

DDD-C-001023 (GSA-FSS)  
December 22, 1966

INTERIM FEDERAL SPECIFICATION

CUSHION, CARPET AND RUG  
(HAIR FELT AND RUBBER COATED JUTE AND ANIMAL HAIR OR FIBER)

This Interim Federal Specification was developed by the Federal Supply Service, General Services Administration, Washington, D. C., 20406, based upon currently available technical information. It is recommended that Federal agencies use it in procurement and forward recommendations for changes to the preparing activity at the address shown above.

1. SCOPE AND CLASSIFICATION.

1.1 Scope. This specification covers the requirements for carpet and rug cushion underlay made of hair felt and rubber coated jute and animal hair or fiber.

1.2 Classification.

1.2.1 Types. The cushions shall be of the following types as specified (6.1).

Type I - Hair felt.

Type II - Rubber coated jute and animal hair or fiber.

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 the specification to the extent specified herein.

Federal Specifications:

C-F-202	- felt Sheet (Hair) & Felt Roll (Hair)
UU-P-268	- Paper, Kraft, Untreated, Wrapping.
CCC-T-191	- Textile Test Methods.
MMM-A-260	- Adhesive, Water-Resistant, (For Sealing Waterproofed Paper).
PPP-B-585	- Boxes, Wood, Wirebound.
PPP-B-591	- Boxes, Fiberboard, Wood - Cheated.
PPP-B-601	- Boxes, Wood, Cheated - Plywood.
PPP-B-621	- Boxes, Wood, Nailed and Lock- Corner.
PPP-B-636	- Box, Fiberboard
PPP-B-640	- Boxes, Fiberboard, Corrugated, Triple -Wall.
PPP-B-1055	- Barrier Material, Waterproofed Flexible.
PPP-T-76	- Tape, Pressure - Sensitive Adhesive Paper, (For Carton Sealing).

Federal Standards:

Fed. Std. No. 123 Marking for Domestic Shipment (Civilian Agencies).

(Activities outside the Federal Government may obtain copies of Federal Specifications, Standards, and Handbooks as outlined under General Information in the Index of Federal Specifications and Standard and at the prices indicated in the Index. The index, which include cumulative monthly Supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing office, Washington, D.C., 20402.)

(Single copies of this specification and other product specifications

required by activities outside the Federal government for bidding purposes are available without charge at the General Services Administration Regional Offices in Boston, New York, Washington, D.C., Denver, San Francisco, Los Angeles, and Seattle, Wash.)

(Federal Government activities may obtain copies of Federal Specifications, and Handbooks and the Index of Federal Specifications and Standards from established distribution points in their agencies.)

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#### Military Standards:

- MIL-STD-105 - Sampling Procedures Tables for Inspection by Attributes.
- MIL-STD-129 - Marking for Shipment and Storage.

(Copies of Military Specifications and Standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

#### Rules and Regulations Under the Textile Fiber Products Identification Act

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

### 3. REQUIREMENTS.

3.1 Preproduction sample. When specified (6.1), a preproduction sample of the cushion, measuring one foot square, shall be submitted to the contracting officer for approval.

3.2 Standard sample. When a standard sample is available, the finished cushions shall match the standard sample for appearance and general workmanship and shall be equal to or better than the standard sample with respect to all characteristics for which the standard sample is referenced.

#### 3.3 Material.

3.3.1 Type I - Hair felt. The hair felt material and construction shall conform to type T, 3/8 inch thickness, of C-F-202, except that up to 9 percent adhesive material (based on weight of the hair felt) is permitted for binding the burlap core. Adhesive shall be nonsouring in the presence of moisture.

3.3.2 Type II - Jute and animal hair or fiber. The basic fiber material shall be thoroughly mixed and composed of jute and animal hair or fiber felt consisting of 90 percent jute fiber with an allowable minus tolerance of 5 percent, and not less than 10 percent animal hair or fiber. Quantitative analysis and identification of jute shall be made as specified in 4.4. Animal hair or fiber shall be cleaned, washed, thoroughly sterilized, free from sizing, loading materials and foreign matter; jute shall be free from loading materials and foreign matter. Other requirements for the type II cushion shall be as specified in 3.3.2.1 through 3.3.2.10.

3.3.2.1 Rubber. Rubber coating shall be of sponge or foam rubber made from natural (includes reclaimed rubber or synthetic rubber or suitable mixture thereof). Rubber shall not readily peel off when rubbed at a normal pressure with fingers.

