

L-P-1040B  
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SUPERSEDING  
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FEDERAL SPECIFICATION

PLASTIC SHEETS AND STRIPS (POLYVINYL FLUORIDE)

This specification was approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers extruded transparent and extruded pigmented polyvinyl fluoride sheet and strip.

1.2 Classification.

1.2.1 Types, grades, and classes. The polyvinyl fluoride sheet and strip shall be of the following types, grades, and classes, as specified (see 6.2).

Type I - Transparent (clear).

Grade B - Medium gloss.

Class 2- High shrinkage.

Grade C - High gloss.

Class 1 - Regular shrinkage.

Class 2 - High shrinkage.

Class 3 - Low shrinkage.

Type II - Pigmented (colored or white).

Grade A - Low gloss.

Class 1 - Regular shrinkage.

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Grade B - Medium gloss.

Class 1 - Regular shrinkage.

Grade C - High gloss.

Class 1 - Regular shrinkage.

Class 2 - High shrinkage.

Type III - Laminating sheet and strip, pigmented (for coated fabrics).

Grade A - Olive green 207.

Class 1 - Regular shrinkage.

Grade B - White 317.

Class 1 - Regular shrinkage.

## 2. APPLICABLE DOCUMENTS

2.1 The following documents, of the issues 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:

UU-P-268 - Paper, Kraft, Wrapping.

PPP-B-585 - Boxes, Wood, Wirebound.

PPP-B-601 - Boxes, Wood, Cleated-Plywood.

PPP-B-621 - Boxes, Wood, Nailed and Lock-Corner.

PPP-B-636 - Boxes, Shipping, Fiberboard

PPP-D-723 - Drums, Fiber.

PPP-T-45 - Tape, Gummed, Paper, Reinforced and Plain, for Sealing and Securing.

### Federal Standards:

Fed. Std. No. 123 - Marking for Shipment (Civil Agencies).

Fed. Std. No. 595 - Colors.

(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.)

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(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 Specifications:

- MIL-P-116 - Preservation, Packaging, Methods of
- MIL-C-5541 - Chemical Films and Chemical Film Materials for Aluminum and Aluminum Alloys.
- MIL-L-10547 - Liners, Case and Sheet Overwrap, Water-Vaporproof or Waterproof, Flexible.

Military Standards:

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

Military Handbook:

- DPSC Handbook 4120.1 - List of Armed Services Colors for Clothing, Equipage, and Textiles.

(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 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) Standards:

- D 882 - Tensile Properties of Thin Plastic Sheeting.
- D 1003 - Haze and Luminous Transmittance of Transparent Plastics.
- D 2457 - Specular Gloss of Plastic Films.

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 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., Traffic Department, 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 Material. The material shall be a flexible, unsupported sheet or strip made from polyvinyl fluoride and be with or without pigments, fillers, and additives.

3.2 Property values. When tested as specified in the applicable procedures of 4.3, the sheet and strip shall conform to the average property values shown in table I for transparent material, table II for pigmented material, and table III for laminating material. The number of test specimens used to obtain average values and the method of testing shall be in accordance with the applicable procedure of 4.3.

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TABLE I. Property values for transparent sheet and strip, type I

Grade	Class	Nominal thickness mm (inch)	Thickness tolerance mm (inch)		Area factor, gram/sq. meter		Shrinkage		Haze Percent, max.	Gloss			Ultra-violet transmission, percent max.	Cementability		
			max.	min.	max.	min.	Temp. °C	Percent max.		Angle (degrees)	Max.	Min.		One side	Two sides	Non-cement.
B	2	.013 (.0005)	.016 (.00063)	.009 (.00037)	19.3	15.7	130	4.0	-	60	25	-	-	X	-	-
C	1	.025 (.001)	.03 (.0012)	.02 (.0008)	38.5	31.5	170	5.0	14.0	60	-	30	-	-	-	X
C	2	.013 (.0005)	.016 (.00063)	.009 (.00037)	19.3	15.7	130	4.0	12.0	60	-	30	-	X	-	X
C	2	.025 (.001)	.03 (.0012)	.02 (.0008)	38.5	31.5	150	17.5	14.0	60	-	30	1.0	X <sup>1/</sup>	X <sup>1/</sup>	-
C	3	.05 (.002)	.06 (.0024)	.04 (.0016)	80.0	60.0	170	2.5	25.0	60	-	30	-	-	-	X

<sup>1/</sup> Clear uncolored material may have one or both sides treated for cementability. Clear, green colored material treated for cementability on one side only.

