

MIL-P-12420C

21 December 1971

SUPERSEDING

MIL-P-12420B

14 December 1966

MILITARY SPECIFICATION

PLASTIC MATERIAL, CELLULAR,

ELASTOMERIC

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

1. SCOPE

1.1 Scope.- This specification covers expanded unicellular plastic in sheet form (see 6.1).

* 1.2 Classification.- The expanded unicellular elastomeric plastic shall be of the following types, classes and finishes specified (see 6.2).

Type I - Shock absorbent and insulation

Class 1 - Low compression set.

Class 2 - Medium compression set.

Class 3 - High compression set.

Type II - Low temperature insulation.

Class 4 - Low density.

Class 5 - High density.

Class 6 - High buoyancy.

Finishes (see 3.1.4.2).

Style 1 - Without mold skin.

Style 2 - With mold skin on one side.

Style 3 - With mold skin on both sides.

Type III - Decorative insulation with protective skin.

* 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.

FSC 9330

MIL-P-12420C**SPECIFICATIONS****FEDERAL**

C-C-91	-	Candle, Illuminating.
UU-P-270	-	Paper, Wrapping, Waxed (Dry).
PPP-B-591	-	Boxes, Fiberboard, Wood-Cleated.
PPP-B-601	-	Boxes, Wood, Cleated-Plywood.
PPP-B-636	-	Boxes, Shipping, Fiberboard.
PPP-F-320	-	Fiberboard; Corrugated And Solid, Sheet Stock (Container Grade), And Cut Shapes.

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MIL-L-10547	-	Liners, Case and Sheet, Overwrap, Water-vaporproof, or Waterproof, Flexible.
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STANDARDS**FEDERAL**

FED-STD-191	-	Textile, Test Methods.
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MIL-STD-105	-	Sampling Procedures and Tables for Inspection by Attributes.
MIL-STD-129	-	Marking for Shipment and Storage.
MIL-STD-147	-	Palletized And Containerized Unit Loads 40" x 48" Pallets, Skids, Runners, or Pallet Type Base.

(Copies of specifications and standards required by the supplier 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:

American Society for Testing and Materials

ASTM 1564-64T, Flexible Urethane Foam.
ASTM 1667-64, Sponges Made From Closed-Cell (Vinyl Chloride), or Copolymers Thereof.

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

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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, D.C. 20036.)

Uniform Classification Committee, Agent

Uniform Freight Classification

(Application for copies should be addressed to the Uniform Classification Committee, Room 202, Union Station, 516 W. Jackson Blvd., Chicago, Illinois 60606.)

3. REQUIREMENTS

3.1 Material.- The expanded unicellular elastomeric plastic shall be a cured and expanded blend of virgin chlorine bearing vinyl resin and a butadiene acrylonitrile rubber, or other thermosetting elastomeric materials, suitably compounded and processed to meet the requirements of this specification. The use of water-soluble compounding ingredients shall not exceed 3 percent. The expanded plastic shall be of unicellular (closed cell) structure. Each sheet of the expanded unicellular elastomeric plastic will be allowed one blister, bubble, cut or tear providing the defect does not cover an area greater than two square inches, or extend for a length of over 2 inches.

- * 3.1.1 Physical requirements.- Types I, II and III expanded unicellular elastomeric plastic shall conform to the physical requirements shown in table I when tested as specified in table III.

TABLE I.- Physical requirements

Characteristic	Type I						Type II		Type III
	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 5	Class 6	
Tensile strength, psi, minimum:									
Initial	60	80	90	30	50	30	50	30	100
After aging	60	80	90	30	50	30	50	30	100
Elongation, percent, minimum:									
Initial	50	100	100	150	200	150	200	150	200
After aging	50	100	100	150	150	150	150	150	150
Density, lbs/cubic foot:									
Minimum	6	6	6.5	3.5	5	3.5	5	3.5	9.0
Maximum	8	8.5	8.5	6.0	7.5	6.0	7.5	6.0	14.0
Volume loss after aging:									
Percent, maximum	6	4	4	4	5	8	5	8	6
Weight loss after aging:									
Percent, maximum	2	2	2	2	2	4	2	4	2
Compression deflection, psi:									
Minimum	3	3	5	1.5	2	1.5	2	1.5	2
Maximum	6	6	7	3	3.5	3	3.5	3	6
Compressing set, percent, maximum	12	20	30	35	25	45	25	45	30
Water absorption, percent, increase, maximum	50	50	50	60	50	60	50	60	50
Low temperature flexibility	-	-	-	Note 1/	Note 1/	Note 1/	Note 1/	Note 1/	-
Fire retardance, seconds, maximum	5	5	5	5	5	5	5	5	5