3.3.2.2 Tape. Tape used for finishing edges shall be 3 inches wide, Hampton No. 623 or equal, and shall extend 1 +/- 1/8 inch on either side of cushion.

3.3.2.3 Backing, (woven). When a backing material is used in fabricating the cushion, it shall be of woven jute burlap weighing not less than 4 ounces per square yard and shall contain not more than 4 percent sizing or adhesive based on the total weight of the cushion. A synthetic resin may be

used in lieu of rubber for the coating on the rug side.

3.3.2.4 Synthetic resin. When a synthetic resin is used for coating the rug side of the cushion it shall be a type and grade that will not become tacky, crack, or deteriorate with age.

3.3.2.5 Odor and colorfastness. The cushion shall be free from an objectionable odor, or evident bleeding or crocking, before and after testing as specified in 4.4.

3.3.2.6 Weight. The finished weight of the cushion shall be not less than 39 ounces per square yard. The animal hair or fiber and jute filling shall weigh not less than 29 ounces per square yard. The rubber shall weigh 10 ounces per square yard with an allowable minus tolerance of 2 ounces, with half the weight (5 ounces) of rubber being applied to each side of the cushion. Where a synthetic resin is used in lieu of rubber for coating the rug side of the cushion, it shall weigh not less than 2 ounces per square yard, but not more than half the total weight of rubber and synthetic resin used for face and back.

3.3.2.7 Thickness. The thickness of the cushion shall measure not less than 1/4 inch when tested as specified in 4.4.

3.3.2.8 Compression. The finished cushion shall have an initial compression of not less than 10 percent and shall recover at least 85 percent when tested as specified in 4.4.

3.3.2.9 Accelerated Aging. The cushion shall not become sticky, shall not crack when bent sharply back upon itself and shall not deteriorate in any way which will impair its Usefulness when tested as specified in 4.4.

3.3.2.10 Finish. Unless other specified (6.1), the cushion shall be seamless. The rubber coating on the floor side of the cushion shall have a waffle or similar non-skid design, and on the rug side shall have a ribbed or other suitable non-skid design. The rug side may have a coating of non-skid synthetic resin.

3.4 Dimensions. The cushions shall be furnished in rolls or pieces cut to special sizes, as specified. The width and length @ be as specified (6.1). For type II cushion, there shall be a tolerance of plus or minus 1/2 inch in width and on pieces Plus or minus 1/4 inch in length. Examination for length or rolls shall be as specified in 4.3.2.2.

3.5 Fiber identification. Cushions shall be labeled, ticketed or invoiced for fiber content in accordance with the Textile Fiber Products Identification Act.

3.6 Workmanship. Cushions shall conform to the quality and grade of product established by this specification. The occurrence of defects shall not exceed the applicable acceptable quality levels (AQL's).

#### 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, the supplier may utilize his own facilities or any commercial laboratory acceptable to 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 that supplies and services conform to prescribed requirements.

4.2 Preproduction sample inspection. When a preproduction sample is required, inspection shall be made of the completed end item for conformance with all provisions of this specification.

4.3 Inspection for acceptance. Inspection shall be performed in accordance with the provisions set forth in MIL-STD-105, except where otherwise indicated.

4.3.1 Inspection of components and materials. In accordance with 4.1 above, the supplier is responsible for insuring that components and materials meet the requirements of this specification. For type II cushion, testing shall be performed on the components listed in table I, as applicable. The sample unit shall be of sufficient size to conduct the required tests. A minimum of one sample unit representative of the lot shall be tested to determine conformance with the requirements of this specification. The lot shall be unacceptable if one or more sample units fail to met any specified requirement.

Table I - Component testing

Characteristic	Requirement paragraph	Test method
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Identification of jute	3.3.2	1260[1]
Quantitative analysis, fabric	3.3.2	2101[1]
Width, tape	3.3.2.2	5020
Weight, backing (woven) (when applicable)	3.3.2.3	5041
Weight, fabric	3.3.2.6	5041

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[1] May be accepted based on supplier's certificate of compliance.

4.3.2 Examination of the end item. For examination of type I cushion, examination of the end item shall be performed in accordance with the requirements of C-F-202. For type II cushion, defects found during the visual examination shall be classified in accordance with 4.3.2.1 and length examination for types I and II cushions shall be as specified in 4.3.2.2.

