

INCH-POUND

MIL-C-17415F
31 May 1989
 SUPERSEDING
 MIL-C-17415E
 16 April 1964
 (See 6.5)

MILITARY SPECIFICATION

CLOTH, COATED, AND WEBBING, INFLATABLE BOAT
 AND MISCELLANEOUS USE

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

1. SCOPE

1.1 Scope. This specification establishes the requirements for cured coated cloth and webbing.

1.2 Classification. The coated cloth and webbing shall be of the following types, classes, and nominal weights, as specified (see 6.2):

Type 1	- 5.0 ounces per square yard.
Type 2	-
Class A	- 8.5 ounces per square yard.
Class B	- 6.8 ounces per square yard.
Class C	- 20.5 ounces per square yard.
Type 3	- 7.6 ounces per square yard.
Type 4	-
Class A	- 15.0 ounces per square yard (natural rubber).
Class B	- 10.0 ounces per square yard (synthetic rubber).
Type 5	- 23.4 ounces per square yard.
Type 6	- 20.5 ounces per square yard.
Type 7	-
Class A	- 30.0 ounces per square yard (natural rubber).
Class B	- 32.0 ounces per square yard (synthetic rubber).

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

FSC 8305

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MIL-C-17415F

Type 8	-
Class A	- 6.5 ounces per square yard (natural rubber).
Class B	- 6.5 ounces per square yard (synthetic rubber).
Type 9	-
Class A	- 30.4 ounces per square yard (synthetic rubber).
Class B	- 33.4 ounces per square yard (natural rubber).
Type 10	- 30.5 ounces per square yard.
Type 11	- 34.5 ounces per square yard.
Type 12	- 45.1 ounces per square yard.
Type 13	- 12.1 ounces per square yard.
Type 14	- 45.3 ounces per square yard.
Type 15	- Webbing, 3-inch width, undyed.
Type 16	-
Class A	- 22.8 ounces per square yard (synthetic rubber).
Class AA	- 16.8 ounces per square yard (synthetic rubber).
Class B	- 22.8 ounces per square yard (natural rubber).
Type 17	- 40.5 ounces per square yard.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards 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).

SPECIFICATION

MILITARY

MIL-W-17337 - Webbing, Textile, Woven Nylon.

STANDARDS

FEDERAL

FED-STD-191 - Textile Test Methods.

FED-STD-595 - Colors.

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.)

MIL-C-17415F

2.2 Non-Government publications. The following documents form 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 297 - Standard Methods for Rubber Products - Chemical Analysis. (DoD adopted)
- D 412 - Standard Test Methods for Rubber Properties in Tension. (DoD adopted)
- D 572 - Standard Test Method for Rubber - Deterioration by Heat and Oxygen. (DoD adopted)
- D 750 - Standard Test Method for Rubber Deterioration in Carbon-Arc Weathering Apparatus. (DoD adopted)
- D 751 - Standard Methods of Testing Coated Fabrics. (DoD adopted)
- D 815 - Standard Method for Testing Coated Fabrics - Hydrogen Permeable.
- D 1682 - Standard Test Methods for Breaking Load and Elongation of Textile Fabrics.
- D 2261 - Standard Test Method for Tearing Strength of Woven Fabrics by the Tongue (Single Rip) Method (Constant-Rate-of-Extension Tensile Testing Machine). (DoD adopted)
- D 3776 - Standard Test Methods for Mass Per Unit Area (Weight) of Woven Fabric.

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

(Non-Government standards and other publications are normally available from the 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.

MIL-C-17415F

3. REQUIREMENTS

3.1 Materials.

3.1.1 Cloth. The base material used in the construction (see table I) of coated cloth shall be cotton or nylon which shall meet the requirements established by this specification. Cotton cloth shall be unbleached, contain no more than 3 percent maximum nonfibrous materials and be chemically neutral, having a pH between 6.5 and 7.6. Cotton cloth weighing up to and including 5 ounces per square yard shall be singed. Nylon cloth shall be bright, unbleached, of high tenacity, improved heat and light resistant (nylon 6 or 6/6), heat set and scoured, contain no more than 3 percent maximum nonfibrous materials and have a pH between 5.0 and 8.0. Length and width shall be as specified (see 4.3 and 6.2). Asbestos is prohibited.

