

MIL-C-12369F(GL)

28 June 1974

SUPERSEDING

MIL-C-12369E(GL)

25 July 1968

## MILITARY SPECIFICATION

### CLOTH, BALLISTIC, NYLON

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

#### 1. SCOPE

1.1 Scope. This specification covers nylon ballistic cloth having a specified minimum ballistic resistance.

\* 1.2 Classification. The cloth shall be of the following classes as specified:

- Class 1 - Natural or dyed, untreated
- Class 2 - Natural or dyed, water repellent treated
- Class 3 - Dyed, camouflage printed and water repellent treated

#### 2. APPLICABLE DOCUMENTS

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

#### SPECIFICATIONS

##### FEDERAL

PPP-P-1133 - Packaging and Packing of Synthetic Fiber Fabrics

##### MILITARY

MIL-P-46593 - Projectile, Calibers .22, .30, .50 and .20 MM  
Fragment - Simulating

#### STANDARDS

##### FEDERAL

FED-STD-4 - Glossary of Fabric Imperfections  
FED-STD-191 - Textile Test Methods

FSC 8305

MIL-C-12369F(GL)

MILITARY

- MIL-STD-105 - Sampling Procedures and Tables for Inspection  
by Attributes
- MIL-STD-662 - Ballistic Acceptance Test Method for Personal  
Armor Material

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

LAWS AND REGULATIONS:

Rules and Regulations Under the Textile Fiber Products Identification Act.

(Copies may be obtained without charge from the Federal Trade Commission, Washington, DC 20580.)

3. REQUIREMENTS

3.1 Standard sample. The dyed and/or camouflage printed and water-repellent treated cloth shall match their respective standards for shade and shall be equal to or better than the standard samples with respect to all characteristics for which the standards are referenced (see 6.4 and 6.5).

3.2 Bid sample and laboratory report approval. Unless otherwise specified (see 6.2), at the time of submission of a bid, the bidder shall submit to the contracting officer a sample of 15 yards and a certified copy of a recent laboratory report covering the cloth which he proposes to deliver. Unless otherwise specified by the contracting officer, the bidder shall certify that the sample submitted was manufactured using the facilities and processes he proposes to use in the manufacture of the cloth. This laboratory report shall contain test data which demonstrate that the finished cloth which the bidder proposes to deliver has been tested, and the extent to which the cloth complies with the performance requirements of this specification (see 6.7). Ballistic performance on the 15-yard sample, as indicated by the V<sub>50</sub> limit, shall be conducted in a Government laboratory to be designated by the contracting officer. Any of the following types of reports will be satisfactory from the standpoint of the non-ballistic requirements.

- (a) An independent or commercial laboratory report.
- (b) The bidder's own laboratory report.
- (c) A Government laboratory report from a contract within not more than six months of date of submission of bid.

MIL-C-12369F(GL)

The purpose of the above requirements is to assist the Government to determine the capability of bidders to manufacture a cloth meeting all requirements of this specification. The submission of an acceptable sample under this requirement shall not be construed as relieving a supplier from subsequently meeting all requirements of this specification on all deliveries.

### 3.3 Material.

3.3.1 Nylon. The nylon shall be bright, high tenacity, continuous filament, prepared from hexamethylene diamine and adipic acid, or its derivatives. It shall have a minimum melting point of 472°F. when tested as specified in 4.4.

3.3.2 Yarn. The warp and filling yarns shall be 1050 denier  $\pm$  3 percent, multifilament, with 3 to 4 turns per inch "Z" twist when tested as specified in 4.4.

### \* 3.4 Color.

3.4.1 Class 1 and class 2. Unless otherwise specified, the color of the finished class 1 and class 2 cloth shall be undyed (natural). When a color is specified (see 6.2), the color of the dyed and finished cloth shall match the standard sample and shall be obtained by piece dyeing using neutral pre-metallized dyes or neutral dyeing acid dyes, applied at a pH value consistent with the maximum temperature that can be maintained in the equipment used (see 6.5.1).

3.4.2 Class 3. The 4-color U.S. Army Pattern 1948 shall be obtained by roller or automatic screen printing. The dyeing of the ground shade and the printing of the cloth shall be accomplished with colorants as specified in 3.4.6 to provide a visual match to the several shades of the standard sample and to provide the infrared reflectance levels specified in 3.4.7. The cloth shall be dyed to ground shade approximately the Yellow Green 354 area of the pattern (see 6.6) and subsequently over printed using 4 colors, Yellow Green 354, Dark Green 355, Brown 356 and Black 357. A resin bonded pigment system shall be required.