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TABLE I.- Physical requirements (cont'd)

Characteristic	Type I		Type II			Type III
	Class 1	Class	Class 3	Class 4	Class 5	Class 6
Energy absorption, inches, maximum	5	10	6	-	-	-
Blocking scale rating, maximum	2	2	2	2	2	2
Lacquer, lifting	Note 2/	Note 2/	Note 2/	Note 2/	Note 2/	Note 2/
Buoyancy, lbs/lb minimum	-	-	-	-	-	8

1/ Test specimens shall show no evidence of breaking or cracking after bending.

2/ There shall be no evidence of lifting, tackiness or swelling in the area of contact and there shall be no exudation of plasticizer from the test specimen.

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3.1.2 Odor.- The expanded plastic shall be free of objectionable odors when tested as specified in table III.

3.1.3 Dimensions.- The width, length and thickness of the expanded plastic shall be as specified in the contract or order (see 6.2). The tolerance for width and length shall be minus zero, plus four inches. The tolerance on thickness shall be as shown in table II.

3.1.4 Color and finish.- Unless otherwise specified (see 6.2) the color of the expanded plastic shall be at the contractor's option (except white (see 6.4)) and shall be uniform throughout.

3.1.4.1 Color.- The protective skin of type III may be a different color than the body of the expanded plastic.

3.1.4.2 Finish.-

3.1.4.2.1 Types I and II expanded plastic shall be supplied without mold skin, with mold skin on one side or with mold skin on both sides as specified (see 1.2 and 6.2). When mold skin is supplied it shall form a continuous film with no more than a slight wrinkled effect permitted. Cut surfaces shall be even.

3.1.4.2.2 Type III expanded plastic shall be furnished with a continuous protective skin on one side. A definite wrinkled effect in the skin surface will be permitted. Cut surfaces shall be regular and even.

3.1.5 Marking of sheet material.- The applicable Federal Stock Number shall be permanently and legibly placed, in contrasting color, on one side of each sheet in at least one place within 12 inches of the edge, and in numbers of not less than 1/2 inch height by means of stamping or stenciling.

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TABLE II.- Expanded plastic thickness tolerance

Thickness (inch)	Plus tolerance (inch)	Minus tolerance (inch)
0.094 (3/32)	0.019	0.021
0.125 (1/8)	0.020	0.020
0.156 (5/32)	0.030	0.030
0.188 (3/16)	0.030	0.033
0.250 (1/4)	0.030	0.040
0.313 (5/16)	0.037	0.048
0.375 (3/8)	0.045	0.055
0.500 (1/2)	0.050	0.060
0.625 (5/8)	0.050	0.060
0.750 (3/4)	0.060	0.060
1.000 (1)	0.080	0.080
1.250 (1-1/4)	0.100	0.100
1.500 (1-1/2)	0.120	0.120

3.2 Workmanship.- The expanded plastic shall conform to the quality and grade of product established by this specification and the occurrence of defects shall not exceed the applicable acceptable quality levels.

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.- The requirements in 3.1, that no more than 3 percent water soluble compounding ingredients be used in the end item, and the chemical composition of the end item, will be satisfied by the acceptance of a certificate of compliance from the supplier. When certificates of compliance are submitted the Government reserves the right to check test such items to determine the validity of the certification.
- * 4.2 Inspection.- Sampling for inspection shall be performed in accordance with MIL-STD-105, except where otherwise indicated hereinafter.

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- * **4.2.1 Inspection of components and materials.-** In accordance with 4.1 above, components and materials shall be inspected and 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.
- 4.2.2 Inspection of the end item.-**
- 4.2.2.1 Examination of the end item.-** Examination of the end item shall be made in accordance with the defects, inspection levels and acceptable quality levels (AQLs) set forth below. The lot size, for purpose of determining the sample size in accordance with MIL-STD-105, shall be expressed in units of sheets for examination under 4.2.2.1.1, 4.2.2.1.2 and in units of shipping containers for examination in 4.2.2.1.3.
- * **4.2.2.1.1 Examination of the end item for defects in appearance, construction, marking and workmanship.-** The sample unit for this examination shall be one sheet of expanded plastic.