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4.3.2.1 Visual examination. The defects listed below shall be counted regardless of their proximity to one another, except where two or more defects represent a single local condition of the carpet, in which case only the more serious defect shall be counted. In full length rolls, continuous defects shall be counted as one defect for each yard or fraction thereof in which they occur. The sample unit shall be 1 linear yard when length rolls are specified and one piece when special cut sizes are specified. The acceptable quality levels shall be 2.5 defects per hundred units. The inspection level shall be level II. The lot size shall be expressed in units of 1 linear yard when full length rolls are specified and one piece when special cut sizes are specified. When examination is made of full length rolls, not more than one third of the total sample yardage shall be examined in any one roll. When the lot consists of less than 5 rolls, an approximate equal number of yards shall be examined on each roll to yield the sample yardage.

#### Defects

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Floor or rug side without design as specified.

Coating readily peels off when rubbed at normal pressure with fingers.

Tacky coating.

Non-uniform coating.

Not Seamless, unless otherwise specified.

Cut, hole or tear - any size.

Thin or weak place.

Length of pieces or width not as specified.

Dirty or stained.

High place or lump.

Objectionable odor.

Tape incorrectly placed and finished, as applicable.

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4.3.2.2 Length examination (rolls only). Each roll shall be a for gross length. Any gross length found to be more than 1/2 inch less than the gross length marked on the roll ticket shall be considered a defect with respect to length. The sample unit shall be one roll. The rolls used for the visual examination shall be used for this examination. The lot shall be unacceptable if one or more defects are found in the sample.

4.3.3 Inspection of preparation for delivery. An inspection shall be made to determine that the packaging, packing and marking comply with the requirements in section 5 of this specification. Defects shall be scored in accordance with table II. For examination of interior packaging the sample unit shall be one shipping container fully prepared for delivery, selected at random just prior to the closing operations. Sampling shall be in accordance with MIL-STD-105. Defects of closure listed shall be examined on shipping containers fully prepared for delivery. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be S-2 with an AQL of 4.0 defects per hundred units.

Table II - Classification of preparation for delivery defects

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Examine	Defects
Markings (exterior and interior)	Omitted; incorrect; illegible; improper size, location, sequence, or method of application.
Materials	Any component missing or damaged.
Workmanship	Inadequate application of components such as incomplete closure of container flaps, loose strapping, inadequate stapling. Distortion of container.

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4.4 Testing of the end item. For type I cushion, tests shall be performed for the characteristics specified in C-F-202, as applicable and acceptance may be based on contractors certificate of compliance. For type II cushion, tests shall be performed for the characteristics specified in table III. Except as otherwise specified, test methods referenced are specified in CCC-T-191. Unless otherwise specified, the physical and chemical values specified in section 3 apply to the average of the determinations made on a sample unit for test purposes in the applicable test method. The sample unit shall be 1 square yard for rolls or one piece of the cushion, as applicable. The lot size for purposes of end item testing be expressed in units of square yards for rolls and pieces of cushion, as applicable. The sample size shall be as listed in table IV. The lot shall be unacceptable if one or more units fail to met any requirement specified.

Table III - End item testing

Characteristic	Requirement reference	Test method
Weight, cushion	3.3.2.6	5045 or 5041[1]
Weight, coating	3.3.2.6	Std. Commerce[2]
Thickness	3.3.2.7	4.5.1
Compression	3.3.2.8	4.5.2
Accelerated aging	3.3-2.9	4.5.3[2]
Odor	3.3.2.5	4.5.4

[1] When method 5041 is used, one specimen with an area of at least 16 square inches be used.

[2] May be accepted based on contractor's certificate of compliance.

Table IV - Sample size

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

#### 4.5 Tests.

4.5.1 Thickness. Measurement shall be with a gage having a circular foot of 6.5 square centimeters 1.0 square inch) area under a load of 100 grams.

4.5.2 Compression. A sample of full thickness shall be cut 2 inches square (4 square inches) and placed under a compressive load of 10 pounds per square inch (40 pounds). The measurement of initial compressibility is then made and the decrease in thickness shall be computed as a percentage of the original thickness. The sample shall be held under this compressive load for a period of 24 hours Plus or minus one-half hour, at which time the load shall be removed and the sample allowed to rest for one hour. The thickness measurement shall then be taken and shall be expressed as a percentage of the original thickness.

4.5.3 Accelerated aging. A piece of rubber shall be exposed to the action

of oxygen, not more than one ounce of rubber per 170 cubic inches of oxygen for 120 hours at a temperature of 158 degrees plus or minus 2 degrees Fahrenheit, and a pressure of 300 pounds, plus or minus 10 pounds per square inch.