\* 3.4.3 Matching. The color of the dyed or dyed and printed finished cloth shall match the standard sample under natural (north sky) daylight or artificial daylight having a color temperature of 7500° Kelvin and shall be a good approximation to the standard sample under incandescent lamplight at 2800° Kelvin.

MIL-C-12369F(GL)

3.4.4 Colorfastness. The dyed or dyed and printed finished cloth shall show colorfastness to light equal to or better than the standard sample when tested as specified in 4.4.

3.4.5 Pattern execution (class 3). The pattern shall reproduce the standard sample in respect to design, colors and registration of the respective areas. The pattern repeat of the dyed, printed and finished cloth shall be  $16.75 \pm .75$  inches. Each pattern area shall show solid coverage; skitteriness exceeding that shown by the standard sample in any of the printed areas will not be acceptable.

\* 3.4.6 Dye formulation (class 3). The areas of the pattern shall be printed with the following (see 3.4.2):

Yellow Green 354

Yellow	4234	RB
Red	4000	RB 60
Blue	4400	RB 21

Dark Green 355

Green	4330	RB
Black	4600	RB 10
Yellow	4234	RB
Red	4000	RB 60

Brown 356

Yellow	4234	RB
Red	4000	RB 60
Black	4600	RB 10

Black 357

Black	4600	RB 10
Brown	4800	RB

\* 3.4.7 Infrared reflectance (class 3). The following reflectance values measured at 1 micron shall be achieved in the printing (see 6.9), when tested as specified in 4.4.

ColorPercent

Yellow Green 354
Dark Green 355
Brown 356
Black 357

$67 \pm 5$
$28 \pm 2$
$16 \pm 2$
$8 \pm 2$

3.5 Physical requirements. The finished cloth shall conform to the physical requirements specified in table I when tested as specified in 4.4.

MIL-C-12369F(GL)

TABLE I. Physical requirements

Overall width (see 6.3.2)	Weight per sq. yd.		Yarns per inch (minimum)		Breaking strength (minimum)		Ultimate elongation (minimum)	
			Warp	Filling	Warp	Filling	Warp	Filling
Inches	Ounces				Pounds	Pounds	Percent	Percent
(min) (max)	(min)	(max)						
48 49	13.5	15.0	46	42	900	825	25	20

3.5.1 Weave. The weave shall be a 2 by 2 basket weave with two ends weaving as one and two picks weaving as one.

\* 3.6 Finish.

\* 3.6.1 Class 1. The class 1 cloth shall be thoroughly scoured (see 6.3.1) and heat-treated (see 6.3.3) and shall be processed as to meet the ballistic resistance requirements of this specification (see 3.12). The supplier shall certify that no additive or leading material has been applied in the manufacture or finishing of the cloth without specific approval of the contracting officer.

\* 3.6.2 Class 2 and 3. The class 2 and 3 cloth shall be thoroughly scoured (see 6.3.1) and heat-treated (see 6.3.3) and shall be given a water repellent treatment consisting of one of the approved water repellent formulations (see 6.8). The cloth shall be processed so as to meet the ballistic resistance requirements of this specification (see 3.12). The supplier shall certify that no additive or leading material has been applied in the manufacture or finishing of the cloth without specific approval of the contracting officer.

\* 3.7 Spray rating (class 2 and 3). The results of the three individual determinations on the water repellent treated cloth sample for spray rating shall be equal to or better than 100, 100, 90, when tested as specified in 4.4.

\* 3.8 Dynamic absorption (class 2 and 3). The treated cloth shall not have a dynamic absorption percent greater than 20, when tested as specified in 4.4.

\* 3.9 Resistance to organic liquid (class 2 and 3). The treated cloth shall not show wetting by n-dodecane, when tested as specified in 4.4.

\* 3.10 pH. The pH value of the water extract of the finished cloth shall be no lower than 5.0 nor more than 8.5 when tested as specified in 4.4.

MIL-C-12369F(GL)

3.11 Shrinkage. The finished cloth shall not shrink more than 3.0 percent in the warp and not more than 2.0 percent in the filling when tested as specified in 4.4.

3.12 Ballistic resistance. The ballistic limit  $V_{50}$  for 12 layers of unbonded cloth shall be not less than 1225 feet per second when tested as specified in 4.4.