TABLE II. Property values for pigmented sheet and strip, type II

Grade	Class	Nominal thickness <sup>1/</sup> mm (inch)	Area factor gram/sq. meter		Shrinkage (transverse direction)		Gloss			Cementability		Pigmentation
			max.	min.	Temp. °C	Percent max.	Angle (degrees)	Percent max.	min.	Two sides	Non-cement	
A	1	.038 (.0015)	61.6	50.4	170	4.0	85	15	10	X	X	White
A	1	.038 (.0015)	61.6	50.4	170	4.0	85	20	14	X	-	Colored
B	1	.050 (.002)	84.7	69.3	170	4.0	60	25	15	X	-	White
C	1	.025 (.001)	45.0	37.0	170	4.0	60	-	30	X	X	White
C	1	.025 (.001)	45.0	37.0	150	17.5	60	-	30	X	-	White

<sup>1/</sup> Thickness tolerance cannot be established for pigmented sheet and strip because of the variation in degrees of pigmentation required for different colors which alters the absolute thickness of the sheet.

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TABLE III. Property values for laminating sheet, type III

Grade	Class	Nominal thickness <sup>1/</sup> mm (inch)	Area factor grams/sq. meter		Shrinkage at 170°C, transverse direction only, percent, max.	Cementability	Tensile strength, MPa (psi), min.		Elongation at break, percent, min.	
			max.	min.			Machine direction	Transverse direction	Machine direction	Transverse direction
A	1	.025 (.001)	48.4	39.6	4	Pass <sup>2/</sup>	34.4 (5000)	34.4 (5000)	60	60
B	1	.025 (.001)	45.0	37.0	4	Pass <sup>2/</sup>	86 (12500)	86 (12500)	75	75

<sup>1/</sup> Thickness tolerance cannot be established for type III sheet and strip because of the variation in degree of pigmentation required for different colors which alters the absolute thickness of the sheet or strip.

<sup>2/</sup> See 4.3.8.2.

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3.3 Color. The colors of type II material, which covers pigmented sheet and strip, shall approximate those specified in Fed. Std. No. 595 as is shown in table IV. The color of type III material, which covers laminating sheet and strip, pigmented (for coated fabrics) shall be as specified in DPSC Handbook 4120.1.

TABLE IV. Colors of pigmented sheet and strip, type II

Color	Fed. Std. No. 595, Color No.	Grade	Class
Georgian Gold	33448	A	1
Granite Gray	36373	A	1
Charcoal	36081	A	1
Bayberry	34226	A	1
Spruce Green	34491	A	1
Sunlight Yellow	33727	A	1
Doeskin	30450	A	1
Cinnamon	24201	A	1
Colonial Red	30111	A	1
Salem Blue	26176	A	1

3.4 Sheet form. The sheet and strip shall be furnished in standard rolls, as specified by the procuring activity (see 6.2) from the following range of core diameters, outside diameters, and widths:

Core diameter or inside diameter, inches	Outside diameter, inches	Width range, inches
3	9-1/2, 13	1 to 72
6	13, 18	6 to 72

The width tolerance shall be plus or minus 1/16 inch and the outside diameter tolerance of the roll shall be plus or minus 1/4 inch. The maximum number of splices per standard roll shall be as follows:

Inside diameter, (ID), inches	Outside diameter, (OD), inches	Maximum number of splices		
		Nominal film thickness, inches		
		.002	.001	.0005

3	9-1/2	4	8	12
3	13	8	16	24
6	13	6	12	18
6	18	12	24	36

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The average length and weight per roll are shown in table V.



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TABLE V. Average length and weight per standard roll