<u>Examine</u>	<u>Defect</u>
Appearance, construction and workmanship	Any blister, bubble, crack, tear, cut, hole or gouge covering an area greater than 2 square inches or extending for a length of over 2 inches. More than one blister, bubble, crack, tear, cut, hole or gouge. Mold skin not as specified (when required). Protective continuous skin omitted or not as specified (applicable type III only). Rough or ragged edges. Cut surfaces (when required) uneven or irregular. Any lump or solid area. Any evidence of tackiness.
Finish	Not as specified.
Color	Not uniform; not as specified.
Marking	Missing, incomplete or incorrect, not legible. Not in specified location. Numbers less than 1/2 inch in height. Not permanent, i.e., can be easily rubbed off with moistened thumb.

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4.2.2.1.2 Examination of the end item for dimensional defects.- The sample unit for this examination shall be one expanded plastic sheet.

<u>Examine</u>	<u>Defect</u>
Width and length	Varies by more than minus 0 or plus 4 inches from the length or width specified.

- * 4.2.2.1.3 Examination of preparation for delivery requirements.- An examination shall be made to determine that the packing and marking complies with the section 5 requirements. Defects shall be scored in accordance with the list below. The sample unit shall be one shipping container fully prepared for delivery with the exception that it need not be closed. Defects of closure listed below 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.

<u>Examine</u>	<u>Defect</u>
Packing	Not in accordance with contract requirements. Not level specified. Inadequate application of components such as: incomplete closure of case liners, container flaps, loose or inadequate strapping, bulged or distorted container. Container not as specified; closures not accomplished by specified or required methods or materials. Liner material (as applicable) omitted, damaged, or not type specified. Separator waxed paper sheets missing, does not cover entire area of contact between the plastic sheets or not as specified. Any nonconforming component, component missing, or damaged.
Weight	Weight of contents exceeds specified requirements.
Marking (exterior)	Omitted, illegible, incorrect, incomplete or not in accordance with contract requirements.

- * 4.2.2.1.4 Examination for palletization.- An examination shall be made to determine that the palletization complies with the section 5 requirements. Defects shall be scored in accordance with the list below. The sample unit shall be one palletized unit load fully prepared for delivery. The lot size shall be the number of palletized unit loads in the end item inspection lot.

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ExamineDefect

Finished dimension

Length, width, or height exceeds specified maximum requirement.

Palletisation

Not as specified.
 Pallet pattern not as specified.
 Interlocking of loads not as specified.
 Load not bonded with required straps as specified.

Weight

Exceeds maximum load limits.

Marking

Omitted; incorrect; illegible; of improper size, location, sequence or method of application.

- * 4.2.2.1.5 Inspection levels and acceptable quality levels (AQLs) for examination.- The inspection levels for determining the sample size and acceptable quality levels (AQLs) expressed in defects per 100 units shall be as follows:

<u>Examination paragraph</u>	<u>Inspection level</u>	<u>AQL</u>
4.2.2.1.1	I	1.5
4.2.2.1.2	S-3	2.5
4.2.2.1.3	S-1	2.5
4.2.2.1.4	S-1	6.5

- * 4.2.3 Testing of the end item.- The end item shall be tested for the applicable characteristics as indicated in table III for each lot presented for inspection. The lot size shall be expressed in units of sheets. The sample unit shall be four square feet of sheet or slab with a minimum dimension of twelve inches $\frac{1}{2}$. The inspection level shall be S-1 except that no less than three sample units shall be selected at random throughout the lot. The acceptable quality level (AQL) shall be 6.5 defects per 100 units. All requirements are applicable to the sample unit.

- 1/ If the end items in a lot are less than $\frac{1}{2}$ inch thick, the supplier shall utilize as a sample unit (one) 12 by 48 by $\frac{1}{2}$ inch piece identical in cure and composition to the lot represented. (Samples for testing may be selected from the stock material from which the sheets or slabs are cut at time of manufacture).