TABLE I. Cloth and webbing construction.

Used in type	Fiber	Breaking strength, minimum pounds per inch of width		Weight, maximum ounces per square yard
		Warp	Filling	
1 and 8	Nylon	40	40	1.0
2	Nylon	150	140	2.5
3	Cotton	40	40	2.1
4	Cotton	80	80	4.5
5 and 9	Nylon	300	300	5.4
6, 10, and 11	Nylon (pile cloth) ^{1/}	N REQT ^{2/}	N REQT	8.5
7	Cotton	150	145	7.5
12	Nylon (pile cloth) ^{2/}	N REQT	N REQT	8.2
13	Nylon	195	195	3.1
14	Nylon	600	600	13.3
15	Nylon webbing	^{3/} 3000	N REQT	2.2 linear yard
16	Nylon	N REQT	N REQT	4.8
17	Nylon	400	400	8.5

^{1/} Types 6, 10, and 11 cloth shall be composed of two nylon fabrics joined by a minimum of 30 pile yarns per square inch so that the fabrics are spaced a minimum of 2-1/4 inches apart or a maximum of 3 inches apart after heat setting. The warp yarn shall be 2 ply, 70 denier yarn, and the filling shall be a single, 210 denier yarn before heat setting. The pile warp yarn shall be either 2 ply, 70 denier yarn or a single, 210 denier yarn before heat setting.

*MIL-C-17415F

Footnotes - Continued

- ^{2/} The pile cloth of type 12 shall be composed of two nylon fabrics joined by a minimum of 30 pile yarns per square inch so that the fabrics are spaced a minimum of 2 inches apart or a maximum of 2-1/4 inches apart after heat setting. Ply and denier of the warp, filling, and pile warp yarns shall be as specified for types 6, 10, and 11.
- ^{3/} Full width.
- ^{4/} No requirement (N REQT).

3.1.1.1 Nylon webbing. The nylon webbing used shall conform to MIL-W-17337 except it shall be undyed and coated in accordance with table II.

3.2 Coatings.

3.2.1 Application. The base fabric may be treated before coating with an adhesive compound or a dip treatment to insure adhesion of the coating compound. Coatings shall be applied by either the spreader or calendar process so that the finished fabric will meet the requirements of this specification. The fabric weight, weight of coating, and finished fabric weight of each of the types of coated cloth shall be as shown in tables I and II.

MIL-C-17415F

TABLE II. Coatings and sequence of plies.