Type I Grade Class	Nominal thickness mm (inch)	Average length in meters (feet) on roll <sup>1/</sup>				Average weight in grams per mm (pounds per inch) of width of roll <sup>1/</sup>			
		76mm (3 inch) I.D.		152mm (6 inch) I.D.		76mm (3 inch) I.D.		152mm (6 inch) I.D.	
		241mm (9-1/2 inch) O.D.	330mm (13 inch) O.D.	330mm (13 inch) O.D.	457mm (18 inch) O.D.	241mm (9-1/2 inch) O.D.	330mm (13 inch) O.D.	330mm (13 inch) O.D.	457mm (18 inch) O.D.
B 2	.013 (.0005)	2100 (7000)	-	-	-	39 (2.2)	-	-	-
C 1	.025 (.001)	1500 (5000)	3000 (10000)	2400 (8000)	-	54 (3.0)	108 (6.0)	86 (4.8)	-
C 2	.013 (.0005)	3000 (10000)	-	-	-	54 (3.0)	-	-	-
C 2	.025 (.001)	1500 (5000)	3000 (10000)	2400 (8000)	-	54 (3.0)	108 (6.0)	86 (4.8)	-
C 3	.05 (.002)	750 (2500)	1500 (5000)	1200 (4000)	2700 (9000)	54 (3.0)	108 (6.0)	86 (4.8)	20 (11.0)
<b>Type II</b>									
<b>Grade Class</b>									
A 1	.038 (.0015)	930 (3100)	1900 (6200)	1600 (5200)	3400 (11500)	54 (3.0)	108 (6.0)	89 (5.0)	20 (11.0)
B 1	.05 (.002)	750 (2500)	1500 (5000)	1200 (4000)	2700 (9000)	59 (3.3)	118 (6.6)	93 (5.2)	21 (11.6)
C 1	.025 (.001)	1500 (5000)	3000 (10000)	2400 (8000)	-	63 (3.5)	125 (7.0)	98 (5.5)	-
C 1	.05 (.002)	750 (2500)	1500 (5000)	1200 (4000)	2700 (9000)	63 (3.5)	125 (7.0)	98 (5.5)	22 (12.5)
C 2	.025 (.001)	1500 (5000)	3000 (10000)	2400 (8000)	-	63 (3.5)	125 (7.0)	98 (5.5)	-
<b>Type III</b>									
<b>Grade Class</b>									
A 1	.025 (.001)	1500 (5000)	3000 (10000)	2400 (8000)	-	63 (3.5)	125 (7.0)	98 (5.5)	-
B 1	.025 (.001)	1500 (5000)	3000 (10000)	2400 (8000)	-	63 (3.5)	125 (7.0)	98 (5.5)	-

<sup>1/</sup> I.D. = Inside diameter of roll core.  
O.D. = Outside diameter of roll.

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3.5 Resistance to solvents. The sheet and strip shall show no visible evidence of swelling or dissolving in methyl ethyl ketone and tetrahydrofuran when exposed as specified in 4.3.10.

3.6 Workmanship. The material shall be uniform and free from defects which impair functionability and appearance of the product.

#### 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 Sampling for inspection and acceptance. Sampling for inspection and acceptance shall be performed in accordance with the provisions set forth in MIL-STD-105, except where otherwise indicated. For purposes of sampling, an inspection lot for examination and tests shall consist of all material of the same type, grade, and class submitted for delivery at one time.

4.2. Inspection of materials and components. In accordance with 4.1, the supplier is responsible for insuring that materials and components used were manufactured, tested, and inspected in accordance with the requirements of this specification and to the extent specified, of referenced subsidiary specifications and standards. In the event of conflict, this specification will govern. A supplier's certificate of compliance with 3.1 shall be furnished.

##### 4.2.2 Inspection of sheet and strip.

4.2.2.1 Examination of the sheet and strip. Examination of the sheet and strip shall be made in accordance with the classification of 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 rolls of sheet or strip for examination in 4.2.2.1.1 through 4.2.2.1.4, and in units of shipping containers for examination in 4.2.2.1.5.

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4.2.2.1.1 Nomination of the sheet and strip for defects in appearance and workmanship. The sample unit for this examination., specified in table VI, shall be five yards of sheet or strips disregarding the first three turns of the roll.

TABLE VI. Examination of the sheet and strip for defects in appearance and workmanship

Examine	Defects
Appearance and workmanship	<p>Not uniform texture, finish., or color.</p> <p>Color not as specified.</p> <p>Not clean, presence of foreign materials imbedded particles.</p> <p>Any cuts, tears, blisters, creases, or wrinkles.</p> <p>Any bubbles, voids, or distortions.</p> <p>Surfaces not smooth, edges not straight and smooth.</p>

4.2.2.1.2 Examination of the sheet and strip for number of splices per roll. The sample unit for this examination shall be one roll of sheet or strip. No roll shall contain more than the maximum number of splices specified in 3.4.

