end items shall be tested for the characteristics listed in table VII. The methods of testing specified in FED-STD-191 wherever applicable and as listed in table VII shall be followed. All test reports shall contain the individual values utilized in expressing the final results. The sample size shall be in accordance with table VI. Any test failure shall be cause for rejection of the lot.

TABLE VI. End item sample size for testing

Test	Sample size
Weight	The sample shall consist of twelve pairs of socks from each size represented in the lot

TABLE VI. End item sample size for testing

Test	Sample size
Dimensional stability	The sample shall consist of sixteen individual socks from each size represented in the lot
All other tests	The sample unit shall be six individual treated socks drawn in the same size proportion as contained in the lot. (If alkali solubility comparison is required for socks treated in sock form (see 3.6.1), one additional untreated sock of the same size as one of the treated socks will be required.) The sample size shall be in accordance with the following:

Lot size (individual socks)	Sample size (sample units)
800 or less	2
801 up to and including 22,000	3
22,001 and up	5

TABLE VII. End item tests

Characteristic	Requirement paragraph	Test method	Number of determinations per sample unit	Results reported as
Wool content	3.3.1	2100	-	-
Alkali solubility	3.6.1	2800	-	-
Number of needles	3.8.1	Count	1	To nearest whole number
Number of courses	Table I	Count	1	To nearest whole number
Weight per dozen pairs (conditioned)	Table II	Scale	1	To nearest 0.1 oz.

TABLE VII. End item tests - continued

Characteristic	Requirement paragraph	Test method	Number of determinations per sample unit	Results reported as
Stretch	3.9.2	7540 1/	6	Avg. 6 determinations to nearest 0.1 inch
Bursting strength	3.9.3	5120	-	-
Nonfibrous material	3.9.4	2611	-	-
Dimensional stability	3.9.5	7560 2/	-	-

1/ A 10-pound weight shall be used and shall be allowed to hang for 30 seconds.

2/ Except that the determination of relaxation shrinkage procedure is not applicable.

4.4.6 Packaging examination. The fully packaged end items shall be examined for the defects listed below. The lot size shall be expressed in units of shipping containers. The sample unit shall be one shipping container fully packaged. The inspection level shall be S-2, and the AQL, expressed in terms of defects per hundred units, shall be 2.5.

Examine	Defect
Marking (exterior and interior)	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application Preshrinking process is identified by name or trademark
Materials	Any component missing, damaged, or not as specified
Workmanship	Inadequate application of components, such as: incomplete sealing or closure of flap, improper taping, loose strapping or inadequate stapling Bulged or distorted container
Content	Number of bundles per container is more or less than required 1/

Content (cont'd)	Number of pairs of socks per bundle is more or less than required 2/
	Size shown on one or more socks not as specified on shipping container 2/

1/ For this defect, one container in the sample shall be examined.

2/ For this defect, one bundle shall be examined from each shipping container in the sample.

4.4.7 Palletization examination. The fully packaged and palletized end items shall be examined for the defects listed below. The lot size shall be expressed in units of palletized unit loads. The sample unit shall be one palletized unit load, fully packaged. The inspection level shall be S-1, and the AQL expressed in terms of defects per hundred units, shall be 6.5.

Examine	Defect
Finished dimensions	Length, width, or height exceeds specified maximum requirement
Palletization	Pallet pattern not as specified
	Load not bonded as specified
Weight	Exceeds maximum load limits
Marking	Omitted, incorrect, illegible, or of improper size, location, sequence, or method of application

5. PACKAGING

5.1 Preservation. Preservation shall be level A or Commercial as specified (see 6.2).

5.1.1 Level A preservation. Each pair of socks shall be folded to approximately 11-1/2 inches in length. Six pairs of socks of one size only shall be evenly stacked in a bundle, with every other pair reversed end for end, and securely tied at each end with cotton tape or twine.