Type and class	Coating	Cloth	Coating	Cloth weight ^{1/} max ounces per square yard	Coating	Cloth	Coating	Total weight ^{1/} ounces per square yard	
								Min	Max
1	-	-	1.5 synthetic	1.0 nylon	2.5 synthetic	-	-	4.7	5.6
2A	-	-	3.0 synthetic	2.5 nylon	3.0 synthetic	-	-	8.0	9.0
2B	-	-	1.5 synthetic	2.5 nylon	2.8 synthetic	-	-	6.3	7.8
2C	-	-	9.0 synthetic	2.5 bias nylon	9.0 synthetic	-	-	19.0	22.0
3	-	-	1.0 synthetic	2.1 cotton (bias)	4.5 synthetic	-	-	7.2	8.0
4A	-	-	2.0 natural	4.5 cotton (straight)	8.5 natural	-	-	14.5	15.5
4B	-	-	2.0 synthetic	4.5 cotton (bias)	3.5 synthetic	-	-	9.5	10.5
5	-	-	1.5 synthetic	5.4 nylon	16.5 synthetic	-	-	22.2	24.6
6	-	-	6.0 synthetic	8.5 nylon	6.0 synthetic	-	-	19.5	21.5
7A	-	-	11.5 natural	7.0 cotton (straight)	11.5 natural	-	-	28.5	31.5
7B	-	-	12.5 synthetic	7.0 cotton (straight)	12.5 synthetic	-	-	28.5	35.0
8A	-	-	2.0 natural	1.0 nylon (bias)	3.5 natural	-	-	6.2	6.8
8B	-	-	2.0 synthetic	1.0 nylon	3.5 synthetic	-	-	6.2	6.8
9A	-	-	12.5 synthetic	5.4 nylon	12.5 synthetic	-	-	28.5	31.5
9B	-	-	14.0 natural	5.4 nylon	14.0 natural	-	-	30.0	34.0
10	1.5 synthetic	1.0 nylon	8.5 synthetic	8.5 nylon	8.5 synthetic	1.0 nylon	1.5 synthetic	28.0	31.0
11	5.0 synthetic	2.0 nylon	6.0 synthetic	8.5 nylon	6.0 synthetic	2.0 nylon	5.0 synthetic	31.8	35.2
12	16.8 synthetic	1.0 nylon	8.3 synthetic	8.2 nylon	8.3 synthetic	1.0 nylon	1.5 synthetic	42.0	46.0
13	-	-	4.5 synthetic	3.1 nylon	4.5 synthetic	-	-	11.5	12.7
14	-	-	16.0 synthetic	13.3 nylon	16.0 synthetic	-	-	42.3	47.3
15	-	-	2/ synthetic	nylon webbing	2/ synthetic	-	-	-	-
16A	-	-	9.0 synthetic	4.8 nylon	9.0 synthetic	-	-	22.0	27.0
16AA	-	-	8.5 synthetic	4.8 nylon	3.5 synthetic	-	-	15.0	18.5
16B	-	-	9.0 natural	4.8 nylon	9.0 natural	-	-	22.0	27.0
17	-	-	16.0 synthetic	8.5 nylon	16.0 synthetic	-	-	38.0	42

^{1/} See table V.^{2/} Friction or spread coated to protect against sunlight aging and to provide a base for cementing. Coating shall be not less than 1 mil thick.

MIL-C-17415F

3.2.2 Characteristics. The compounds used shall be such that when equivalently cured in sheet form as in the coated cloth, they shall have a minimum tensile strength of 1800 pounds per square inch (lb/in²) and a minimum elongation of 500 percent (see table III). Materials which will result in a waxy finish, or which will be water soluble shall not be used. The synthetic rubber coating compounds shall retain a tensile strength of not less than 75 percent of the original strength after being cured and after exposure to accelerated light aging (see table III).

3.2.2.1 Natural rubber. The natural rubber compound shall contain not less than 78 percent by volume of new plantation rubber (see table III).

3.2.2.2 Synthetic rubber. The synthetic rubber compound shall contain not less than 60 percent nor more than 75 percent by volume of polymerized chloroprene (see table III).

3.3 Color. Unless otherwise specified (see 6.2), the color shall be that which naturally evolves as a result of the compounding ingredients used except for type 2, class B coated cloth which shall be international orange number 12197 as specified in FED-STD-595.

MIL-C-17415F

TABLE III. Rubber sheets.

Characteristic	Requirement	Test method	Number of determinations per individual unit of product	Results reported as
Coating compound identification	Table II	ASTM D 297	1	Pass or fail
Tensile strength (initial)	3.2.2	ASTM D 412	3	Median value three determinations to nearest 10 lb/in ²
Tensile strength after accelerated heat-light aging	3.2.2	ASTM D 750	3	To the nearest 1.0 percent based on comparison of the median value, with the median of the initial tensile strength
Percent natural rubber (by vol)	3.2.2.1	4.1.1	—	—
Percent synthetic rubber (by vol)	3.2.2.2	4.1.1	—	—
Elongation	3.2.2	ASTM D 412	3	Median value of three determinations to nearest 5.0 percent

3.4 Physical properties of coated cloth. The coated cloth shall have the physical properties specified in table IV.

MIL-C-17415F

TABLE IV. Strength requirements of coated fabrics.

