[INCH-POUND]
A-A-59403
May 14, 1999

COMMERCIAL ITEM DESCRIPTION

SEAT COVER CLOTH, POLYESTER OR NYLON, WATER-RESISTANT

The General Services Administration has authorized the use of this commercial item description (CID) for all federal agencies.

1. SCOPE. This commercial item description covers two types of UV-stabilized nylon or polyester water-resistant cloth. The cloth is intended for use in the manufacture of seat covers for automotive equipment.

2. CLASSIFICATION. The cloth shall be of the following types:

Type I	-	Cloth, Uncoated, Polyester or Nylon, Woven
Type II	-	Heavy Duty Cloth, Uncoated, Polyester or Nylon, Woven
Type III	-	Highly Water Resistant, Heavy Duty Cloth, Uncoated, Polyester or Nylon, Woven

3. SALIENT CHARACTERISTICS.

3.1 Cloth. All cloth shall consist of high-tenacity, either bright, semi-dull, or clear, filament polyester or nylon yarns. All types shall be woven and the weave shall be plain. The cloth shall conform to one of the types described in Table I and shall conform to the requirements specified in 3.1 through 3.9.

Beneficial comments recommendation, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: Tank-automotive and Armaments Command, ATTN: AMSTA-TR-E/BLUE, Warren, Michigan 48397-5000.

AMSC N/A FSC 25GP

TABLE I. Cloth description and verification.

Characteristics	Type I	Type II	Type III	Test
Tensile strength – minimum	260 lbs Warp 175 lbs Fill 1/	450 lbs Warp 400 lbs Fill	450 lbs Warp 400 lbs Fill	ASTM D-5034, 2/
Tear strength	10 lbs Warp 11 lbs Fill	45 lbs Warp 40 lbs Fill	45 lbs Warp 40 lbs Fill	ASTM D-2261
Elastic stretch range	3-7% Warp 11-18% Fill	3-11% Warp 3-11% Fill	3-11% Warp 3-11% Fill	SAE J-855
Abrasion resistance (minimum)	1000 cycles	2000 cycles	2000 cycles	ASTM D-3884 3/
Tensile strength retention after UV exposure minimum	104 lbs Warp 70 lbs Fill	230 lbs Warp 160 lbs Fill	175 lbs Warp 125 lbs Fill	SAE J-1885 & ASTM D-5034 4/
Tensile strength retention after wear degradation maximum	170 lbs Warp 150 lbs Fill	400 lbs Warp 350 lbs Fill	400 lbs Warp 350 lbs Fill	ASTM D-4157 & ASTM D-5034 5/
Air permeability ($ft^3/min/ft^2$) 6/ minimum	1.3	1.3	0.5	ASTM D-737
Water resistance (cm water in column) – minimum	10	10	30	AATCC 127 7/

NOTES:

1/ lbs = pounds.

2/ Tensile strength. A constant rate-of-extension (CRE) testing machine shall be used.

3/ There shall be no visible wear-through when Taber-tested with a 1 kilogram (kg) weight and a CS-10 wheel for 1000 cycles for type I and 2000 cycles for type II and III.

4/ Strength retention after UV exposure. After being exposed to a xenon-arc lamp at 225.6 kilojoules per square meter (kj/m^2) In Accordance With (IAW) SAE J-1885, cloth shall retain specified tensile strength IAW ASTM D-5034.

5/ Strength retention after wear degradation. Cloth shall retain specified tensile strength after 100,000 double rubs (Wyzenbeek abrasion) using a #8 Duck as the abrader IAW ASTM D-4157. Tensile strength IAW ASTM D-5034.

6/ $ft^3/min/ft^2$ = Cubic feet per minute per square foot.

7/ Water resistance. Water shall not pass through the cloth when a column of the minimum height specified is used. Testing IAW AATCC 127.

3.2 Weight. The weight of all cloth shall be 12 $\pm$ 3 ounces per yard (oz/yd^2) when measured IAW ASTM D-3776, Option C.

3.3 Minimum flame resistance. Flames shall progress no more than 4.0 inch per minute (in./min) when tested IAW FMVSS 302.

3.4 Operational temperature range required. The operational temperature range required shall be –50 to 150 degrees Fahrenheit (°F) when tested IAW 3.4.1 and 3.4.2.

3.4.1 Resistance to low temperature test. A 1-in by 4-in specimen of the cloth with the long dimension warp-wise, and a 1-in by 4-in specimen of the cloth with the long dimension filling-wise, shall be exposed for 4 hours at a temperature of -50 ± 5°F. The sample, still in the test atmosphere, shall be bent sharply 180 degrees over a 1/8 in steel rod that has been exposed in the test chamber with the test specimen. The cloth shall not crack or flake.

3.4.2 Resistance to high temperature test. A 2-in by 6-in specimen of the cloth shall be exposed for a period of 6 hours in an oven maintained at a temperature of +150° ± 2°F. At the end of this period, the specimen, still maintained at the test atmosphere shall be bent sharply 180 degrees over a 1/8 in steel rod. The cloth shall show no evidence of tackiness, blistering, or softening.

3.5 Water wicking (minimum). The minimum water wicking shall be 3.0 in the ISO Gray scale unit of measurement when tested IAW SAE J-913, option C.

3.6 Dimensional stability (maximum shrinkage). The maximum shrinkage shall be 3.5% in the warp direction and 2.5% in the fill direction when tested IAW SAE J-883.

3.7 Mildew resistance (rating). The mildew resistance shall be 0 in the ISO Gray scale unit of measurement when tested IAW ASTM G-21.