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TABLE III.- Instructions for testing

Characteristic	Requirement reference	Test method reference		No. of deter. per ind. unit 3/	Results reported To nearest	
		Para.	ASTM			
Tensile strength:						
Initial	Table I		Suffix "T" of D1564-64T	3		1 pound
After aging	Table I	4.3.9	Suffix "T" of D1564-64T	3		1 pound
Elongation:						
Initial	Table I		Suffix "T" of D1564-64T	3		10 percent
After aging	Table I	4.3.9	Suffix "T" of D1564-64T	3		10 percent
Density 1/	Table I		Suffix "W" of D1667-64	2		0.1 lb/cu. ft.
Volume loss:						
After aging 2/	Table I	4.3.1		2		0.1 percent
Weight loss:						
After aging 2/	Table I	4.3.1		2		0.1 percent
Compression deflection 2/	Table I		D1667-64	2		0.1 psi
Compression set 2/	Table I		Suffix "B" of D1667-64	2		1.0 percent
Water absorption 2/	Table I	4.3.2		2		1.0 percent
Low temperature flexibility	Table I	4.3.3		1		Pass or fail
Fire retardance	Table I	4.3.4		1		1 second
Energy absorption 2/	Table I	4.3.5		1		Pass or fail
Blocking	Table I	4.3.6		3		Scale reading
Lacquer lifting	Table I	4.3.7		1		Pass or fail
Buoyancy	Table I	4.3.10		3		0.1 pound
Odor	Para. 3.2.2	4.3.8		1		Pass or fail
Thickness	Table II		D1667-64	3		0.001 inch

1/ The test specimens shall be 8 inches long, 8 inches wide and 1/2 inch thick.

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2/ The thickness of the test specimens shall be 1/2 inch.

3/ Where more than one determination is made per unit, the result shall be reported as the average of the determinations.

4.3 Test Methods.-

- * 4.3.1 Volume loss and weight loss after aging.- The volume and weight loss after aging shall be determined by heating the test specimens used for the density determination in a circulating air oven for 24 hours at $158^{\circ} \pm 2^{\circ}\text{F}$. Test specimens shall be placed in the oven in a horizontal position on heavy kraft paper and care shall be taken to avoid restricting or deforming the specimens. After removal from the oven, test specimens shall be conditioned for 4 hours at a temperature of $30 \pm 9^{\circ}\text{F}$. After conditioning the volume and weight shall again be determined and the per cent volume loss and percent weight loss shall be calculated using the following formulas:

$$\text{Percent volume loss} = \frac{(V_1 - V_2)}{V_1} \times 100$$

Where V_1 = Original volume

V_2 = Volume after oven aging

NOTE: Dimensions of test specimens shall be measured in accordance with ASTM procedure D1667-64, paragraph 14

$$\text{Percent weight loss} = \frac{(W_1 - W_2)}{W_1} \times 100$$

Where W_1 = Original volume

W_2 = Weight after oven aging

NOTE: Weights shall be determined to nearest 0.1 gram.

- * 4.3.2 Water absorption.- The water absorption shall be determined in accordance with suffix L of ASTM designation D1667-64 except that the same shall be 1/2 inch thick and the percent weight increase shall be calculated as follows:

$$\text{Percent weight increase} = \frac{(W_2 - W_1)}{W_1} \times 100$$

Where W_1 = Weight of specimen before immersion

W_2 = Weight of specimen after immersion

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4.3.3 Low temperature flexibility.- One test specimen 8 inches long by 1 inch wide by $5/16 \pm 1/16$ inch thick together with the test equipment shall be conditioned for four hours at minus $40^{\circ}\text{F.} \pm 2^{\circ}\text{F.}$ in a cold box. The low temperature flexibility shall be determined by bending the test specimen 180 degrees around a one inch mandrel within five seconds at minus $40^{\circ}\text{F.} \pm 2^{\circ}\text{F.}$ If a dry ice cooled box is used, test specimens shall not make direct contact with the gaseous carbon dioxide.

4.3.4 Fire retardance test.-

4.3.4.1 Test specimen.- The test specimen shall be any convenient length and shall have a cross section $1/2$ inch wide and $1/4$ inch thick.

4.3.4.2 Apparatus.-

- (a) Stop watch
- (b) Standard candle conforming to type II, class B of C-C-91.

4.3.4.3 Procedure.- The test specimen shall be held horizontal with the wider cross dimension in a vertical position. The end of the test specimen shall be placed in the flame so that the flame is equally bisected horizontally by the specimen, with the end of the specimen not extending beyond the perimeter of the flame. Hold the specimen in the flame for exactly one minute, remove and record the afterflame in seconds.

NOTE: If the test specimen melts or shrinks from the flame, the candle flame shall continue to be applied to the remaining end of the molten or shrunken specimen.