Type	Coating adhesion (lb per inch) (minimum)	Breaking strength (pounds) (minimum) per inch of width		Tearing strength (pounds) (minimum)	
		Warp	Filling	Warp	Filling
1	5	50	50	N REQ ^{4/}	N REQ
2A	5	N REQ	N REQ	N REQ	N REQ
2B	5	180	165	8	8
2C	5	N REQ	N REQ	N REQ	N REQ
3	5	N REQ	N REQ	N REQ	N REQ
4A	5	N REQ	N REQ	N REQ	N REQ
4B	5	N REQ	N REQ	N REQ	N REQ
5	15	360	360	25	25
6	8	110	180	7	13
7A	10	165	160	4	4
7B	15	165	160	4	4
8A	5	N REQ	N REQ	N REQ	N REQ
8B	5	N REQ	N REQ	N REQ	N REQ
9A	12	360	360	21	21
9B	8	360	360	15	15
10	1/8	N REQ	N REQ	N REQ	N REQ
11	1/8	N REQ	N REQ	N REQ	N REQ
12	1/8	N REQ	N REQ	N REQ	N REQ
13	8	225	225	12	12
14	12	600	600	60	60
15	N REQ	^{2/} 3000	N REQ	N REQ	N REQ
16A	16	300	300	16	16
^{3/} 16AA	16	300	300	16	16
16B	8	300	300	16	16
17	16	400	400	25	25

^{1/} The adhesion of the plies and one face of the cloth shall be tested (see table V), but the two strips shall be plied before curing. The assembled specimens shall be cured along with and identically to the end item made from the coated fabric.

^{2/} Full width.

^{3/} Rip stop weave (approximately 2 rip stops per inch, warp and fill).

^{4/} No requirement (N REQ).

3.4.1 Aging.

3.4.1.1 Resistance to accelerated aging. The coating of the cloth and webbing shall show no signs of becoming stiff and brittle or soft and tacky when exposed for 4 days (see table V). Loss in initial tensile strength after aging shall not exceed 15 percent for fabrics coated with natural rubber compound or 10 percent for fabrics coated with synthetic rubber compound.

MIL-C-17415F

3.4.1.2 Resistance to accelerated weathering. Synthetic rubber coating shall not crack when the material is bent, more heavily coated side out, over a 1/8-inch diameter rod after exposure for 100 hours without "Corex D" filters (see table V). One side of the cloth only shall be tested which shall be the side facing the arc in the testing apparatus. After weathering, the synthetic rubber coated cloth shall show a loss in initial tensile strength not exceeding the following:

<u>Nominal finished weight</u>	<u>Percent loss (maximum)</u>
Above 10 ounces	10
7 to 10 ounces	20
Under 7 ounces	No requirement

3.4.2 Temperature resistance.

3.4.2.1 Resistance to heat (blocking). The coated cloth and webbing shall show a rating of not more than 2 (see table V).

3.4.2.2 Resistance to low temperature. The coating shall not crack when exposed to low temperatures (see table V).

3.4.3 Permeability. When tested as specified in 4.3 the permeability to hydrogen of the coated cloth, expressed in liters per square meter per 24 hours, shall not exceed the following:

<u>Finished fabric</u>	<u>Permeability (liters) (maximum)</u>
Types 6, 7, 9, 10, 11, 12, 14, 16, and 17	2.0
Types 4, 8, 13	11.8
Types 1, 2, 3, 5, and 15	No requirement

3.4.4 Hydrostatic resistance. The hydrostatic resistance of types 2, 3, and 5 cloth shall be not less than 100 lb/in² (see table V).

3.5 Roll lengths. There shall be not more than two pieces in any roll of coated fabric, and neither piece shall be less than 10 yards long.

3.6 Workmanship. The finished cloth and webbing shall conform to the quality and grade of product established by this specification. Defects shall not exceed the level specified.

MIL-C-17415F

TABLE V. Instructions for testing.