4.5.4 Odor. The specimen shall be approximately 8 square inches in area and shall be immersed for 24 hours in distilled water at a temperature of not less than 70 deg C. and then removed and allowed to dry naturally. The felt shall be inspected for offensive odor during and after drying.

5. PREPARATION FOR DELIVERY

5.1 Packaging. Packaging shall be level A, B, or C, as specified (see 6.1).

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5.1.1 Level A. The cushion furnished in lengths as widths as specified (see 6.1) shall be wrapped in paper conforming to UU-P-268, grade B and secured with tape conforming to PPP-T-76. The cushioning shall be overwrapped with material conforming to PPP-B-1055, class 1 with all folds seams, and laps sealed with adhesive conforming to MMM-A-260. A minimum of a 2-inch overlap shall be provided at all overlapping edges.

5.1.2 Level B. The cushioning furnished in lengths and widths as specified (see 6.1) be wrapped in paper conforming to UU-P-268, grade B and secured with tape. A minimum of a 2-inch overlap shall be provided at all overlapping edges.

5.1.3 Level C. The cushioning shall be and damage from the supplier to the initial destination.

5.2 Packing. Packing shall be level A, B, or C, as specified (see 6.1).

5.2.1 Level A. The rolls of cushioning to PPP-B-585, class 3, PPP-B-591, class II, Class weather-resistant or PPP-B-601, Class 2 PPP-B-636, class weather-resistant or PPP-B-640, class 2 grade A. The boxes shall be closed and strapped in accordance with the applicable specification or appendix thereto. When the gross weight of the wood or triple-wall box, exceeds 250 pounds, skid shall be provided in accordance with the applicable box specification. The gross weight of the PPP-B-636 box shall not exceed the weight limitations of the box specification.

5.2.2 Level B. The rolls of cushioning shall be packed in a close-fitting box conforming to PPP-B-585, class 1, PPP-B-591, class 1, PPP-B-601, domestic type, PPP-B-621, class 1, PPP-B-636, class domestic or PPP-B-640, class 2, grade A. The boxes shall be closed in accordance with the applicable specification or appendix thereto. When the gross weight of the wood boxes or triple-wall box exceeds 250 pounds, skids shall be provided in accordance with the applicable box specification. The gross weight of the PPP-B-636 box shall not exceed the weight limitations of the box specification.

5.2.3 Level C. The cushioning shall be packed to insure carrier acceptance and safe delivery at destination in containers complying with the rules and regulations applicable to the mode of transportation.

5.3 Marking.

5.3.1 Civil agencies. In addition to markings required by the contract or order, the interior packages and shipping containers shall be marked in accordance with Fed. Std. No. 123.

5.3.2 Military agencies. In addition to markings required by the contract or order, the interior packages and shipping containers shall be marked in accordance with MIL-STD-129.

6. NOTES

6.1 Ordering data. Purchasers should exercise any desired options offered herein and procurement documents should specify the following:

- (a) Title, number and date of this specification.
- (b) Type required (1.2.1).
- (c) When preproduction sample is required (3-1).
- (d) Requirements if other than seamless (3-3.2-10).
- (e) Width and length required (3.4).
- (f) Selection of applicable level of packaging and packing required

(5.1 and 5.2).

6.2 Standard sample. For access to the standard sample, when available, address the procuring office issuing the invitation for bids.

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Amendment-1  
March 10, 1972

AMENDMENT

TO

INTERIM FEDERAL SPECIFICATION

CUSHION, CARPET AND RUG

(HAIR FELT AND RUBBER COATED JUTE AND ANIMAL HAIR OR FIBER)

This amendment was developed by the Standardization Division, Federal Supply Service, General Services Administration, Washington, DC 20406, based upon currently available technical information. The General Services Administration has authorized this amendment as a part of Interim Federal Specification DDD-C-001023 (GSA-FSS) dated December 22, 1966.

PAGE 1

Paragraph 2.1 - Under "Federal Specifications" delete "C-F-202 - Felt Sheet (Hair) & Felt Roll (Hair)" and CCC-T-191 - Textile Test Methods". Also, under "Federal Standards" insert "Fed. Test Method Std. No. 191 - Textile Test Methods".

PAGE 2

Paragraph 3.3.1 - Delete in its entirety and substitute paragraphs 3.3.1 through 3.3.1.6, as follows:

"3.3.1 Type I - Hair felt. The hair felt material and construction shall be as specified in 3.3.1.1 through 3.3.1.6.