3.13 Length and put-up. Unless otherwise specified (see 6.2), the cloth shall be furnished in rolls of continuous lengths of 80 to 120 yards. Each roll shall contain not more than two pieces and no single piece shall be less than 40 yards in length. The cloth shall be put in full width rolls as specified in PPP-P-1133.

3.14 Fiber identification. Each piece of cloth shall be labeled, ticketed or invoiced for fiber content in accordance with the Rules and Regulations Under the Textile Fiber Products Identification Act.

\* 3.15 Marking. The face side of the cloth shall be identified by applying a stamping on that side of the cloth with the word "Face" at each end of the roll.

3.16 Workmanship. The finished cloth shall conform to the quality and grade of product established by this specification. The occurrence of defects shall not exceed the point level specified.

#### 4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Certificate of compliance. Where certificates of compliance are submitted, the Government reserves the right to check test such items to determine the validity of the certification.

#### 4.2 Preacceptance inspection.

4.2.1 Bid sample inspection. The data contained in the report shall be obtained in accordance with the test methods specified in table II. Ballistic evaluation shall be made by the Government in accordance with the test method specified in table II except that the twelve panels will be cut from the single 15-yard sample.

MIL-C-12369F(GL)

\* 4.3 Quality conformance inspection. Sampling for inspection shall be performed in accordance with MIL-STD-105, except where otherwise indicated hereinafter.

\* 4.3.1 Component and material inspection. In accordance with 4.1 above, components and materials shall be tested in accordance with all the requirements of referenced specifications, drawings and standards unless otherwise excluded, amended, modified or qualified in this specification or applicable purchase documents.

4.3.2 Examination of the end item. Examination of the end item shall be in accordance with 4.3.2.1 through 4.3.2.4.

\* 4.3.2.1 Yard-by-yard examination. Each roll in the sample shall be examined on the face side only. When the total yardage in the roll does not exceed 100 yards, the entire yardage in the roll shall be examined. When the total yardage in the roll exceeds 100 yards, only 100 yards shall be examined. All defects as defined in section III of FED-STD-4, which are clearly noticeable at normal inspection distance (3 feet), shall be scored and assigned demerit points as listed in 4.3.2.1.1. No linear yard (increments of 1 yard on the measuring device of the inspection machine) from any one roll within the sample shall be penalized more than 4 points. The sample size shall be in accordance with the following:

<u>Lot size (yards)</u>	<u>Sample size (rolls) 1/</u>
3200 or less	8
3201 up to and including 10,000	13
10,001 and over	20

1/ No more than one roll shall be taken from any shipping container unless the number of shipping containers in the lot is less than the required number of rolls in which case all shipping containers shall be present in the sample.

The lot shall be unacceptable if the points per 100 square yards of the total yardage examined exceeds the following point values:

22.0 points for undyed (natural) cloth  
18.0 points for dyed or printed cloth

The lot shall be unacceptable if the points per 100 square yards of two or more individual rolls exceeds the following point values:

33.0 points for undyed (natural) cloth  
27.0 points for dyed or dyed and printed cloth



## MIL-C-12369F(GL)

If no individual roll exceeds the point level, the lot shall be acceptable with respect to this characteristic. If one roll exceeds the point level, a second sample of 20 rolls shall be examined only for individual roll quality examination. The lot shall be unacceptable if one or more rolls in the second sample exceeds the point level. Point computation for lot quality and individual roll quality shall be as follows:

$$\frac{\text{Total points scored in sample} \times 3600}{\text{Contracted width of cloth (inches)} \times \text{Total yards inspected}} = \text{Points per 100 square yards}$$

4.3.2.1.1 Demerit points. Demerit points shall be assigned as follows:

For defects up to 3 inches in any dimension	- one point
For defects exceeding 3 inches, but not exceeding 6 inches in any dimension	- two points
For defects exceeding 6 inches but not exceeding 9 inches in any dimension	- three points
For defects exceeding 9 inches in any dimension	- four points

The following defects, when present, shall be scored four points for each yard in which they occur:

Baggy, ridgy or wavy cloth  
 Objectionable odor  
 Overall uncleanness  
 Width less than 48 inches or more than 49 inches  
 Mottled or cloudy (dyed fabrics only)  
 Skitteriness of pattern exceeding that shown by the standard sample (class 3)  
 Pattern repeat not within tolerances (class 3)  
 Pattern repeat not equal to the standard sample (class 3)

4.3.2.2 Examination for length.

4.3.2.2.1 Individual rolls. During the yard-by-yard examination, each roll in the sample shall be examined for length. Any roll found to be less than the minimum specified, any roll found to be more than 2 yards less the length marked on the ticket, any roll found to contain more than two pieces, or any piece of less than 40 yards in length shall be considered a defect with respect to length. The lot shall be unacceptable if two or more rolls in the sample are defective in respect to length.