4.3.5 Energy absorption.- The energy absorption shall be determined by dropping a steel ball $1-1/4$ inches in diameter, weighing 130 ± 10 grams from a height of 30 inches on the center of a test specimen. The test specimen shall measure 4 by 4 by $1/2 \pm 1/16$ inches thick. A rule shall be mounted vertically behind the specimen with the zero mark of the rule even with the top surface of the test specimen. An opaque shield shall be placed in front of the specimen with the top of the shield as high above the top of the specimen as the maximum rebound permitted in table I. The person performing the test shall sight across the top of the shield to the same height on the rule, as the ball is dropped. The material shall be considered as failing if any part of the ball is visible in this plane of sight during rebound. Prior to testing, the test specimens shall be conditioned for 4 hours at a temperature of $73 \pm 2^{\circ}\text{F.}$

4.3.6 Blocking.- Blocking shall be determined as specified in Method 5872 of FED-STD-191, except that there shall be two sets of four-inch square specimens, one set placed face to face and one set placed back to back; and the test shall be performed at $158 \pm 2^{\circ}\text{F.}$ for a period of 48 hours.

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4.3.7 Lacquer lifting.- The lacquer lifting test shall be conducted by placing a 3 by 5-inch specimen over a lacquered panel of equal or larger dimension. The specimen shall be covered with a flat glass plate and weighted with a two pound weight. The specimen shall be exposed for a test period of 14 days.

4.3.7.1 Preparation of panel.- The lacquered panel shall be prepared by applying two medium coats of the following lacquer to a thin sheet of carbon steel which is smooth and free of grease and other foreign matter:

<u>Ingredients</u>	<u>Parts by weight</u>
Nitrocellulose, 1/2 second	16.0
Ethyl alcohol	10.6
Dibutyl phthalate	4.0
Toluene	40.0
Butyl acetate	16.0
Ethyl acetate	8.6
Butyl alcohol	4.8

The panel shall be air dried for a minimum of two days prior to use.

4.3.8 Odor.- A sample of the expanded plastic shall be exposed to circulating air at $75 \pm 5^{\circ}\text{F.}$ for a period of not less than 24 hours before noting the odor.

4.3.9 Oven aging.- Test specimens to be used for tensile strength and elongation after aging tests shall be exposed in a circulating air oven for 96 hours at $200 \pm 2^{\circ}\text{F.}$ The specimens shall be placed in a horizontal position on heavy kraft paper and care shall be taken to avoid restricting or deforming the specimens. After removal from the oven and before testing, the specimens shall be conditioned for not less than 4 hours at a temperature of $80 \pm 9^{\circ}\text{F.}$

* 4.3.10 Buoyancy.- Three test samples 12 by 15 inches in dimension shall be weighed to the nearest 0.5 ounce. The samples shall then be secured to a frame of adequate size and of sufficient weight to submerge the samples in water in a vertical position. This assembly shall be suspended from a direct reading scale in fresh water, at room temperature, with the top of the samples two inches beneath the surface of the water. The scale reading (to nearest 0.5 ounce) shall be taken 30 minutes after submersion and the buoyancy calculated to the nearest 0.1 pound as follows:

$$\text{Buoyancy} \\ (\text{lbs per lb of material}) = \frac{\text{Weight of frame (in water) minus} \\ \text{weight of frame and samples in water}}{\text{Weight of samples in air}}$$