3.8 Color. The color of the finished cloth shall match green-383 (color chip 34094) or tan-686A (color chip 33446) of FED-STD-595 or shall match an approved color sample for the color specified. There shall be no light areas or windows due to absence or poor blending of pigmentation. Visual testing is to be done on a 4”x20” swatch of cloth with a light of at least 538 lux at the working surface. The color of the finished cloth shall meet the spectral reflectance properties in tables II and III.

3.9 Length and put-up. The cloth shall be put-up in full width rolls in lengths as required by the contract or purchase order. The total length shall be marked on an identifying document. The ends of the pieces shall be overlapped and not joined by a seam. When unrolled, there shall be no rolled, curled, folded, doubled, scalloped, or wavy edges, which prevent a flat lay of the cloth.

TABLE II. Spectral reflectance values (percent) for green-383 (color chip 34094).

Wavelength, Nanometers (nm)	Reflectance		Wavelength, Nanometers (nm)	Reflectance	
	Min.	Max.		Min.	Max.
600	3	12	740	7	52
620	3	12	760	11	60
640	3	12	780	17	64
660	3	13	800	24	70
680	3	15	820	32	80
700	3	28	840	37	86
720	5	40	860	49	88

TABLE III. Spectral reflectance values (percent) for tan-686A (color chip 33446).

Wavelength, Nanometers (nm)	Reflectance		Wavelength, Nanometers (nm)	Reflectance	
	Min.	Max.		Min.	Max.
700	45	65	800	45	65
720	45	65	820	45	65
740	45	65	840	45	65
760	45	65	860	45	65
780	45	65			

4. REGULATORY REQUIREMENTS. The offer or/contractor is encouraged to use recovered materials to the maximum extent practicable, IAW paragraph 23.403 of the Federal Acquisition Regulation (FAR).

5. QUALITY ASSURANCE PROVISIONS.

5.1 Responsibility for inspection. The contractor is responsible for the performance of all inspections (examinations and tests).

5.2 Product conformance. The products shall meet the salient characteristics of this CID, conform to the producer's own drawings, specifications, standards, and quality assurance practices, and be the same product offered for sale in the commercial market expect for any changes necessary to conform to this commercial item description. The Government reserves the right to require proof of such conformance.

5.3 Market acceptability. The offerer shall prepare written certification that the cloth provided has been a stable production item for at least three years or is the basis for current orders if a new product. The use of the term "commercial item" in this document does not imply that any items offered are not required to conform with all requirements specified herein.

5.4 Standard test conditions. Physical tests shall be conducted with both the specimen and test apparatus under standard conditions as defined in ASTM D-618.

6. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or order.

7. NOTES.

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

7.1 Ordering data. Acquisition documents must specify the following:

a. Title, number, and date of this CID.
b. Issue of the DoDISS to be cited in the solicitation, and if required, the specified issue of individual documents referenced .
c. Length/width of rolls.
d. Level of preservation, packaging, and packing required.

7.2 Part Identification Number (PIN). The following part identification numbering procedure is for Government purposes and does not constitute a requirement for the contractor.

AA59403 X

X — Type:
1 = Type I, Cloth, Uncoated, Polyester or Nylon, Woven.
2 = Type II, Heavy Duty Cloth, Uncoated, Polyester or Nylon, Woven.
3 = Type III, Highly Water Resistant, Heavy Duty Cloth, Uncoated, Polyester or Nylon, Woven.

AA59403 — CID number.

7.3 Address for obtaining copies of reference documents.

7.3.1 Government publications. The Code of Federal Regulations (CFR) may be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

7.3.2 Copies of AATCC-127, “Water Resistance: Hydrostatic Pressure Test” are available from The American Association of Textile Chemists and Colorists (AATCC) Standards, 1 Davis Drive, P.O. Box 12215, Research Triangle Park, NC 27709-2215.

7.3.3 Copies of ASTM D-3776, “Standard Test Method for Mass Per Unit Area (Weight) of Fabric”; ASTM D-5034, “Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)”; ASTM D-2261, “Standard Test Method for Tearing Strength of Fabrics by the Tongue (Single Rip) Procedure (Constant-Rate-of-Extension Tensile Testing Machine”; ASTM D-3884, “Standard Test Method for Abrasion Resistance of Textile Fabrics (Rotary Platform, Double-Head Method)”; ASTM D-4157, “Standard Test Method for Abrasion Resistance of Textile Fabrics (Oscillatory Cylinder Method)”; ASTM D-737, “Standard Test Method for Air Permeability of Textile Fabrics”; ASTM D-618 “Standard Practice for Conditioning Plastics for Testing”; and ASTM G-21 “Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi” are available from the American Society For Testing And Materials, 100 Bar Harbor Drive, West Conshohocker, PA 19428-2959.

7.3.4 Copies of FMVSS-302, “Flammability of Interior Materials-Passenger Cars, Multipurpose Passenger Vehicles, Trucks and Busses” are available from the U.S. Department of Transportation, National Highway Traffic Safety Administration, Office of Vehicle Safety Compliance, 400 Seventh Street SW, Room 6115, Washington, DC 205090.

7.3.5 Copies of SAE J855, “Test Method of Stretch and Set of Textiles and Plastics”; SAE J883, “Test Method for Determining Dimensional Stability of Automotive Textile Materials”; SAE J1885, “Accelerated Exposure of Automotive Interior Trim Components Using a Controlled Irradiance Water Cooled Xenon-Arc Apparatus”; and SAE J913, “Test Method for Wicking of Automotive Fabrics and Fibrous Materials” are available from the Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

7.3.6 Copies of FED-STD-595, “Colors” are available from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.

Custodians:
Army - AT
Navy - NU
Air Force - 99

Review Activities:
Army - GL, MI
Navy - MC
Air Force - 45, 82
DLA - CT

CIVIL AGENCY COORDINATING ACTIVITY:
GSA - FSS

Preparing Activity:
Army - AT

(Project 25GP-0012)