4.2.2.1.3 Examination of the sheet and strip for average length per roll. The sample unit for this examination shall be one roll of sheet or strip. Not less than two rolls shall be measured. The average length per roll a shall be not less than the specified or required length.

4.2.2.1.4 Examination of the sheet and strip for defects in dimensions. The sample unit for this examination, specified in table VII, shall be five yards of sheet or strip. Determination of thickness tolerance for type I material shall be based on an average of 10 readings measured over an area of not less than 12 square inches.

TABLE VII. Examination of the sheet and strip for dimensional defects

Examine	Defects
Width	Varies by more than plus or minus 1/16 inch from the specified width.
Thickness	Varies by more than plus or minus the applicable tolerance.
Core diameter	Inside diameter less than specified.
Outside diameter (O.D.)	Varies by more than plus or minus 1/4 inch from average specified.

4.2.2.1.5 Examination of the preparation for delivery requirements. An examination shall be made in accordance with table VIII to determine that packaging, packing, and marking comply with section 5 requirements. The sample unit for this examination shall be one shipping container fully packed, selected just prior to the closing operation. Shipping containers fully prepared for delivery shall be examined for closure defects.

4.2.2.1.6 Inspection levels and AQLs for examinations. The inspection levels for determining the sample size and the AQL expressed as defects per 100 units shall be as follows:

Examination paragraph	Inspection level	AQL
4.2.2.1.1	II	2.5
4.2.2-1.2	S-2	2.5
4.2.2.1.3	S-2	-
4.2.2.1.4	S-2	4.0
4.2.2-1.5	S-2	2.5

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TABLE VIII. Examination of preparation for delivery

Examine	Defects
Packaging	<p>Not level specified; not in accordance with contract requirements</p> <p>Rolls not unit wrapped and unit packaged as specified.</p> <p>Unit packing material not as specified; closures not made by specified or required methods or materials.</p> <p>Cores missing, crushed, or broken.</p>
Packing	<p>Not level specified; not in accordance with contract requirements.</p> <p>Any nonconforming component, component missing, damaged, or otherwise defective affecting serviceability.</p> <p>Inadequate application of components such as: incomplete closures of case liners; container flaps loose or inadequate strappings; bulged or distorted containers.</p>
Count	Less than specified or indicated quantity.
Weight	Gross weight exceeds specified requirements.
Markings	<p>Interior or exterior markings omitted, illegible, incorrect, incomplete, of improper size, location, sequence or method of application.</p> <p>Not in accordance with contract requirements.</p>

4.2.2.2 Classification of tests. All tests under this specification shall be classified as lot acceptance tests. They shall be made on each lot of material offered against this specification and, in conjunction with the above examination shall be the basis of acceptance or rejection of the lot.

4.2.3 Testing. The sheet and strip shall be tested for the applicable characteristics listed in tables I, II, and III, and 3.5 in accordance with the test methods specified, for each lot submitted for inspection. The lot size, for the purpose of determining the sample size for testing (see MIL-STD-105), shall be expressed in units of one roll of sheet or strip. The sample unit shall consist of sufficient material to prepare all required specimens. The inspection level shall be S-1, with an acceptance number of 0. The results of each test shall be the averaged results of the specimens, unless only one specimen or determination is specified for testing.

### 4.3 Test methods.

4.3.1 Preparation of specimens. Test specimens shall be taken across the width of sheet or strip excluding areas of wrinkles, folds, gels, and other obvious visually determined imperfections.

4.3.2 Specimen conditioning and testing. Unless otherwise specified by the procuring activity, test specimens shall require no conditioning and shall be tested at ambient conditions of temperature and humidity.

4.3.3 Area factor. The area factor shall be measured by weighing a sample of sheet or strip at least 1/2 square meter in area. Dimensions of the sheet or strip shall be measured to the nearest millimeter and the weight of the sheet or strip shall be to the nearest centigram. The weight in grams divided by the area in meters equals the area factor. One determination shall be made to ascertain conformance to 3.2.

4.3.4 Shrinkage. The shrinkage shall be determined by selecting four specimens, each 1020mm (4 inches) by 1270mm (5 inches) from any roll. Three measurements shall be made along either the length or width direction of each specimen using a scale calibrated to .25mm (.01 inch). Each specimen shall be suspended freely in an oven at the specified temperature (see 3.2), plus or minus 1.0 deg. C. for 30 minutes. The specimens shall be measured as before. The shrinkage shall be calculated as follows:

$$\text{Shrinkage, percent} = \frac{\text{Initial measurement} - \text{final measurement}}{\text{Initial measurement}} \times 100.$$

The 12 determinations shall be averaged to ascertain conformance to 3.2.