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5. PREPARATION FOR DELIVERY

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

- * 5.1.1 Level A.- Plastic material of one description only, shall be packed in a snug-fitting shipping container conforming to style optional, grade V2s of PPP-B-636; class II of PPP-B-591; or overseas type, style A or I, grade A or B, type 2 load of PPP-B-601, as specified (see 6.2). Each PPP-B-591 container shall have panels fabricated of fiberboard conforming to grade V3s or V4s of PPP-F-320. The inside of PPP-B-636 container, except style FTC or FPF, shall be fitted with a taped box liner conforming to type CF, class weather resistant, variety DW, grade V15c of PPP-B-636. The plastic material sheets shall be completely separated from each other by not less than one thickness of 30-pound minimum basis weight, dry-waxed paper conforming to type II, class 3 of UU-P-270. In addition, each shipping container shall be provided with a liner of the specified dry-waxed paper with the edges overlapping not less than four inches. Each fiberboard container shall be closed, waterproofed, and reinforced in accordance with the appendix of PPP-B-636. Each wood-cleated container shall be closed and reinforced in accordance with the appendix of the applicable container specification and be waterproofed with a sealed case liner conforming to type I or II, grade C of MTL-L-19547. The weight of the contents of each fiberboard container shall not exceed 65-pounds and for each wood-cleated container shall not exceed 150-pounds.
- * 5.1.2 Level B.- Plastic material of one description only, shall be packed in a snug-fitting shipping container conforming to style optional, type CF (variety SW) or SF, class domestic, grade 275 of PPP-B-636; class I, style A or B of PPP-B-591, except only solid fiberboard shall be used: or domestic type, style A or I, grade B, type 2 load of PPP-B-601, as specified (see 6.2). The inside of each fiberboard shipping container, except style FTC or FPF, shall be fitted with a taped box liner conforming to type CF, class domestic, variety DW, grade 275 of PPP-B-636. The plastic material sheets shall be completely separated from each other by not less than one thickness of 30-pound minimum basis weight dry-waxed paper conforming to type II, class 3 of UU-P-270. In addition, each shipping container shall be provided with a liner of the specified dry-waxed paper with the edges overlapping not less than four inches. Each fiberboard container shall be closed in accordance with method II as specified in the appendix of the container specification. Each wood-cleated container shall be closed and reinforced in accordance with the appendix of the applicable container specification. The weight of the contents of each fiberboard container shall not exceed 65 pounds and for each wood-cleated container shall not exceed 150 pounds.
- * 5.1.2.1 When specified (see 6.2), the fiberboard shipping container specified in 5.1.2 shall be a grade V3c, V3s, or V4s fiberboard box fabricated in accordance with PPP-B-636 and closed in accordance with the appendix of the container specification.

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- * **5.1.3 Level C.-** Plastic material shall be packed in a manner to ~~insure carrier acceptance and safe delivery at destination at the lowest transportation rate for such supplies.~~ Containers shall be in accordance with Uniform Freight Classification Rules or National Motor Freight Classification Rules, as applicable.
- * **5.2 Palletization.-** Unless otherwise specified (see 6.2), plastic material of one description only, packed as specified in 5.1, shall be palletized in accordance with load type I of MIL-STD-147. Each prepared load shall be bonded with primary and secondary straps in accordance with bonding means K and L. Pallet patterns shall be in accordance with the appendix of MIL-STD-147. Interlocking of loads shall be effected by reversing the pattern of each course. If the container is of a size which does not conform to any of the pallet patterns specified in MIL-STD-147, the pallet pattern used shall first be approved by the contracting officer.
- 5.3 Marking.-** In addition to any special marking required by the contract or order, shipping containers and palletized unit loads shall be marked in accordance with MIL-STD-129.
- 6. NOTES**
 - * **6.1 Intended use.-** The expanded plastic covered by this specification is intended for use in shock absorbent containers; in Jackets and Trousers, Insulating (Coldbar); in Jacket, Extreme Cold Weather, Impermeable, and for use as a decorative insulation.
 - * **6.2 Ordering data and procurement documents should specify the following:**
 - (a) Title, number and date of this document.
 - (b) Selection of the applicable levels of packing (see 5.1).
 - (c) Type, class and style required (see 1.2).
 - (d) Width, length and thickness required (see 3.1.3).
 - (e) Color required (see 3.1.4.1).
 - (f) Type of shipping container desired for level A or B packing (see 5.1.1 and 5.1.2).
 - (g) When weather resistant grade fiberboard shipping containers are required for level B packing (see 5.1.2.1).
 - (h) When palletization is not required (see 5.2).
 - 6.3** The maximum length and width in which plastic, expanded, uni-cellular elastomeric can be supplied are 72 inches by 45 inches respectively.
 - 6.4** Expanded plastic can be furnished in all colors except white.

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6.5 Special samples.- When the contract calls for expanded plastic less than 1/2 inch thick, the supplier shall be required to furnish test specimens of the expanded plastic in 1/2 inch thickness for the purpose of conducting tests that require test samples 1/2 inch thick. (see table III, footnotes 1 and 2).

- * 6.6 Marginal notations.- The margins of this specification are marked with an asterisk to indicate where changes (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 previous issue.

Custodians:

Army - GL
Navy - OS

Preparing activity:

Army - GL
Project No. 9330-0514

Review activities:

Army - EL, MD, MR, MU
Navy - AS, YD

User activity:

Navy - MC, EC

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