Characteristic	Requirement	Test method	Number of determinations per individual unit of product	Results reported as
Total weight oz/sq yd, minimum and maximum	Table II	ASTM D 3776 option A	5	Avg of the five determinations to the nearest 0.1 ounce
Sequence of plies (construction)	Table II	Visual examination of cross section	1	Pass or fail
Coating adhesion lb/inch, minimum	Table IV	FED-STD-191 method 5970	5	Avg of the five determinations to nearest 0.5 lbs computed to a 1 inch width
Blocking, maximum	3.4.2.1	FED-STD-191 method 5872	2	Applicable rating ^{1/}
Permeability to hydrogen, maximum	3.4.3	ASTM D 815	3	Avg of the three determinations to the nearest liter
Tearing strength (lb, minimum): warp filling	Table IV	ASTM D 2261	5 5	Avg of the five determinations to the nearest 0.1 lb
Breaking strength (lb, minimum): warp filling	Table IV	ASTM D 1682 grab method	5	Avg of all determinations for each direction separately to 1.0 lb; also lot avg for comparison with avg after aging and after weathering
Resistance to 100 hrs. accelerated weathering	3.4.1.2	FED-STD-191 method 5804	5	Pass or fail (evidence of cracking)
Breaking strength after accelerated weathering max loss, percent (100 hrs.) not applicable to types 4A, 7A, 8A, 9B, and 16B warp filling	3.4.1.2	ASTM D 1682 grab method	5 5	Avg of all determinations in each direction compared with avg of all determinations before exposure, reported in percent loss for warp and filling
Resistance to accelerated aging	3.4.1.1	ASTM D 572 and visual examination for brittleness, softness, or tackiness	5	Pass or fail
Breaking strength after accelerated aging max percent loss warp filling	3.4.1.1	ASTM D 1682 grab method	5 5	Avg of all determinations in each direction separately, compared to nearest 1.0 lb with avg of all determinations before exposure, reported in percent loss
Resistance to low temperature for $9\frac{1}{2} \pm 1/2$ hrs at $-20 \pm 2^\circ\text{F}$	3.4.2.2	FED-STD-191 ^{2/} method 5874	3	Pass or fail (evidence of cracking)
Hydrostatic resistance, minimum (types 2, 3 and 5 only)	3.4.4	ASTM D 751	5	Avg of the five determinations to the minimum (types 2, 3, nearest 1.0 lb/in ²)

See footnotes at top of next page.

MIL-C-17415F

^{1/} To be reported separately for each determination in the unit of product.

^{2/} Except that hydrostatic determination is not required and that specimen shall be subjected to minus 20 ± 2 degrees Fahrenheit ($^{\circ}\text{F}$) for $94 \pm 1/2$ hours before testing.

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 the 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 (see 6.3). 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.

4.2 Quality conformance inspection. Quality conformance inspection shall be in accordance with 4.2.1 through 4.3.

4.2.1 Base cloth. The base fabric shall be tested as specified in table VI. The physical and chemical values specified in 3.1.1 and table I apply to the average of the determinations made on a unit of product for the test purposes specified in the applicable test method. The unit of product shall be 1 yard, full width, of the uncoated base fabric. The sample size shall be in accordance with table VII. The lot shall be unacceptable if any unit fails to meet any of the requirements specified.

MIL-C-17415F

TABLE VI. Test methods.