4.3.2.2.2 Total yardage in sample. The lot shall be unacceptable if the total of the actual lengths of rolls in the sample is less than the total of the lengths marked on the tickets.



MIL-C-12369F(GL)

4.3.2.3 Examination for shade. During the yard-by-yard examination of the dyed or dyed and printed cloth, each roll in the sample shall be examined for shade. Two or more rolls in the sample off shade, shaded side to side, side to center, or end to end shall be cause for rejection of the entire lot represented by the sample.

- \* 4.3.2.4 Examination for face identification and compliance with Textile Fiber Products Identification Act. During the yard-by-yard examination, each roll in the sample shall be examined for the defects listed below. The lot shall be unacceptable if two or more of the following defects are present:

Face identification missing from either or both ends.  
 Face identification on wrong side (classes 1 and 2).  
 Not labeled in accordance with the Rules and Regulations under the Textile Fiber Products Identification Act.

4.3.3 Examination of preparation for delivery requirements. An examination shall be made in accordance with the provisions of PPP-P-1133 to determine that packaging, packing and marking requirements comply with section 5 requirements.

4.4 Testing of the end item. Methods of testing specified in FED-STD-191, wherever applicable, and as specified in table II shall be followed. Except for ballistic resistance, the physical and chemical values specified in section 3 apply to the results of the determinations made on a sample unit for test purposes as specified in the applicable test method. For the ballistic resistance characteristic, the lot average of all sample units in the sample shall apply. Except for ballistic resistance, the lot shall be unacceptable if one or more sample units fail to meet any requirement specified. For ballistic resistance, the lot shall be unacceptable if the lot average value fails to meet the minimum ballistic resistance requirements (see 3.12). The sample unit for test purpose shall be as follows:

(a) Ballistic tests. Four cuts of 15 inches and full width of the finished cloth with each cut originating from a different roll.

(b) For all other tests. One cut 3 yards long and full width of the finished cloth originating from one of the four rolls from which the sample unit of the ballistic test is drawn. Each individual cut comprising the sample unit (a) and (b) shall be marked to indicate supplier's piece, lot and roll number, and the Government lot number. The lot size shall be expressed in units of 1 linear yard. The sample size shall be as shown below:

<u>Lot size (yards)</u>	<u>Sample size</u>
3200 or less	4
3201 up to and including 8000	5
8001 up to and including 22,000	7
22,001 up to and including 110,000	10
110,001 and over	15

MIL-C-12369F(GL)

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TABLE II. Test methods

<u>Characteristic</u>	<u>Requirement paragraph</u>	<u>Test method</u>
Nylon		
Identification	3.3.1	1530 <u>1/</u>
Melting point	3.3.1	1534 <u>1/</u>
Tenacity	3.3.1	<u>1/</u>
Luster	3.3.1	<u>1/</u>
Nylon yarn		
Denier	3.3.2	4021 <u>1/</u>
Turns per inch	3.3.2	4052 <u>1/</u>
Directions of twist	3.3.2	4050 <u>1/</u>
Dye identification (class 1 and class 2)	3.4.1	<u>1/</u>
Infrared reflectance	3.4.2	4.4.1
Colorfastness to:		
Light	3.4.4	5660
Yarns per inch:		
Warp	3.5	5050
Filling	3.5	5050
Weight	3.5	5041
Breaking strength and elongation		
Warp	3.5	5100
Filling	3.5	5100
Weave	3.5.1	Visual <u>2/</u>
Finish		
Scouring	3.6	<u>2/</u>
Heat treated	3.6	<u>1/</u>
No additive or loading material used	3.6	<u>1/</u>
Spray rating (class 2 and 3)	3.7	5526
Dynamic Absorption (class 2 and 3)	3.8	5500
Resistance to organic liquid (class 2 and 3)	3.9	4.4.2
Acidity (pH)	3.10	2811
Shrinkage	3.11	4.4.4
Ballistic resistance	3.12	4.4.3

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

2/ One determination per sample unit reported as "pass" or "fail".

MIL-C-12369F(GL)

\* 4.4.1 Infrared reflectance. The infrared reflectance shall be determined by recording the spectral reflectance relative to  $MgO$  or  $BaSO_4$  at 1 micron using a spectrophotometer sensitive in this range or using a photometer. The photometer is calibrated with vitreous enamel gray standards of varying reflectance, certified by the National Bureau of Standards. Readings shall be reported to the nearest percent unit. The value of each shade of the pattern shall be determined and reported separately.