4.3.5 Haze (type I only). Haze shall be determined on three specimens of type I sheet or strip according to ASTM D 1003 using procedure A. The average of three determinations shall be used to ascertain conformance to 3.2.

4.3.6 Gloss. Gloss shall be determined on five specimens according to ASTM D 2457. The average of five specimens measured at the gloss angle specified (see tables I and II, as applicable), shall be used to determine conformance to 3.2.

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4.3.7 Ultraviolet transmission. Ultraviolet transmission of a single thickness of sheet or strip shall be determined at 350 millimicrons wavelength with air as a reference. A spectrophotometer shall be used to make the trace. When making the trace, the sample shall be immersed in a suitable hydrocarbon, such as benzene, toluene or xylene, to eliminate surface effects. The average of three specimens shall be used to determine conformance to 3.2.

#### 4.3.8 Cementability.

##### 4.3.8.1 Cementability (for type I and II sheet and strip only).

Cementability shall be determined by placing a drop of distilled water on the surface of the sheet or strip. If the water drop wets the surface and spreads, losing its drop-like configuration the surface is cementable. If it retains its drop-like form and does not wet the surface or spreads the surface is noncementable.

4.3.8.2 Cementability (for type III sheet and strip only). An approximately 25.4 by 1270mm by 5-inches) piece of aluminum, .475 to .550mm (0.019 to 0.022 inch) thick, shall be pretreated with Bonderite 721, or equal, to meet the requirements of MIL-C-5541. One side of the aluminum shall be coated with one coat of DuPont Adhesive #6840, or equal, and air dried between 10 and 11 minutes followed by baking in a circulating air oven at 250 deg. +/- 3 deg. C (482 +/- 5.4 deg. F) for 60 to 65 seconds. The aluminum strips shall be taken from the oven and placed in a desiccator for storage until needed. Four 25.4mm (1 inch) by 1270mm (5 inch) samples of film shall be taken for each side of the film to be tested for cementability. Using a model RF "Robot" heat sealer, or equal, at 154 deg. +/- 2 deg. C (309 deg. 3.6 deg. F), an air pressure of 172 +/- 7 kilopascal (25 +/- 1 psi) and timed for 10 to 11 seconds, each sample of film to be tested shall be superimposed and heat sealed to an adhesive coated aluminum strip across the one inch width (metal below and film on top) approximately 13mm (1/2 inch) from the top end of metal and film composite. During the heat sealing, the front or long end of the film tab shall be held away from the metal. The banded samples shall then be soaked in distilled water at 50 deg. +/- 1 deg. C (122 deg. +/- 1.8 deg. F) for a minimum of 16 hours. The samples shall then be removed from the water and tested while still wet. The bond strength shall be determined by pooling at 305 +/- 25mm (12 +/- 1 inches) per minute in a suitable tensile or peel tester. The film shall not separate from the aluminum panel and shall show a clean film break at the top edge of the seal line. If any of the samples fail to pass the roll shall be rechecked. If a recheck any sample does not pass, the roll shall be rejected.

4.3.9 Tensile strength and elongation (for type III sheet and strip only). Three specimens shall be tested in accordance with method A of ASTM D 882 using 51mm (2 inches) per minute +/- 10 percent for rate of jaw separation. Specimen dimensions shall conform to ASTM D 882 using the thickness as received.

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4.3.10 Resistance to solvents. Six specimens, each 25.4 +/- 2.5mm (1 +/- .1 inch) by 25.4 +/- 2.5mm (1 +/- .1 inch), shall be prepared. Three of the specimens shall be submerged in boiling methyl ethyl ketone and three shall be submerged in boiling tetrahydrofuran, each for a minimum of 15 minutes.

## 5. PREPARATION FOR DELIVERY

5.1 Packaging. Packaging shall be level A or C as specified (see 6.2).

### 5.1.1 Level A.

5.1.1.1 Rolls. Sheeting shall be supplied in rolls. Each roll shall be wound on a substantial core with an inside diameter of not less than 3 inches. The rolls shall not exceed 150 pounds in weight and shall be suitably restrained from unwinding. Each roll shall be wrapped with at least one layer of kraft wrapping paper, conforming to UU-P-268, and tightly sealed with tape conforming to type III, grade B of PPP-T-45.