5.1.2 Commercial preservation. Socks shall be preserved in accordance with ASTM D 3951.

5.2 Packing. Packing shall be level A, B, or Commercial as specified (see 6.2).

5.2.1 Level A packing. Seventy-two pairs of socks of one size only, preserved as specified in 5.1, shall be packed in a fiberboard shipping container conforming to style RSC-L, grade V2s of PPP-B-636. The inside of each fiberboard shipping container shall be fitted with a box liner conforming to type CF, class weather-resistant, variety DW, grade V15c of PPP-B-636. Level A unit packs shall be packed flat two in length, three in width, and two in depth within a shipping container. Inside dimensions of each container shall approximate 23-1/2 inches in length, 15 inches in width, and 15 inches in depth. Approximate dimensions are furnished as a guide only. Not less than 8 ounces of napthalene flakes shall be evenly distributed throughout the contents of each shipping container (see 6.5). Each container shall have the contents completely covered on the top and bottom with a sheet of 30-pound minimum basis weight kraft paper conforming to A-A-203. Each shipping container shall be closed, waterproofed, and reinforced in accordance with PPP-B-636, except that the inspection shall be in accordance with 4.4.6. Boxes shall be arranged in accordance with MIL-L-35078 for the type and class load specified (see 6.2). Strapping shall be limited to nonmetallic strapping, except for type II, class F loads.

5.2.2 Level B packing. Seventy-two pairs of socks of one size only, preserved as specified in 5.1, shall be packed in a fiberboard shipping container conforming to style RSC-L, type CF, (variety SW) or SF, class domestic, grade 275 of PPP-B-636. The inside of each fiberboard shipping container shall be fitted with a box liner conforming to type CF, class domestic, variety DW, grade 275 of PPP-B-636. Level A unit packs shall be packed flat two in length, three in width, and two in depth within a shipping container. Inside dimensions of each container shall approximate 23-1/2 inches in length, 15 inches in width, and 15 inches in depth. Approximate dimensions are furnished as a guide only. Not less than 8 ounces of napthalene flakes shall be evenly distributed throughout the contents of each shipping container (see 6.5). Each container shall have the contents completely covered top and bottom with a sheet of 30-pound minimum basis weight kraft paper conforming to A-A-203. Each shipping container shall be closed in accordance with method II as specified in the appendix of PPP-B-636, except that the inspection shall be in accordance with 4.4.6.

5.2.2.1 Weather-resistant packaging. When specified (see 6.2), the shipping container shall be a grade V3c, V3s, or V4s fiberboard box fabricated in accordance with PPP-B-636 and closed in accordance with method III as specified in the appendix of PPP-B-636, except that inspection shall be in accordance with 4.4.6.

5.2.3 Commercial packing. Socks, preserved as specified in 5.1, shall be packed in accordance with ASTM D 3951.

5.3 Palletization. When specified (see 6.2), men's winter socks, packed as specified in 5.2.2 or 5.2.3, shall be palletized on a 4-way entry pallet in accordance with load type Ia of MIL-STD-147. Pallet type shall be type I (4-way entry pallet), type IV, or type V in accordance with MIL-STD-147. Each prepared load shall be bonded with straps in accordance with bonding means C and D or film bonding means F or G. Pallet pattern shall be number 3 in accordance with the appendix of MIL-STD-147.

5.4 Marking. In addition to any special marking required by the contract or purchase order, unit packs, shipping containers, and palletized unit loads shall be marked in accordance with MIL-STD-129 or ASTM D 3951, as applicable.

6. NOTES

6.1 Intended use. The socks are intended for use by male military personnel in the Department of Defense.

6.2 Acquisition requirements. Acquisition documents must specify the following:

a. Title, number, and date of this specification.
b. Size 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 2.1.1 and 2.2).
d. When a first article is required (see 3.1, 4.3, and 6.3).
e. Levels of preservation and packing (see 5.1 and 5.2).
f. Type and class of unit load required (see 5.2.1).
g. When weather-resistant grade fiberboard shipping containers are required for level B packing (see 5.2.2.1).
h. When palletization is required (see 5.3).

6.3 First article. When a first article is required, it shall be inspected and approved under the appropriate provisions of FAR 52.209. The first article should be a preproduction sample. The contracting officer should specify the appropriate type of first article and the number of units to be furnished. The contracting officer should also include specific instructions in acquisition documents regarding arrangements for selection, inspection, and approval of the first article.

6.4 Sample. For access to samples, address the contracting activity issuing the invitation for bids or request for proposal.

6.5 Naphthalene flakes. The naphthalene flakes requirement is not applicable when Government furnished material of wool or part wool content has been mothproof treated (see 5.2.1 and 5.2.2).

6.6 Toe closing seam. Use of the following equipment, cutter setting, stitch setting and thread tension has resulted in flat, lump-free toe closing seams:

Sewing machine - Merrow MG-4D-67 using needle plate part no. EXC643-8, with 5/32 inch width needle plate finger, EXC8331-1 presser foot finger, EXC833-2 presser foot, EXC643-8 feed dog (A81-44 Rear, A88-12 Front), with No. 16 front cam and No. 32 rear cam. Set cutter setting as far to the left as possible with 1/32 inch away from needle plate at lower blade. Set at 23 to 27 stitches/inch. Do not use tight needle thread tension.