3.3.1.1 Fiber. The felt shall be made predominantly from washed cattle hair which shall be the main fiber constituent of the felt, but not to the exclusion of other animal hair. The fiber content of all felt shall be not less than 95 percent cattle hair, except for the core material specified in 3.3.1.2. Up to 9 percent adhesive material (based on weight of the hair felt) is permitted for binding the interliner material. Adhesive shall be nonsouring in the presence of moisture. Chloroform and water extractable matter shall not exceed 16.0 percent by weight based on the bone dry weight of the specimen when tested as specified in 4.4. Animal hair shall be cleaned, washed, thoroughly sterilized, free from loading materials and foreign matter.

3.3.1.2 Construction. The felt for the cushion shall be a matted fabric evenly felted on each side of an interliner by the needle loom (needle punched) process. The interliner used for the reinforcement shall be burlap fabric weighing not less than 4.2 ounces per square yard or other open mesh or nonwoven material which will provide the necessary strength to eliminate shrink and stretch in both directions of the cushion at time of installation. The felt shall be compressed into a threaded or waffled pattern of the thickness specified in 3.3.1.5. Edges of the cushion shall be evenly cut.

3.3.1.3 Color. Unless otherwise specified (6.1), the felt shall be natural, i.e. the color resulting from the various shades of hair used.

3.3.1.4 Weight. The finished weight of the cushion shall be 48 ounces per square yard. A plus tolerance of 10 percent and a minus tolerance of 8 percent will be allowed.

3.3.1.5 Thickness. The thickness of the cushion shall be not less than 3/8 inch.

3.3.1.6 Flexibility. The cushion shall show no visible sign of cracking or splitting."

Paragraph 3.3.2.2 - Add sentence "Taping of the finished edges is not required. however, unless specified (6.1)."

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PAGE 3

Paragraph 3.3.2.10 - After first sentence, insert new sentence, as follows:  
 "When seaming is specified, pieces shall be securely seamed with tape applied to the underside of the cushion."

Paragraph 4.3.1 - After first sentence insert new sentence: "For type I cushion, testing shall be Performed for fiber identification, as specified in 3.3.1.1, and weight of core fabric, as applicable in 3.3.1.2; the fiber identification may be accepted based on contractor's certified laboratory test results and for the core fabric weight test method 5041 of Fed. Test Method Std. No. 191 shall be used." Also after second sentence, insert the following sentence: "For type I and type II cushions, the contractor shall certify that the animal hair or fiber has been cleaned, washed, and sterilized as specified herein."

Table I - After column heading "Test method" insert footnote reference "L2J". Also, under Table I insert footnote as follows: "L2J Test methods referenced are applicable to Fed. Test Method Std. No. 191."

Paragraph 4.3.2 - Delete first sentence in its entirety. Also, in second sentence before type II cushion" insert "type I and".

PAGE 4

Paragraph 4.3.2.1 - In "Defects" listing, after first, second, third, fourth, and twelfth defect, add "(type II)".

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Paragraph 4.4 - Delete first sentence in its entirety and substitute: "For type I cushion, tests shall be performed for the characteristics specified in table V." Also, line 4, delete "CCC-T-191" and substitute "Fed. Test Method Std. No. 191".

Table III - After table heading "End item testing" add "(Type II cushion)".

After Table IV, insert new Table V, as follows:

TABLE V. End item testing (Type I cushion)

Characteristic	Requirement Reference	Test Method
Quantitative analysis (not including core fabric)	3.3.1.1	2101[1]
Extractable material	3.3.1.1	2611[1]
Weight, cushion	3.3.1.4	5040 or 5041[2]
Thickness	3.3.1.5	5030
Flexibility	3.3.1.6	4.5.5

[1] May be accepted based on contractor's certified laboratory test results.

[2] When method 5041 is used, one specimen with an area of at least 16 square inches shall be used.

After paragraph 4.5.4 add new paragraph 4.5.5 as follows:

"4.5.5 Flexibility. A cushion specimen shall be bent 160 degrees over a rod approximately equal in diameter to the thickness of the sample. Any

visible sign of cracking or splitting shall be considered a failure."

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Paragraph 6.1 - Add new subparagraph (g) and (h) as follows:

- "(g) Color, if other than as specified (3.3.1.3).
- (h) When taping of finished edges is required (3.3.2.2)."

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