5.1.1.2 Sheets. Sheet material shall be interleaved to prevent adherence of sheets to each other and shall be overwrapped with kraft wrapping paper as specified in 5.1.1.1. Unless otherwise specified in the contract or order (see 6.2), sheets shall be unit packed in quantities specified by the procuring agency in accordance with method III of MIL-P-116. Shapes of only one set of nominal dimensions shall be placed in one package. When required, specified quantities of unit packing shall be intermediately packed as specified in the contract or purchase order (see 6.2).

5.1.2 Level B (applicable for Army only). Packaging shall be the same as for level A (see 5.1.1).

5.1.3 Level C. Rolls or sheets shall be packaged to provide a sufficient level of protection against deterioration and physical damage during shipment and to ensure safe delivery at destination.

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

### 5.2.1 Level A.

5.2.1.1 Rolls. Rolls of sheeting shall be packed in fiber drums or boxes conforming to type II or III, grade A of PPP-D-723 or class weather-resistant, grade V2s of PPP-B-636. Drum closure shall be in accordance with the drum specification, and fiberboard shipping containers shall be closed, waterproofed and reinforced in accordance with the appendix of the fiberboard container specification.



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5.2.1.2 Sheets. Sheets shall be packed in containers conforming to PPP-B-385 (class 3), PPP-B-601 (overseas type), or PPP-B-621 (class 2). Unless otherwise specified, containers shall be provided with a case liner conforming to MIL-L-10547. Boxes shall be closed, strapped, or banded in accordance with the applicable box specification or appendix thereto. The gross weight of wirebound wood or wood-cleated boxes shall not exceed 200 pounds.

#### 5.2.2 Level B.

5.2.2.1 Rolls. Packaged rolls of sheeting shall be packed in fiber drum or boxes conforming to type 1, grade A of PPP-D-723 or class domestic of PPP-B-636. Drum closures shall be in accordance with the drum specification, and fiberboard shipping containers shall be closed in accordance with method II as specified in the appendix of the fiberboard container specification.

5.2.2.2 Sheets. Packages of sheets shall be packed in domestic class or type shipping containers conforming to PPP-B-585 (class 1) PPP-B-601, or PPP-B-621. Containers shall be closed and strapped in accordance with the applicable container specification or appendix thereto. The gross weight of wirebound wood or wood-cleated containers shall not exceed 200 pounds.

5.2.2.3 When specified (see 6.2), the shipping container for packed rolls 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.

5.2.3 Level C. Rolls or sheets, unit packed as specified in 5.1, shall be packed in a manner to ensure 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.

#### 5.3 Marking.

5.3.1 Civil agencies. Shipping containers shall be marked in accordance with Fed. Std. No. 123.

5.3.2 Military requirements. In addition to any special marking required in the contract or order, containers shall be marked in accordance with MIL-STD-129.

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## 6. NOTES

6.1 Intended use. The polyvinyl fluoride sheet and strip covered by this specification are used as a surfacing for wood, metal, vinyl, fiberboard, roofing compositions and plastic panels to protect against weather and to provide color and decorative appearance. They are also used as a sold release in the noncementable form. Type III laminating sheet and strip are intended for use in laminating to a chloroprene-coated polyester fiber.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in the procurement documents:

- a. Title, number, and date of this specification.
- b. Type, grade, and class, as applicable (see 1.2).
- c. Color, as applicable (see 3.3).
- d. Specific form, if required (see 3.4).
- e. Length, width, core diameter, as applicable (see 3.4).
- f. Cementability (see tables I and II).
- g. Levels of packaging and packing required (see 5.1 and 5.2).
- h. Quantities required in unit and intermediate packing, and number of rolls, as applicable (see 5.1.1.1 and 5.1.1.2).
- i. When weather-resistant grade fiberboard shipping containers are required for level B packing of rolls (see 5.2.2.3).
- j. Additional marking, if required (see 5.3).

MILITARY CUSTODIAN:

Army - MR

Preparing activity:

Army - MR

Review activities:

Army - GL, EL  
Navy - YD  
DSA - GS

Project No. 9330-0525

CIVIL AGENCY COORDINATING ACTIVITIES:

User activities:

Army - ME  
Navy - SR

GSA-FSS, PCD

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