6.7 Subject term (key word) listing.

Knit
Foot
Terry stitch
Tubular

6.8 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.

Custodians:

Army - GL
Navy - NU
Air Force - 99

Review activities:

Army - MD
Air Force - 82
DLA - CT

User activity:

Navy - MC

Preparing activity:

Army - GL

(Project 8440-0187)

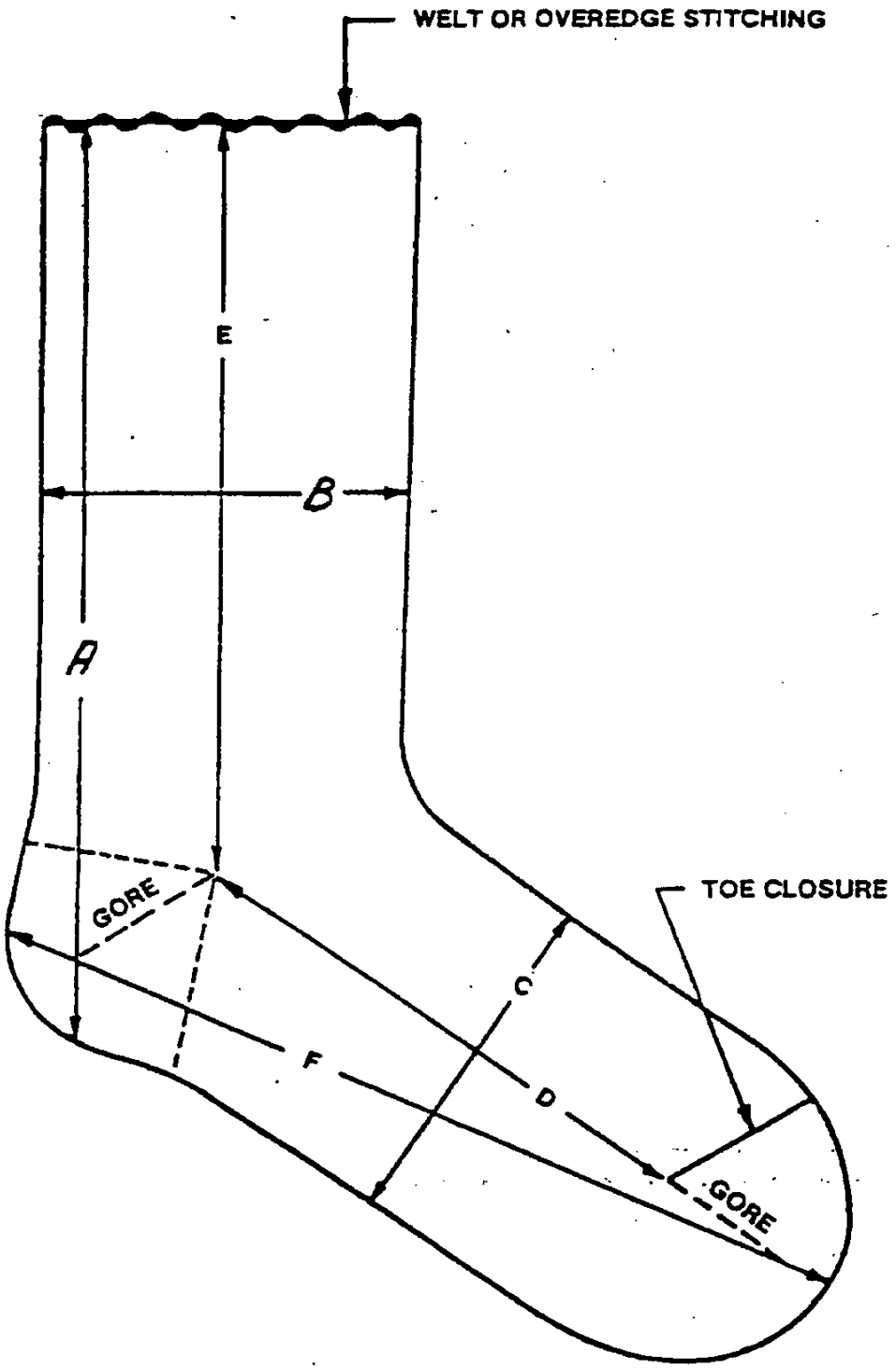

Figure 1. Sock's, Men's: Winter (Wool and Cotton)