Characteristic	Requirement	Test method	Number of determinations per individual unit of product	Results reported as
Cotton cloth: color	3.1.1 (unbleached)	Visual	1	Pass or fail
Nonfibrous materials, percent max	3.1.1 (3 percent max)	FED-STD-191 method 2611	2	Avg of the two determinations to the nearest 0.1 percent
pH of water extract	3.1.1 pH 7 = neutral	FED-STD-191 method 2811	2	Avg of the two determinations to the nearest 0.1 pH
Weight, max oz/sq yd	Table I	ASTM D 3776 option A	5	Avg of the five determinations to the nearest 0.1 ounce
Breaking strength lb, min warp filling	Table I	ASTM D 1682 grab method	5 5	Avg of the five determinations to the nearest 1.0 lb, separately for warp and filling
Nylon cloth: material identification	All nylon	FED-STD-191 method 1530	1	Pass or fail
pH of water extract	3.1.1 pH 7= neutral	FED-STD-191 method 2811	2	Avg of two determinations to nearest 0.1 pH
Rip stops	Table IV	Visual	1	Pass or fail
Weight, max oz/sq yd	Table I	ASTM D 3776	5	Avg of the five determinations to the nearest 0.1 ounce
Breaking strength ^{1/} lb, min warp filling	Table I	ASTM D 1682 grab method	5 5	Avg of the five determinations to the nearest 1.0 lb, separately for warp and filling
Weave ^{2/}	3.1.1 and table I	Visual	1	Pass or fail
Piles per inch, min ^{2/}	Table I	Visual	2	Avg of the two counts to the nearest full number
Spacing between the two fabric surfaces min/max ^{2/}	Table I	Visual	3	Avg of the three measurements to the nearest 1/8 inch
Yarn count (den) and yard ply before heat setting ^{2/}	Table I	Visual	1	Pass or fail, reported separately for warp, filling and pile warp

See footnotes at top of next page.

MIL-C-17415F

- ^{1/} Breaking strength shall not be tested on the double (pile) fabrics (8.5 and 8.2 oz) used for types 6, 10, 11, and 12.
- ^{2/} To be tested only on the double (pile) fabrics (8.5 and 8.2 oz) used for types 6, 10, 11, and 12.

4.2.2 Coating compound. The rubber used for coating shall be tested as specified in table III. The physical and chemical values specified in 3.2.2 apply to each unit of product tested. The unit of product for test purposes shall be one 6 by 6 by 0.07 to 0.80 inch sheet of rubber, cured in the same degree and manner as the finished product. The sample size shall be as shown in table VII. The lot shall be unacceptable if any unit fails to meet any of the specified requirements.

TABLE VII. Sample size.

Lot size (units) ^{1/}	Sample size
800 or less	2
801 to 22,000	3
22,001 and over	5

- ^{1/} Lot size expressed in units of pounds for 4.2.2 and in yards for 4.2.4.1 and 4.2.4.2.

4.2.3 Nylon webbing. Nylon webbing shall be tested as required for the 3-inch webbing in MIL-W-17337, except that it shall be undyed.

4.2.4 Examination of the coated and cured cloth. Coated and cured cloth shall be tested in accordance with 4.2.4.1 through 4.3. Classification of defects shall be as shown in table VIII.

MIL-C-17415F

TABLE VIII. Classification of defects during the yard-by-yard examination.

Category	Defect
Major 101	Abrasion mark - resulting in a weak place or evidence of coating removed. ^{1/}
102	Blister - any soft (hollow), clearly noticeable lump or tunnel.
103	Hard lump (solid) ^{1/} , more than 1/2 inch in its longest dimension.
104	Crease or wrinkle embedded, or resulting in doubling, or adhesion of surfaces against each other, or in incomplete curing.
105	Cut (including cuts through coating only), hole, tear, or pin hole. Any light areas or windows (poor distribution of pigments). More than three per linear yard. ^{1/}
106	Uneven coating - thin areas where coating compound is missing or insufficient. Heavily coated areas, noticeably stiffer than adjoining, unaffected cloth.
107	Selvage - scalloped, deepest indentation 1/2 inch or more; tight, resulting in pucker or waviness in adjoining cloth.
108	Uneven tension - puckers, waviness, or ridges that will not flatten under manual pressure.
109	Spot, stain, or streak other than coating or pigment, and more than 1/2 inch in its longest dimension.
110	Width - less than specified.
111	More than two pieces in a roll.
Minor	None defined.

^{1/} Clearly visible at normal inspection distance (about 3 feet).

MIL-C-17415F

4.2.4.1 Yard-by-yard examination. The required yardage of each roll shall be inspected and visual defects classified as listed. The material shall be examined on one side; however, the sample shall be alternated from roll to roll. The material shall also be through-lighted for pinholes. The defects listed in table VIII shall be counted regardless of their proximity to each other, except where two or more defects represent a single local condition of the cloth, in which case only the more serious defects shall be counted. A continuous defect shall be counted as one defect for each warpwise yard or fraction thereof in which it occurs. The unit of product for this examination shall be 1 linear yard. The inspection level shall be level H in accordance with MIL-STD-105. The lot size shall be expressed in units of 1 yard each. The number of pieces from which the sample is to be selected shall be in accordance with table IX. An approximate equal number shall be examined in each piece of the sample.