\* 4.4.2 Resistance to organic liquid test.

4.4.2.1 Place a small specimen of the cloth on a smooth horizontal surface face up, using a pipette, or eye-dropper, gently deposit one drop of n-dodecane on the surface of the specimen. After one minute, examine the specimen under light at an angle. Absence of light reflectance at the fabric-drop interface shall be taken as evidence of wetting. Three specimens (or areas) taken at various locations across the sample shall be tested.

4.4.3 Ballistic resistance test.

4.4.3.1 Test. The test shall be conducted in accordance with the Ballistic Acceptance Test Method for Personal Armor Material specified in MIL-STD-662

4.4.3.1.1 The  $V_{50}$  limit for the lot shall be reported as the average of all panels tested from the lot.

4.4.3.2 Test panels. The four cuts comprising the sample unit for the ballistic test (see 4.4) shall each be cut into three parts. The twelve cloth specimens thus obtained shall make up twelve layers required for a test panel (sample unit). The size of each layer in the panel shall be approximately 15 inches by 15 inches. Prior to conducting the ballistic test, the test panels shall be preconditioned in the ballistic test area for at least 48 hours with air freely circulating on all sides of the panels.

4.4.3.3 Test projectile. The test projectile shall be the caliber 22 type 2 projectile for body armor as specified in MIL-P-46593.

4.4.3.4 Fair impact. An impact is considered fair when an unyawed fragment simulator test projectile strikes an unsupported area of the armor test panel at least 2 inches from any previous impact and at least 2 inches from a supported area of the test panel.

4.4.4 Shrinkage. Three specimens, each 20 inches by 20 inches, shall be cut from the cloth and conditioned for 4 hours at Standard Condition. Each specimen shall be marked with an 18 inch square and formed into a loop by stapling two opposite sides together. A glass rod 1/2 inch in diameter and 21 inches long shall be placed inside the loop at the top and a glass rod 1/4 inch in diameter and 21 inches long, weighing approximately 100 grams shall be placed inside the loop at the bottom.

MIL-C-12369F(GL)

Each specimen shall be immersed in a tub of boiling water, by attaching twine or wire to the ends of the top glass rod, and allowing the specimen to hang freely in the boiling water for 15 minutes. The specimen shall be removed and allowed to drain. After the staples are removed, the specimen shall be dried in a flat position on a horizontal screen, and reconditioned as stated above. The marked square shall be measured in three places in the warp direction and three places in the filling direction and the percent of shrinkage determined. The shrinkage of the sample unit shall be calculated as follows and reported to nearest 0.1 percent:

$$\text{Shrinkage, percent} = \frac{A - B}{A} \times 100$$

A = Average of initial measurements (3 specimens)

B = Average of measurements after laundering (3 specimens)

The three specimens shall be selected from the cloth sample unit as follows: One specimen from each side of the cloth to within three inches of selvage and one specimen from the center of the cloth. No two specimens shall contain the same filling yarns. Each elongation value shall be prefixed with a minus sign and both inclosed in parenthesis.

#### 5. PREPARATION FOR DELIVERY

- \* 5.1 Put-up and packaging. Put-up and packaging shall be level A or C as specified (see 6.2).

5.1.1 Level A and C. The cloth, shall be put-up and packaged in accordance with the applicable requirements of PPP-P-1133, except that the maximum weight requirement per roll shall not apply.

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

5.2.1 Levels A, B and C. The cloth shall be packed in accordance with the applicable requirements of PPP-P-1133.

5.3 Marking. In addition to any special marking required by the contract or order, shipments shall be marked in accordance with PPP-P-1133.

#### 6. NOTES

6.1 Intended use. The nylon ballistic cloth covered by this specification is intended for use in the manufacture of body armor, helmets and armored clothing.

MIL-C-12369F(GL)

\* 6.2 Ordering data. Procurement documents should specify the following:

- (a) Title, number and date of this specification.
- (b) When bid sample and laboratory report approval are not required (see 3.2).
- (c) Class of cloth required (see 1.2).
- (d) Color, if required (see 3.4).
- (e) Length required, if other than specified (see 3.13).
- (f) Selection of applicable levels of packaging and packing (see 5.1 and 5.2).

