PPP-P-[illegible]E
February 9, 1976
SUPERSEDING
Fed. Spec. PPP-P-[illegible]d
March 20, 1967

FEDERAL SPECIFICATION

PAPERBOARD, WRAPPING AND CUSHIONING

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers paperboard, wrapping and cushioning material which is flexible in all directions.

1.2 Classification. The paperboard cushioning material shall be of the following types and styles, as specified (see 6.2, 6.3 and 6.4).

Type I - Light duty
Type III - Heavy duty
Style 1 - Backing sheet mandatory
Style 2 - Backing sheet optional

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:

Federal Specifications:

L-P-378	-	Plastic Sheet and Strip, Thin Gauge, Polyolefin
UU-P-268	-	Paper, Kraft, Wrapping
MIL-A-260	-	Adhesive, Water-Resistant (For Sealing Waterproofed Paper)
PPP-B-636	-	Boxes, Shipping, Fiberboard
PPP-B-1055	-	Barrier Material, Waterproofed, Flexible
PPP-T-45	-	Tape, Gummed, Paper, Reinforced and Plain, for Sealing and Securing
PPP-T-76	-	Tape, Pressure-Sensitive Adhesive Paper (for [illegible] Sealing)

Federal Standard:

[illegible] - Packing for Shipment (Civil [illegible]

[illegible]13

(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 Standards and at the prices indicated in the Index. The Index, which includes cumulative monthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

(Single copies of this specification and other Federal specifications required by activities outside the Federal Government for bidding purposes are available without charge from Business Service Centers at the General Services Administration Regional Offices in Boston, New York, Washington, DC, Atlanta, Chicago, Kansas City, MO, Fort Worth, Denver, San Francisco, Los Angeles, and Seattle, WA.

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

Military Standards:

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

(Copies of Military Specifications and Standards required by suppliers 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 a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply:

Technical Association of The Pulp and Paper Industry (TAPPI) Standards

Technical Methods, Recommended Practices, Specifications of the Technical Association of the Pulp and Paper Industry

T401 - Fiber Analysis of Paper and Paperboard
T402 - Conditioning Paper and Paperboard for Testing
T403 - Bursting Strength of Paper
T410 - Weight per Unit Area (Basis weight of substance) of Paper or Paperboard
T411 - Thickness (Caliper) of Paper and Paperboard
T414 - Internal Tearing Resistance of Paper

(Copies of TAPPI testing methods may be obtained from the Technical Association of the Pulp and Paper Industry, One Dunwoody Park, Atlanta, GA 30341.)

American Society for Testing and Materials (ASTM)

D 1098 - Static Bending Test for Corrugated Paperboard

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

National Motor Freight Traffic Association, Inc., Agent

National Motor Freight Classification

(Application for copies should be addressed to the American Trucking Associations, Inc., Tariff Order Section, 1616 P Street, N.W., Washington, DC 20036.)

Uniform Classification Committee, Agent

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, Room 1106, 222 South Riverside Plaza, Chicago, IL 60606.)

3. REQUIREMENTS

3.1 Materials.

3.1.1 Cushioning components. The paperboard cushioning material shall be constructed of one or more plies and shaped in a configuration to conform to the specified requirements (see 6.1).

3.1.1.1 Corrugated and nodule. The cushioning component for corrugated and nodule constructions shall be fabricated from 100 percent wood pulp fibers and when tested as specified in table II shall have a minimum thickness of 0.009 inch.

3.1.1.2 Solid molded pulp. Solid molded pulp, when tested as specified in table II, shall contain at least 60 percent unbleached sulphate fibers. The remainder shall be clean No. 1 baled news or groundwood pulp.

3.1.1.3 Other configurations. The cushioning component for other configurations shall be made from 100 percent wood pulp fibers.

3.1.2 Backing sheet.

3.1.2.1 Style 1. The backing sheet for style 1 material shall be 100 percent unbleached sulphate paper. The backing sheet shall be attached to the cushioning component and shall remain securely attached when the end item is flexed 180° in any direction, when tested as specified in table III.

3.1.2.2 Style 2. Style 2 material may be furnished with or without a backing sheet at the supplier's option. When a backing sheet is furnished, it shall meet the requirements specified in 3.1.2.1.

3.1.2.3 Physical requirements. The backing sheet components shall have the following physical requirements when tested as specified in table II.

Basis weight - pounds, 24 x 36 - 500 basis, minimum	35
Bursting strength, points, minimum	25
Tear, grams, minimum, both principal directions	60

3.1.3 End item physical requirements. The end item shall conform to the applicable physical requirements in table I, when tested as specified in table III.

TABLE I. Physical properties of the end item

Types	Energy absorption 1/ inch-pounds/cubic inch, minimum, average 1st cycle	2nd cycle	Force at 60 percent compression, applicable to 1st and 2nd cycle, pounds maximum average 1/	Flexural resistance, pounds stiffer direction, maximum average 1/	Bursting strength, points minimum average 2/	Tear resistance, grams (total machine plus cross direction) minimum, average 2/	Thickness 2/ inches Minimum	Maximum
	5.00	1.10	350	2.0	35	250	0.0925	
II	5.00	1.60	500	2.0	50	350	.0925	

1/ Requirements applicable to other than specified constructions only (see 3.2.6).

2/ Requirements applicable to all constructions.

3.2 Construction, cushioning component.

3.2.1 Corrugated construction. The corrugated cushioning component shall be of "B" flute design. Each corrugation (flute) shall be indented diagonally or perpendicularly at 1/4 inch maximum intervals so that the finished product may be flexed in any direction and folded in any shape without surface rupture.

3.2.2 Nodule construction. Nodule indented material shall have 40 to 45 nodules per foot measured diagonally to the web of the finished product.

3.2.3 Molded construction. Solid molded pulp shall have not less than 23 corrugations (flutes) per lineal foot and shall weigh not less than 48 pounds per thousand square feet. When the molded cushioning component has less than 30 flutes per lineal foot, each flute shall be not less than 5/32 inch high and 1/8 to 3/16 inch wide at the peak of the corrugation. When the molded cushioning component has 30 or more flutes per lineal foot, the flutes shall be not less than 1/8 inch high, and 3/32 to 5/32 inch wide at the peak of the corrugation. All corrugations shall be indented diagonally or perpendicularly at 1/4 inch intervals so that the finished product may be flexed in any direction without surface rupture.

3.2.4 Other construction. Construction other than specified above can also provide adequate cushioning. Such constructions shall be tested by the supplier on the first contract under this specification to determine conformance to all the requirements in table I. In subsequent contracts, testing for three of the requirements, (1) energy absorption, (2) force at 60 percent compression, and (3) flexural resistance, can be waived by the contracting officer or his authorized representative. These three requirements can be satisfied by a certificate of compliance. The certificate shall state that the cushioning material was fabricated from the same components, in the same manner, and is of the same construction, workmanship, and quality as the material furnished under previous contracts and meets all requirements specified in table I. In addition, the certification shall include the date of award and number of the initial contract and the test results.

3.3 Dimensions.

3.3.1 Form. Wrapping paperboard shall be furnished in sheets or in rolls as specified (see 6.3).

3.3.1.1 Sheets. Sheets shall be as specified (see 6.2 and 6.3). The sheets shall be plus or minus 1/8 inch of the specified dimensions.

3.3.1.2 Rolls. Unless otherwise specified, rolls shall be furnished in widths as specified (see 6.2 and 6.3). The rolls shall be within plus or minus 1/8 inch of the specified width. Rolls shall be evenly wound and shall be one continuous length of 250 ± 5 feet with no more than two splices in any roll. Rolls shall be suitably restrained to prevent unwinding.

3.4 Workmanship. The paperboard shall be free from abrasive material, wax, asphalt, dyes, stains, holes, cuts, tears, or scuffs.

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

4.2.1 Component and material inspection. In accordance with 4.1, components and materials shall be inspected 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 document.

4.2.1.1 Testing of component. The component materials shall be tested for the applicable characteristics in table II. The test sample unit shall consist of two 1-square yard specimens of either cushioning or backing sheet. The lot size for determining the sample size shall be expressed in units of one thousand square feet area of cushioning or backing sheet paper area, as applicable. Sample size shall be determined as shown below. The sample units shall be randomly selected and not more than one test sample shall be taken from any single one thousand square foot unit. Failure of any test shall be cause for rejection of the lot.

Lot size (thousands of square feet)	Sample size (No. of test units)
0-50	2
51-500	3
501 thru 35,000	5
35,001 and over	8

TABLE II. Instructions for testing the components

Characteristic	Specification reference: Requirement	Specification reference: Test Method 3/	Number determinations per sample unit 1/	Results reported as: Numerically to nearest 2/
Cushioning component				
Corrugated & module				
Stock	3.1.1	T401	Composite (Avg of 2)	5 percent
Thickness	3.1.1.1	T411	Avg of 20, 2 per specimen	0.0001 inch
Solid molded pulp				
Stock	3.1.1.2	T401	Composite (Avg of 2)	5 percent
Other configurations				
Stock	3.1.1.3	T401	Composite (Avg of 2)	5 percent
Backing sheet, style 1				
Stock	3.1.2	T401	Composite (Avg of 2)	5 percent
Basis weight 24 x 36-500 pounds	3.1.2.3	T410	1 (weight of 5 specimens)	0.1 pound
Bursting strength	3.1.2.3	T403	Avg of 10 5 on each side	Point
Tearing resistance grams minimum				
Machine direction	3.1.3	T414	Avg of 10	Gram
Cross direction	3.1.3	T414	Avg of 10	Gram

1/ For characteristics on which multiple determinations are specified per sample unit, the determination shall be randomly distributed throughout the sample unit.

2/ Test reports shall [illegible] all values on which results are based.

3/ Indicates test method of TAPPI.

4.2.2 End item inspection. The end item shall be examined in accordance with the applicable subparagraphs at the inspection levels and acceptable quality levels (AQLs) in 4.2.2.1. A random sample shall be drawn from each lot of material for each type, style, form, and construction for visual examination of material, construction, workmanship, dimensions, count, and preparation for delivery defects. The lot size for purpose of determining the sample size, in accordance with MIL-STD-105, shall be expressed in units of rolls or packages, of sheets, as applicable, for examinations under 4.2.2.2 through 4.2.2.5 and in units of shipping containers for examination under 4.2.3.

4.2.2.1 Inspection levels and AQLs for examinations. The inspection levels, for determining the sample size, and the AQLs, expressed in terms of defects per hundred units, shall be as follows:

Examination paragraph 1/	Inspection levels	AQLs
4.2.2.2	I	2.5
4.2.2.3	S-2	2.5
4.2.2.4	S-2	2.5
4.2.2.5	S-2	NA
4.2.3	S-1	2.5

1/ The same rolls, packages of sheets, or sheets, as applicable shall be used for examinations under 4.2.2.3 thru 4.2.2.5 inclusive, and shall be within the rolls or packages of sheets randomly selected for examination under 4.2.2.2.

4.2.2.2 Examination of the end item for defects in appearance, workmanship, and construction. The sample unit shall be twelve consecutive yards full roll width randomly selected for the examination of defects within rolls. The sample unit shall not be taken from the first or last convolutions of the roll. The sample unit shall be 5 sheets randomly selected from a package for the examination for defects in sheets (flat cuts). Not more than three sample units shall be examined from any one roll or one package of sheets, as applicable. Both sides of the material shall be examined. Defects of each type shall be scored only once within each sample unit for rolls and once per sheet for flat cuts.

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Examine	Defect
Form	Not in rolls or sheets, as specified.
Workmanship	Not clean; contains wax, asphalt, dyes, stains, or abrasive materials. Any hole, tear, scuff, crease, puncture, or fold. Multiple plies not securely attached to adjacent plies.
Construction (as applicable)	Backing sheet missing (style 1 only). Not flexible.
Corrugated	Surface ruptures upon flexing. Not "B" flute.
Nodule	More than 45 nodules per diagonal foot. Less than 40 nodules per diagonal foot.
Molded	Less than 23 flutes per lineal foot.

4.2.2.3 Examination of the end item for dimensional defects. The sample unit for this examination shall be one roll or one sheet, as applicable.

Examine	Defect
Rolls:	
Width	Varies from specified width by more than plus or minus 1/8 inch.
Sheets:	
Length and width	Varies from specified dimensions by more than plus or minus 1/8 inch.
Indentations: (Corrugated and molded construction only)	Flutes not horizontally or diagonally indented at 1/4 inch intervals.
Molded constructions:	
30 or more flutes per lineal foot:	
Flute height	Less than 1/8 inch.
Flute width	Less than 3/32 or more than 5/32 inch wide at peak of flute.
Less than 30 flutes per lineal foot:	
Flute height	Less than 5/32 inch
Flute width	Less than 1/8 or more than 3/16 inch wide at peak of flute.

4.2.2.4 Examination of the end item for defects in roll formation. The sample unit for this examination shall be one roll.

Examine	Defect
Assembly of roll	Not suitably restrained to prevent unwinding. Material not wound evenly on roll causing wrinkles, creases, or telescoping.
Unwinding of rolls	Roll not continuous More than two splices per roll. Splice not evenly and neatly made; does not cover entire width of roll.

4.2.2.5 Examination of the end item for average length per roll or average count per package of sheets. The sample unit for this examination shall be one roll or one package of sheets, as applicable. The lot shall be unacceptable if the average length including tolerance per roll or average count per package of sheets for the samples examined is less than specified or indicated.

4.2.2.6 End item testing. The end item shall be conditioned in accordance with method T402 of TAPPI and tested for the applicable characteristics in table III. The sample unit shall be one piece forty-eight inches long, full width of roll for rolls, or two sheets full size for sheets. The sample size shall be at inspection level S-1. No more than one sample unit for test shall be taken from one roll or package of sheets, as applicable. All tests reports shall contain the individual values utilitized in expressing the final results. The lot shall be unacceptable if one or more sample units fail to meet any test requirement specified.

TABLE III. Instructions for testing of the end item

Characteristics	Specification reference: Requirement	Specification reference: Test method	Requirements applicable to: Sample unit	Requirements applicable to: Lot avg.	Number determinations sample per unit	Results reported as: Pass or fail	Results reported as: Numerically to nearest ?/	Insp level	AQL
Basis weight, pounds per thousand square feet:									
Molded construction	3.2.3	T410	X		1 (weight of 5 specimens)		0.1 Pound		
Thickness, inches, all constructions	Table I	4.3.1	X		1 (ten sheet average)		0.001 inch		
Bursting strength, points	Table I	T403	X		Average of 4 (2 on each side)		Point		
Tearing strength, grams, total of 2 principal directions, minimum	Table I	T414	X		10 (5 in each principal direction)		Gram		
Energy absorption, inch pounds per cubic inch	Table I	4.3.2 2/	X				Inch pounds per cubic inch		
Direct cycle	Table I	4.3.2 2/	X						
Indirect cycle	Table I	4.3.2 2/	X						

TABLE XII. Instructions for testing of the end item (cont'd)

Characteristics	Specification reference: Requirement	Specification reference: Test Method	Requirements applicable to: Sample unit	Requirements applicable to: Lot avg.	Number determinations sample per unit	Results reported as: Pass or fail	Results reported as: Numerically to nearest 2/	Insp level	AQL
Force at 50 percent compression, pounds:									
First cycle	Table I	4.3.3 2/	X		Average of 3		0.1 pound		
Second cycle	Table I	4.3.3 2/	X		Average of 3		0.1 pound		
Flexural resistance, pounds applied	Table I	4.3.4 2/	X		Average of 5		0.1 pound		
[illegible] of backing sheet	3.2.2	4.3.5	X		Average of 2 per direction	X			

1/ Methods refer to test method of TAPPI.

2/ Not applicable to other than specified construction only (see 3.2.1.4).

4.2.3 Examination of preparation for delivery requirements. An examination shall be made to determine whether the packing and marking complies with the section 5 requirements. Defects shall be as listed below. The sample unit shall be one wrapped roll, one bundle of sheets, or one shipping container fully prepared for delivery except that it need not be closed. The lot size shall be the number of wrapped rolls, wrapped sheets, or shipping containers in the end item inspection lot.

Examine	Defect
Marking (exterior)	Omitted, incorrect, illegible, of improper size, location, sequence or method of application.
Materials	Any component missing, damaged or not as specified.
Workmanship	Inadequate application of components, such as: incomplete closure of wrapped rolls or sheets, loose or inadequate sealing, strapping, stapling or ties. Bulged or distorted containers.
Content	Loose or inadequate sealing, strapping or stapling. Number of sheets is more or less than required

4.2.3.1 Examination of shipping containers. When shipping containers are required to comply with PPP-B-636, examination for defects in the closure, waterproofing and reinforcing shall be in accordance with the appendix of PPP-B-636.

4.3 Test procedures.

4.3.1 Thickness of the end item. Stack on a flat smooth surface, ten, 4-by 4-inch specimens of paperboard cushioning material interleaved with ten, 4-by 4-inch pieces of 1/8 inch flat plastic sheets. Measure the height of the ten plastic sheets at the four corners and average the four readings to obtain the height of the plastic sheets alone prior to assembling the stack. The plastic sheets shall be made of methyl methacrylate or material having approximately equivalent weight, resiliency, and stiffness. Measure the height of the stack of cushioning material and plastic sheets combined at the four corners to the nearest 0.01 inch and determine the average of the four readings. Subtract the average height of the plastic stack from the average height of the combined stack to determine the total height of the paperboard cushioning material alone and divide this by 10 to determine the thickness of a single cushioning paperboard specimen.

4.3.2 Energy absorption.

4.3.2.1 Apparatus. The test apparatus shall be a compression tester equipped with a chart recorder and a means of applying a constant compression rate at a force from zero to 500 pounds.

4.3.2.2 Procedure. Place the test stack from 4.3.1 in the compression tester in such a manner that the compression is applied perpendicular to the top plastic sheet of the test stack at the rate of 1 inch per minute. Use the total height of the cushioning material alone as the initial value. For the first cycle the test stack is compressed to the point where the height of the stack of cushioning material is 40 percent of its initial value (60 percent compression). Release the load and immediately repeat the procedure on the same test stack for the second cycle. The results shall be reported in inch pounds per cubic inch. Energy absorption is calculated using the following formula:

$$E = \frac{a}{AH}$$

Where:

a = Area under the chart recorder load-compression curve in inch pounds.
A = Area of the test stack, nominally 16 square inches for 4- by 4-inch specimens.
H = Original height of the stack of cushioning material in inches.

4.3.3 Force at 60 percent compression. The force required to compress the cushioning material 60 percent of its original height shall be determined for each cycle from the recorder curves of load versus compression.

4.3.4 Flexural resistance.

4.3.4.1 Apparatus. The apparatus is the same as that used in the energy absorption test with the addition of a support and loading block as specified in ASTM D 1098. The following test procedure is substituted for ASTM D 1098.

4.3.4.2 Test specimen. Select and cut the test specified 3 ± 1/8 inch in one principal direction and 2 ± 1/16 inch in the other direction. If the stiffer direction is obvious, the specimen shall be cut 3 ± 1/8 inch in the stiffer direction and it will not be necessary to cut any test specimen in the other direction, otherwise both directions shall be tested.

4.3.4.1 Procedure. Using a 2-inch span between supports, place the specimen with the more irregular surface up across the supports with the long dimension approximately centered and the long edges parallel with the edges of the supports. For equally irregular face materials, either side may face up. Using center loading with a crosshead speed of one inch per minute, depress the surface of the sample 0.22 ± 0.02 inch. Report the flexural resistance as the maximum stress recorded in pounds from the start to the end of the test.

4.3.5 Adhesion of backing sheet. After conditioning, cut a sample 2 by 12 inches from each principal direction. Draw the sample over 1 inch in such a way that the backing sheet is in contact with the mandrel and that the specimen is subjected to a 180° bend over a three second period. Examine the specimen for separation of the backing sheet from the cushioning component.

5. PREPARATION FOR DELIVERY

5.1 Packing. Packing shall be level A, B, or Commercial, as specified (see 6.3).

5.1.1 Level A.

5.1.1.1 Rolls. Each roll of paperboard shall be completely wrapped overall with at least one thickness of waterproofed barrier material conforming to PPP-B-1055, except that when class C-1 is used, two thicknesses shall be required. The wrapper shall be closed at the end by means of inside and outside headers of the same material as the wrapper. When machine wrapped, inside headers are not required. Seams and outside headers shall be sealed with a water-resistant adhesive conforming to type I or II, grade B, class optional of MMM-A-260, using sufficient adhesive to effect a watertight seal. The width of the continuous seam adhesive strip shall be not less than 3/4-inch. Alternatively, each roll be packed in a snug-fitting fiberboard shipping container conforming to style RSC, grade V2s of PPP-B-636. Each fiberboard shipping container shall be closed in accordance with method III, waterproofed in accordance with method V and reinforced as specified in the appendix of PPP-B-636.

5.1.1.2 Sheets. Two hundred sheets of paperboard of one description only shall be evenly stacked and wrapped overall with waterproofed barrier material as specified in 5.1.1.1. All seams, joints and closures shall be sealed with a water-resistant adhesive conforming to type I or II, grade B, class optional of MMM-A-260 or with pressure-sensitive tape conforming to PPP-T-76. Alternatively the sheets may be packed in a fiberboard shipping container as specified in 5.1.1.1.

5.1.2 Level C.

5.1.2.1 Rolls. Each roll of paperboard shall be completely wrapped overall with 70-pound minimum basis weight kraft paper conforming to grade B of UU-P-268. The wrapper shall be closed at the ends by means of inside and outside headers of the same material as the wrapper. When machine wrapped, inside headers are not required. Seams and outside headers shall be securely sealed with an adhesive commercially used for this purpose or with 3-inch minimum width gummed paper tape conforming to type III, grade B or C of PPP-T-45. Alternatively, each roll shall be packed in a snug-fitting fiberboard shipping container conforming to style RSC, type CF (variety SW) or SF, class domestic, grade 275 of PPP-B-636. Each container shall be closed in accordance with method II as specified in the appendix of PPP-B-636. Alternatively, each roll shall be packed in a snug-fitting plastic bag fabricated from polyethylene film conforming to L-P-378, type I, minimum thickness 0.004 mils. The bag shall be closed with a twist tie wire closure.

5.1.2.2 Sheets. Two hundred sheets of paperboard of one description only shall be evenly stacked and wrapped overall with kraft paper as specified in 5.1.2.1. All seams, joints and closures shall be securely sealed with an adhesive commercially used for this purpose; with 2-inch minimum width gummed paper tape conforming to type III, grade B or C of PPP-T-45; or by securely cross-tying with cord or twine. Alternatively, the sheets may be packed in a fiberboard shipping container as specified in 5.1.2.1.

5.1.2.3 Weather-resistant grade fiberboard containers. When specified (see 6.3), the fiberboard containers specified in 5.1.2.1 and 5.1.2.2 shall be a grade V3c, V3s or V4s fiberboard box fabricated in accordance with PPP-B-636 and closed in accordance with method III as specified in the appendix of PPP-B-636.

5.1.3 Commercial packing. Paperboard shall be packed in a manner to insure carrier acceptance and safe delivery at destination at the lowest transportation rate for such supplies. The quantity per shipping container (when applicable) shall be the same as that normally used by the supplier for retail distribution. Containers shall comply with the Uniform Freight Classification or National Motor Freight Classification, as applicable.

5.2 Marking.

5.2.1 Civil agencies. Shipping containers shall be marked in accordance with FED-STD-123.

5.2.2 Military requirements. In addition to any special marking required by the contract or order, shipments shall be marked in accordance with MIL-STD-129. Special handling marking requirements applicable to arrows and the words "THIS SIDE UP" shall apply to wrapped or boxed rolls, and shall be applied in such a manner as to ensure the rolls being handled and stored as end.

6. NOTES

6.1 Intended use. Cushioning wrapping paperboard is used as a cushioning wrap or to immobilize irregular shaped objects. A backing sheet (style 1) is required when the material is used as an outer wrapper for such shipments as parcel post.

6.2 Paperboard cushioning material is commercially available in widths of 6, 9, 12, 15, 18, 24, 30, 36, 48, 54, 60, 72, and 84 inches. Sheet stock is available in 18 by 30, 24 by 36, 36 by 48, and other practical sizes up to 72 inches wide.

6.3 Ordering data. Purchasers should select the preferred options permitted herein and procurement documents should specify the following:

(a) Title, number, and date of this specification.
(b) Type, style, and form required (see 1.2 and 3.3.1).
(c) Width of roll or dimensions of sheets, as applicable (see 3.3).
(d) Selection of applicable level of packing (see 5.1).
(e) When weather-resistant grade fiberboard shipping containers are required for level B shipments (see 5.1.2.3).

6.4 Cushioning material conforming to the requirements for type III heavy duty materials of this specification may be used in applications for which type II medium duty material of PPP-P-291a was formerly used.

Custodians:

Army - GL
Navy - SA
Air Force - 69

Review activities:

Army - EL, PA, MI
Air Force - 84, 70, 80, 82
DOD - DS

User activities:

Army - MT, MD
Navy - YD, MC
Air Force - 71

Preparing activity:

Army - GL

Civil Agency Coordinating Activities:

AGR-APS
GSA-FSS

Project No. 8135-0370

Orders for this publication are to be placed with General Services Administration, acting as an agent for the Superintendent of Documents. See section 2 of this specification to obtain extra copies and other documents referenced herein. Price 5¢ cents each.

INSTRUCTIONS In a standing effort to improve standardization documents, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide input. Fold the form only as directed, fasten along the line indicated, tape along the loose edge (*DO NOT STAPLE*), and mail. In block 5, be as specific as possible about particular problems areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgment will be mailed to you within 30 days to let you know that your comments were received and are being considered.

NOTE This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions – Reverse Side)

1. DOCUMENT NUMBER

2. DOCUMENT TITLE

3a. NAME OF SUBMITTING ORGANIZATION

4. TYPE OF ORGANIZATION *(Mark one)*

- ☐ VENDOR
- ☐ USER
- ☐ MANUFACTURER
- ☐ OTHER *(Specify)* _____

3b. ADDRESS *(Street, City, State, ZIP Code)*

5. PROBLEM AREAS

a. Paragraph Number and Wording

b. Recommended Wording

c. Reason/Rationale for Recommendation

6. REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI)* – Optional

7b. WORK TELEPHONE NUMBER *(Include Area Code)* – Optional

7c. MAILING ADDRESS *(Street, City, State, ZIP Code)* – Optional

8. DATE OF SUBMISSION *(YYMMDD)*

DD FORM 1426

DD DETACH THIS FORM, CUT ALONG THIS LINE.