TABLE IX. Sampling for examination.

Lot size in yards	Sample size in pieces	Acceptance number
^{1/} Up to 1,300	3	0
1,301 to 3,300	5	0
3,301 to 8,000	7	1
8,001 to 22,000	10	1
22,001 and up	15	2

^{1/} If the lot contains fewer than three pieces, each piece in the lot shall be examined.

4.2.4.2 Overall examination. Each defect listed in table X shall not be counted more than once in each piece examined. The unit of product for this examination shall be one piece. The lot shall be unacceptable if any defects listed in table X are found.

TABLE X. Classification of defects during overall examination.

Category	Defect
Major	
101	Wrong color (see 3.3).
102	Objectionable odor.
103	Not clean throughout.
104	Adhering to successive layers on roll (resists unrolling), tacky, cracked, or brittle.
105	Uneven coating throughout.

MIL-C-17415F

4.2.4.3 Examination for length.

4.2.4.3.1 Individual pieces. The piece shall be examined for gross length. Any gross length found to be less than the minimum specified or more than two yards below the gross length marked on the ticket shall be considered a defect with respect to length. The unit of product for this examination shall be one piece.

4.2.4.3.2 Total yardage in sample. The lot shall be unacceptable if the total of the actual gross lengths of pieces in the sample is less than the total of the gross lengths marked on the ticket.

4.3 Testing of end item. The physical and chemical values specified in section 3 apply to each unit of product tested and shall be reported as specified in the applicable test provisions of table V, except for loss of strength after aging, and after weathering, which shall be based on the average of all determinations made for a lot. Length and width shall be determined by using a standard ruler with 1/16 inch graduations (see 3.1.1). End item tests are not required for the coated webbing (type 15). The unit of product for test purposes shall be 3 continuous yards (full width) of coated cloth cured in the same manner as the items for which it is used. The sample size (number of such units of products) shall be as shown in table VII. The lot shall be unacceptable if any unit fails to meet one or more of the requirements specified.

5. PACKAGING

5.1 This section is not applicable to this specification.

6. NOTES

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

6.1 Intended use. This material is intended for use in inflatable boats and accessories.

6.2. Acquisition requirements. Acquisition documents must specify the following:

- (a) Title, number, and date of this specification.
- (b) Type, class, and weight 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) Length and width of coated cloth or length and width of coated webbing required (see 3.1.1).
- (e) Color (see 3.3).

MIL-C-17415F

6.3 Consideration of data requirements. The following data requirements should be considered when this specification is applied on a contract. The applicable Data Item Descriptions (DID's) should be reviewed in conjunction with the specific acquisition to ensure that only essential data are requested/provided and that the DID's are tailored to reflect the requirements of the specific acquisition. To ensure correct contractual application of the data requirements, a Contract Data Requirements List (DD Form 1423) must be prepared to obtain the data, except where DoD FAR Supplement 27.475-1 exempts the requirement for a DD Form 1423.

<u>Reference Paragraph</u>	<u>DID Number</u>	<u>DID Title</u>	<u>Suggested Tailoring</u>
4.1.1	DI-E-2121	Certificate of Compliance	-

The above DID's were those cleared as of the date of this specification. The current issue of DoD 5010.12-L, Acquisition Management Systems and Data Requirements Control List (AMSDL), must be researched to ensure that only current, cleared DID's are cited on the DD Form 1423.

6.4 Subject term (key word) listing.

Cotton
Nylon
Rubber synthetic

6.5 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 - ME
Navy - SH

Preparing activity:

Navy - SH
(Project 8305-0198)

Review activities:

Army - ME
DLA - CT

User activities:

Army - ME, CE
Navy - MC, CG

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