6.3 The following is furnished for information only:

6.3.1 Thorough scouring of the cloth will be found to be necessary. Where caustic soda or soda ash have been used in the scouring process, good results have been reported. The use of surface active agents or soaps is not recommended. Solvents and water extractable matter should be held to a minimum.

6.3.2 Reeding the cloth in the loom rather wide in relation to the finished width should tend to improve the ballistic resistance. For example, for a finished width of 48 inches a reed width of 55-3/4 inches is suggested.

6.3.3 Excessive time or temperature of heat treatment or stretching or stressing of the yarn or cloth may reduce the ballistic resistance of the cloth.

6.4 Standard sample. For access to standard sample, address procuring office issuing invitation for bids.

6.5 The standard sample for olive green 106 was dyed with the following neutral dyeing premetallized formula:

Acid Green 70  
Acid Orange 80  
Acid Yellow 128  
Acid Green 74  
Acid Blue 165

6.5.1 The standard sample was dyed at a pH of 6.7 in a closed jig. The supplier is cautioned that the relationship between temperature of dyeing and pH of the dye bath is critical and may affect the ballistic performance of the fabric. Research has indicated that the higher the temperature at which the dyeing is accomplished, the higher should be the pH and that lower

MIL-C-12369F(GL)

values of pH are reasonably safe as the temperature of dying is lowered. For example: at 170°F. a pH of 4 can be used; at 190°F., a pH of 5 is adequate; at 200°F., the pH may fall to between 5.5 and 6.0. In a completely closed jig where temperatures of 212°-215°F. are possible, the pH of 6.7 is adequate to achieve exhaustion and maintain ballistics. A pH value below the value of 4.0 should not be used under any temperature condition as this will deteriorate the ballistic performance of the fabric.

- \* 6.6 A suggested but not mandatory dyestuff formulation for the dyeing of the ground shade Yellow Green 354 for class 3 cloth is as follows:

Neutral Premetallized Dyes

Acid Yellow 151 or 129  
Acid Orange 85  
Acid Green 70  
Acid Green 57

or

Level Dyeing Acid Dyes

Acid Blue 40 CI 62125  
Acid Orange 128  
Acid Red B or Acid Red 337

6.7 The potential suppliers are advised to submit samples to the Government for ballistic testing as soon as practical so that they would be in a position to satisfy the bid sample requirements contained in 3.2 when the cloth is procured.

- \* 6.8 Approval of the water repellent formulation is the responsibility of the U.S. Army Natick Laboratories, Natick, MA 01760 and is based on more extensive tests which are not set forth in this specification. Because of the time necessary to conduct full evaluation, only those chemical formulations already approved and so listed in the invitation for bids or request for proposal shall be considered.
- \* 6.9 The basic instrument for measuring the infrared reflectance is the General Electric Spectrophotometer, but other instruments can be used, such as Beckman Du or Dk Spectrophotometers, the Cary 14 Spectrophotometers, or the infrared photometer available from Hunter Associates Laboratory, Fairfax, VA 22030.

MIL-C-12369F(GL)

6.10 The margins of this specification are marked with an asterisk (\*) to indicate where (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and suppliers are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Custodian:

Army - GL

Review activity:

Army - MD

Preparing activity:

Army - GL

Project No. 8305-A117



SPECIFICATION ANALYSIS SHEET		Form Approved Budget Bureau No. 22-R255
<p><b>INSTRUCTIONS:</b> This sheet is to be filled out by personnel, either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.</p>		
<p><b>SPECIFICATION</b> MIL-C-12369F(GL) Cloth, Ballistic, Nylon</p>		
<p><b>ORGANIZATION</b></p>		
<p><b>CITY AND STATE</b></p>		<p><b>CONTRACT NUMBER</b></p>
<p><b>MATERIAL PROCURED UNDER A</b>  <input type="checkbox"/> DIRECT GOVERNMENT CONTRACT      <input type="checkbox"/> SUBCONTRACT         </p>		
<p><b>1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?</b>  <b>A. GIVE PARAGRAPH NUMBER AND WORDING.</b> </p>		
<p><b>B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES</b></p>		
<p><b>2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID</b></p>		
<p><b>3. IS THE SPECIFICATION RESTRICTIVE?</b>  <input type="checkbox"/> YES      <input type="checkbox"/> NO (If "yes", in what way?)         </p>		
<p><b>4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity)</b></p>		
<p><b>SUBMITTED BY (Printed or typed name and activity - Optional)</b></p>		<p><b>DATE</b></p>

DD FORM 1426  
1 JAN 66

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED.