PLAINTIFF'S EXHIBIT

BOND-93

PPP-S-50a
JULY 29, 1957
SUPERSEDING
Int. Fed. Spec. PPP-S-0050 (GSA-FSS)
September 20, 1956

FEDERAL SPECIFICATION

SACKS, SHIPPING, PAPER, REINFORCED

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 the construction for heavy duty paper reinforced shipping sacks to be utilized in the shipment of supplies and which will afford adequate protection during shipment, handling, indeterminate storage and world wide distribution.

1.2 Classification.

1.2.1 *Type and grades.*—Sacks furnished under this specification shall be sewn bottom, open mouth type in the following grades, as specified: (see 6.2 and 6.3)

Grade W.—For normal overseas shipments.

Grade X.—For unfavorable storage conditions and hazardous overseas shipment.

2. APPLICABLE SPECIFICATIONS, STANDARDS, AND OTHER PUBLICATIONS

2.1 The following specifications and standards, of the issues in effect on date of invitation for bids, form a part of this specification:

Federal Specifications:

QQ-S-781—Strapping, Flat; Steel.

UU-P-31—Paper, General Specification and Methods of Testing.

Federal Standards:

Fed. Std. No. 102—Preservation, Packaging, and Packing Levels.

Fed. Test Method Std. No. 791—Lubricants, Liquid Fuels and Related Products; Methods of Testing.

(Activities outside the Federal Government may obtain copies of Federal Specifications and Standards 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 25, D. C.

(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, Atlanta, Chicago, Kansas City, Mo., Dallas, Denver, San Francisco, Los Angeles, Seattle, and Washington, D. C.

(Federal Government activities may obtain copies of Federal Specifications and Standards 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 contractors in connection with specific procurement functions should be obtained from the procuring agency or as directed by the contracting officer.)

2.2 Other publications.—The following publications, of the issues in effect on the date of invitation for bids, form a part of this specification:

441881/57/No. 5

FSC 8105

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Technical Association of the Pulp and Paper Industry Publication:

T405—Wax Extraction.

(Copies of TAPPI Test Methods and Recommended Practices Specifications may be obtained from the Technical Association of the Pulp and Paper Industry, 155 E. 44th Street, New York 17, N. Y.)

Consolidated Classification Committee Publication:

Consolidated Freight Classification Rule 40.

(Application for copies should be addressed to the Consolidated Classification Committee, 202 Chicago Union Station, Chicago 6, Ill.)

3. REQUIREMENTS

3.1 Material.

3.1.1 *Paper and coated paper.* — Paper shipping sacks shall be fabricated either wholly or in part from the following classes of paper:

Class 1—Paper, kraft, non-laminated, non-woven glass-fiber reinforced, 24/24 glass fiber strands per lineal foot warp and fill.

Class 2—Paper, kraft, non-laminated, non-woven, glass fiber reinforced, 48/48 glass fiber strands per lineal foot warp and fill.

Class 3—Polyethylene sandwich kraft paper creped two ways.

Class 4 — Polyethylene coated kraft paper.

Class 5—Paper, kraft, plain, heavy duty.

3.1.1.1 *Classes 1 and 2—Paper, kraft, non-laminated, non-woven glass-fiber reinforced.* —The non-woven, glass-fiber reinforced paper shall have a degree of water resistance such as secured by normal rosin sizing, and shall conform to the requirements in table I except that variations in cross-direction tensile strength of not more than 2 units below the minimum requirements will be permitted, provided the variations are compensated by an increase in the machine-direction tearing strength in the ratio of 5 units of tearing strength to 1 unit of tensile strength; and variations in combined dry tensile strength of not more than 4 units below the minimum requirements will be permitted, provided the variations are compensated by an increase in the combined tearing strength in the same ratio. Similarly, variations in machine-direction tearing strength of not more than 10 units below minimum requirements will be permitted, provided the variations are compensated by an increase in cross-direction tensile strength in the ratio of 1 unit of tensile strength to 5 units of tear-

TABLE I.—*Paper, kraft, non-laminated, non-woven, glass-fiber reinforced*

Class	Nominal basis weight (24 by 36–500)	Minimum average tear strength		Minimum average tensile strength per inch width			
				Dry		Wet	
		Machine direction	Total machine direction plus cross direction	Cross direction	Total cross direction plus machine direction	Cross direction	Total cross direction plus machine direction
	Pounds	*Grams*	*Grams*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
1	120	900	2600	35	95	15	45
2	120	1010	3180	40	130	25	80

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TABLE II.—*Polyethylene sandwich kraft paper, creped two ways*

Nominal basis weight (24 by 36–500)	Minimum average tear strength	Minimum average tensile strength per inch width	Minimum stretch
	Weaker direction	Weaker direction	Cross direction and machine direction
Pounds	*Grams*	*Pounds*	*Percent*
105	200	15	15

ing strength; and variations in combined tearing strength of not more than 20 units below the minimum requirements will be permitted, provided the variations are compensated by an increase in the combined tensile strength in the same ratio.

3.1.1.2 *Class 3 — Polyethlene sandwich kraft paper, creped two ways.*—Polyethylene sandwich kraft paper, creped two ways, shall consist of 2 sheets of kraft paper, each sheet having a basis weight of not less than 30 pounds (24 by 36–500), continuously and uniformly laminated together with an average of not less than 17 pounds of high molecular weight polyethylene per ream (24 by 36–500) before creping. Class 3 paper shall meet the requirements of table II, and also the water-vapor-permeability requirements of table III, when tested in accordance with 4.4.

3.1.1.3 *Class 4—Polyethylene coated kraft paper.*—The polyethylene coated kraft paper shall consist of one sheet of kraft paper, having a basis weight of not less than 50 pounds (24 by 36–500) conforming to table IV, continuously and uniformly coated with an average of not less than 20 pounds of high molecular weight polyethylene per ream (24 by 36–500). Class IV paper shall meet the requirements of table III, when tested in accordance with 4.4.

3.1.1.4 *Class 5—Paper, kraft, plain, heavy duty.*—The kraft paper, having a nominal basis weight of 60 pounds per ream (24 by 36–500) used as a sack wall, shall meet the requirements of table IV, when tested in accordance with 4.4.

3.1.2 *Waterproof adhesive.* — Adhesive, where used, shall be waterproof and shall meet the requirements of 4.4.1.

TABLE III.—*Polyethylene coated kraft paper*

Heat resistance	Minimum average tensile strength per inch-width		Maximum average water-vapor permeability of both sides at 73° F. 50 percent relative humidity	
	Cross direction	Total cross direction plus machine direction	Uncreased	Creased [1]
	Pounds	*Pounds*	*g/m²/24 hrs.*	*g/m²/24 hrs.*
5 hours at 150° F. without impairing the function of the sack	19	53	4.5	7.5

[1] Creasing at 40°F.

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TABLE IV.—*Kraft paper, plain*

Normal basis weight (24 by 36–500)	Minimum average tearing strength		Minimum average tensile strength per inch width	
	Machine direction	Total machine direction plus cross direction	Cross direction	Total cross direction plus machine direction
Pounds	*Grams*	*Grams*	*Pounds*	*Pounds*
50	110	235	19	53
60	132	282	23	64

3.1.3 *Tape.*—Tape used on the sewn ends shall be a minimum 2⅛ inches wide and shall be made from kraft paper, creped or uncreped, having a finished basis weight of not less than 70 pounds per ream (24 by 36–500).

3.1.4 *Dipping and sealing compound.*—The compound used for dipping and sealing the ends of the sack shall be of a microcrystalline type which shall give as a final product an amorphous compound having a melting point of not less than 140° F. Alternatively, the compound for dipping and sealing the ends may be a blend of paraffin wax modified by polyethylene. All sealing compounds shall remain flexible at a temperature of minus 10° F. plus or minus 3° F. Tests for melting point and flexibility shall be in conformance with 4.4.2.

3.2 Construction.

3.2.1 *Wall construction and number.*—The successive walls of the sacks shall be arranged and fabricated in tube form, one within the other, so that each bears its share of the load. The number, kinds and basis weights of walls and the arrangement of walls from inside to outside shall be as shown in table V.

3.2.2 *Sewn bottom, open mouth type.*—The sewn bottom, open mouth sack shall have the open end of the sack made without a thumb cut. The bottom, or factory closed end, shall be sewn through all walls of the sack at a minimum distance of ⅜ inch and not more than ¾ inch from the end. A strip of tape shall also be incorporated into the sewn end of the sack in such a way that

TABLE V.—*Sack construction*

Grade	Minimum number of walls	Nominal basis weights in order from inside to outside wall				Cotton sewing thread
W	4	1/120 [1]	1/PCK [3]	1/60 [4]	1/120 [1]	12/6 N.TH [5] 12/5 L.TH
X	3	1/120 [1A]	1/PSK [3]	1/120 [1A]		12/6 N.TH [5] 12/5 L.TH

[1] Class 1—Paper, kraft, non-laminated, non-woven, glass fiber reinforced. (See 3.1.1.1)
[1A] Class 2—Paper, kraft, non-laminated, non-woven, glass fiber reinforced. (See 3.1.1.1)
[2] Class 3—Polyethylene sandwich kraft paper creped two-ways. (See 3.1.1.2)
[3] Class 4—Polyethylene coated kraft paper. (See 3.1.1.3)
[4] Class 5—Paper, kraft, plain, heavy duty. (See 3.1.1.4)
[5] N.TH—Needle thread. (See 3.2.4)
L.TH—Looper thread. (See 3.2.4)

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it folds over the end of the sack to control sifting. (See 3.1.3.) Tape shall extend across the face of the sack and protrude not less than ½ inch nor more than 2 inches beyond both edges of the sack. When specified, spot pasting between the various plies of paper shall be provided at or near the top (open end) of the sack to facilitate opening of the sack for filling. Top closure shall be effected by sewing through all plies of the sack at a minimum distance of 5/8 inch from the end. A strip of tape shall also be incorporated into the seam or end of the sack in such a way that it folds over the end of the sack to control sifting.

3.2.3 *Longitudinal seams.* — Longitudinal seams shall have an overlap of paper approximately one inch (overlaps greater than one inch shall be acceptable) and be sealed with adhesive in such a manner to give strength at least equal to the sack paper and prevent sifting of the product to be packed. Seams in successive walls shall be staggered.

3.2.4 *Stitching.* — Unless otherwise specified, the stitching on the ends of sewn sacks shall be not less than 12/6 cotton needle thread and 12/5 cotton looper thread. The stitches shall be spaced 3.0 to 3.6 to the inch using either a lock or chain stitch and suitably reinforced on the needle side to prevent the thread from cutting into the paper and to act as a covering for the holes made in the paper by the needle.

3.2.5 *Waterproofing of sewn seams.*—The sewn ends of the sacks (including both bottom and top closure) shall be dipped in a sealing compound conforming to the requirements in 3.1.4 to a depth of at least ⅛ inch beyond the edge of the kraft tape on the sack body.

3.3 Capacities.—The amount and nature of the material for which the sacks are to be used, shall be as specified in contract or order. (See 6.2.) The capacities of the sacks shall be such as to contain the specified amount of the material.

3.4 Bag maker's certificate (applicable to rail or motor shipments in the U.S.A.).—If a certificate is required it shall be in the form, size and wording as provided in Rail Freight or Motor Freight Classification in effect on date of invitation for bids.

3.5 Refill sacks.—All packers shall provide empty, open mouth, refill sacks for resacking of sacks damaged in transit. The number of refill sacks to accompany each shipment of packaged material shall be not less than 1 percent of the number of filled sacks in the shipment.

3.6 Workmanship.—The sacks shall be free from defects affecting their appearance or serviceability. All seams shall be securely fastened.

3.7 Printing, stenciling, and marking.—Each shipping sack shall be plainly marked by printing or stenciling in accordance with the requirements as specified in the contract or order. The ink used shall be commercially water fast and sun fast.

3.7.1 *Sack manufacturer's identification.* —In addition to the markings which may be required by the purchaser, each shipping sack shall be marked on one side with the following: Specification number, the sack manufacturer's name, and address, the sack grade, and the words "FOR OCEAN SHIPMENT". All markings shall be placed in a conspicuous position, not closer than 6½ inches from the bottom of the sack, in block letters not less than 5/16-inch high, except that the words "FOR OCEAN SHIPMENT" shall be in letters approximately 1 to 1½ inches high. Arrangement of markings shall be as follows:

EXAMPLE ONLY: COMPLIES WITH
FEDERAL SPECIFICATION
PPP–S–50a
JOHN DOE SACK COMPANY
CHICAGO, ILLINOIS
SACK GRADE____
"FOR OCEAN SHIPMENT."

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4. SAMPLING, INSPECTION, AND TEST PROCEDURES

4.1 General.—Unless otherwise specified by the procuring agency, the quality assurance provisions contained in this specification are applicable to inspection performed by or for the Government. Quality assurance provisions for components or materials described shall, unless otherwise specified by the procuring agency, be in accordance with this specification and with subsidiary specifications and drawings referenced herein to the extent applicable, except that this specification shall govern in the event of conflict.

4.2 Pre-acceptance inspection.—Pre-acceptance inspection is not applicable under this specification.

4.3 Inspection for acceptance.—Inspection for acceptance shall be in accordance with Military Standard MIL–STD–105, except where otherwise indicated hereinafter. Wherein MIL–STD–105 specifies an action by the Government, it shall, at the option of the Government, be performed either by the Government or by the contractor under the supervision of the Government inspector.

4.3.1 *Inspection of components.*—In addition to the quality assurance provisions of the subsidiary specifications and drawings, inspection shall be performed on the components and materials listed below for the characteristics shown. The sample unit shall be as indicated in table VI. The lot size shall be expressed in the following units:

Thread (when required):
Needle ----------Cones or spools
Looper ----------Cones or spools
Tape (when required) -------Rolls
Dipping or sealing compound (when required) ------Pounds

The inspection level for each test applicable to the sample unit shall be as indicated in table VI.

TABLE VI.

Component	Characteristic	Requirement	Test procedure	Requirement applicable to sample lot unit average	Sample unit	Inspection level	AQL in defects per 100 units
Thread (when required)							
Needle	Count/ply	3.2.4	Standard	X	5 yds each 5 yds	L–2	6.5
Looper	Count/ply	3.2.4	Standard	X	5 yds wrapped on a card or wrapper	L–2	6.5
Tape (when required)	Identification	3.1.3	4.4	Composite (2 determinations)	1 foot	L–2	—
	Basis weight (24 by 36–500)	3.1.3	4.4	X		L–2	—
Dipping or sealing comp. (when required)	Identification (microcrystalline)	3.1.4	Standard	X	½ pound	L–2	4.0
	Melting point	3.1.4	4.4.2.1	Composite (2 determinations)		L–2	—
	Flexibility		4.4.2.2	X		L–2	4.0

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4.3.2 *Inspection of the end item.*

4.3.2.1 Examination of the end item shall be in accordance with the classification of defects and acceptable quality levels set forth below. The Government reserves the right to require examination for any defect not included herein and to classify such defects in accordance with the definitions contained in Military Standard MIL–STD–105.

4.3.2.1.1 *External examination of the end item sack for defects in appearance, construction and workmanship.* — The lot size for this examination shall be expressed in units of sacks. The sample unit for this examination shall be one sack.

Examine	Defect
Sack	Not a reinforced shipping sack
	Not tube form
	Successive plies not arranged one within the other (applicable to multiwall sacks)
Workmanship (outer ply)	Not clean
	Not new and unused
	Any scuff which may impair serviceability
	Any tear, split or slit
	Any hole more than ¾ inch in any dimension
Longitudinal seam (outer ply)	Not securely sealed with adhesive along full length
	Not overlapped
Sack manufacturer's identifications	Missing, incorrect, illegible, or incomplete
	Not printed or stenciled as specified
	Arrangements of markings not as specified
	Not on one side only
Special markings for Dep't. of Defense purchases (when required)	Missing, incorrect, illegible or incomplete
	Not stenciled or printed on one side only
	Arrangements of markings not as specified
	Not block letters

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Examine	Defect
Construction	Not sewn closed bottom
	Not open mouth
	Spot pasting between the various plies of paper at or near open end missing (when specified)
	Any thumb cut in mouth
	Not securely and completely sewn at bottom
	Not a firm tight bottom closure
Dipping (when required)	Not dipped
Stitching	Not lockstitched or chain stitched
	Not reinforced on needle side of stitching
	Thread cuts into the paper
	Reinforcement does not act as a covering for the holes made in the paper by the needle
Tape	Missing from sewn ends
	Not paper
	Tape not properly folded over sewn ends of bag seams
	Does not extend completely across face of sack at sewn ends
	Does not protrude beyond both edges of sack
"Bag maker's certificate" (when required)	Not in form, size, and wording as provided in rule 40 of the Consolidated Freight Classification in effect on the date of the invitation for bid

4.3.2.1.2 *Internal examination of the end item for defects in appearance, construction and workmanship.*—The lot size for this examination shall be expressed in units of bags. The sample unit for this examination shall be one bag.

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Examine	Defect
Plies	Not number of plies specified
Longitudinal seams (inner plies)	Not securely sealed with adhesive along full length
	Not overlapped
	Successive ply seams not staggered (include outer ply)
Workmanship	Not clean
	Not new and unused
	Any tear, split or slit in any ply
	Any hole more than ½ inch in any dimension or through more than 1 ply
	Any scuff which may impair serviceability
	Not sewn through all ply walls at bottom

4.3.2.1.3 *Examination of the end item for defects in dimensions.*—The lot size for this examination shall be expressed in units of sacks. The sample unit for this examination shall be one sack.

Examine	Defect
Width of tape at bottom of sack	Less than 2½ inches
Distance of stitching from bottom of sack	More than ¾ inch
	Less than ½ inch
Spacing of stitching	More than 3.6 per inch
	Less than 3.0 per inch
Overlap of longitudinal seams	Less than ¾ inch at any point
Extension of tape beyond both edges	Less than ½ inch, more than 2 inches
Waterproof dip beyond upper edges of tape (when required)	Less than ½ inch
Special Markings (for Dep't of Defense) when specified	
Height of lettering	Not size specified (½ inch tolerance)

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4.3.2.1.4 *Examination of the end item for average count of sacks per package.*—The lot size for this examination shall be expressed in units of packages of sacks. The sample unit for this examination shall be one package of sacks. The average count per package of sacks shall be not less than the specified or indicated quantity.

4.3.2.1.5 *Inspection levels for visual examination.*—The inspection level for normal inspection of each characteristic shall be as follows:

For examinations listed in 4.3.2.1.1—Level I

For examinations listed in 4.3.2.1.2—L–7 of Appendix to MIL–STD–105A

For examinations listed in 4.3.2.1.3—L–5 of Appendix to MIL–STD–105A

For examinations listed in 4.3.2.1.4—L–3 of Appendix to MIL–STD–105A

4.3.2.1.6 *Acceptable quality levels (AQL's) for examinations.*—The acceptable quality levels (AQL's) expressed in defects per 100 units shall be as follows:

For defects listed in 4.3.2.1.1—2.5

For defects listed in 4.3.2.1.2—2.5

For defects listed in 4.3.2.1.3—2.5

For defects listed in 4.3.2.1.4—Not applicable

4.3.2.2 *Testing of the end item.*—The sample unit shall be one sack. The lot size shall be expressed in units of sacks. The inspection level for each test applicable to the sample unit shall be L–2 of Appendix to MIL–STD–105. The AQL's for each characteristic applicable to the sample unit shall be 4.0 defects per 100 units.

4.4 **Tests.**—The following tests shall be made in accordance with the following current methods:

Test	Fed. Spec. UU–P–31 method No.	TAPPI No.
Atmospheric conditions	102	T402
Basis weight	110	T410
Creasing for water-vapor permeability tests	120	——
Tearing resistance	170	T414
Tensile breaking strength (dry) at stressing rate of 12 inches per minute	171	T404
Tensile breaking strength, wet (specimens immersed in water at approximately 73° F. for 2 hours)	172	T456
Water-vapor permeability	182	T448
Wax extraction	——	T405

4.4.1 *Waterproof adhesive.*

4.4.1.1 *Water resistance.*—Waterproof adhesive shall be tested for resistance to water as follows:

Cut strips 1 inch wide across the longitudinal seam, or bottom fold (if pasted construction), adjusting the length so that both sheetings will extend approximately 1½ inches beyond one edge of the cemented joints. Immerse the test specimens in 1 to 2 inches of distilled water at 73° F. plus or minus 3.5° F. for 24 hours. Remove one specimen at a time, blot before removing the next strip. To test, grasp the projecting ends of the sheetings with one thickness between the thumb and forefinger of each hand, the forefingers resting against the cemented joint, one on each side. Separate the joint by gently pulling the ends apart with a rolling motion from the top downward with the second joints of the second and third fingers successively resting against each other to act as fulcrums. Examine the manner of separation of the joint, noting the percent of separation that occurs without fiber failure of the paper surface. Test not less than 10 strips per each determination. Separation of the adhesive from more than 25 percent of the surface of either ply without visible fiber failure shall be judged as a failure of a specimen and failure of more than 10 percent of the specimens shall be reported as failure of the adhesive.

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4.4.2 *Dipping or sealing compound.*

4.4.2.1 *Melting point.*—The melting point of dipping or sealing compound shall be determined in accordance with method 1401.2 of Federal Test Method Standard No. 791.

4.4.2.2 *Flexibility.*—Six pieces of 50-pound (24 by 36–500) kraft paper, 1 inch by 16 inches, shall be conditioned and shall then be dipcoated at a temperature not to exceed 200° F. by drawing the strip lengthwise through sealing compound contained in a tray of sufficient size to permit free movement. The sealing compound on the strip shall be allowed to set and the dipping operation repeated, if necessary, to obtain a coating at least 3 mils in depth on each side of the panel. (Other procedures of coating may be employed provided the applied coating has a minimum thickness of 3 mils). Precautions should be taken to insure that the thickness of the wax at the ends of the paper strips is at least 3 mils. It may be necessary to cut the strip into two pieces at a point where the desired thickness is located. After cooling to room temperature, the strips shall have one end wrapped approximately ¼ of a turn around a ½-inch wood dowel and fastened in place with adhesive tape. Weights of approximately 200 grams each shall be hung on the bottom of each of the strips. The dowel and strips shall be conditioned in a cold chamber at a temperature of –10° F. plus or minus 3° F. for a minimum of two hours. While in the cold chamber, the wood dowel shall be turned slowly for one revolution (approximately two seconds). The compound shall be examined for flaking. Any flaking on more than one strip shall be considered cause for rejection.

5. PREPARATION FOR DELIVERY

The definitions and applications of the various levels of packaging and packing shall be in accordance with Federal Standard No. 102.

5.1 Packaging and packing.

5.1.1 *Level A.*—A uniform number of sacks, of one type and size, shall be bundled or baled. Each bundle or bale shall be overwrapped with an inner sheet of class 5 paper and an outer sheet of asphalted kraft paper. The asphalted kraft paper shall consist of two sheets of kraft paper, each sheet having a minimum basis weight of 25 pounds per ream (24 by 36–500), continuously and uniformly laminated together with an average of not less than 25 pounds of asphalt per ream (24 by 36–500). The completed sheet shall have a minimum average tensile strength per inch of width in the cross direction of 20 pounds; a total of 55 pounds in the cross direction plus the machine direction; and a maximum average water-vapor permeability of both sides of a creased sheet of 15 grams per square meter per 24 hours when tested at 73° F. and 50 percent relative humidity. The overwrap shall be held in place by the application of a flat steel strap over the top, ends and bottom and not less than four flat steel straps applied over the top, sides and bottom. The straps shall be a minimum ½ inch by 0.020 inch and shall conform to Federal Specification QQ–S–781, type I, class A or B. The gross weight of the bundle or bale shall not exceed 100 pounds.

5.1.2 *Level B.* — A uniform number of sacks, of one type and size shall be bundled or baled as specified in 5.1.1 except that the inner and outer wraps shall be of class 5 paper and may be secured with a minimum of four cords or three round wire or flat steel straps. Baling cord used shall have a minimum breaking strength of 385 pounds. The wire strapping shall be a minimum 16 gage (0.0625-inch). The maximum gross weight of the bundle or bale shall not exceed 200 pounds.

5.1.3 *Level C.*—The sacks shall be prepared for shipment in accordance with the sack manufacturer's best commercial practice.

5.2 Marking.

5.2.1 *Civil activities.*—Each bundle or bale shall be plainly marked with black ink to indicate the name, type and grade of the sacks and the quantity contained therein, as defined by the contract or order under which the ship-

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ment is made, the name of the contractor and number of the contract or order. Ink used for marking shall be made commercially waterfast and sun-fast.

5.2.2 *Military activities.*—In addition to any special marking required, the bundles or bales shall be marked in accordance with Military Standard MIL–STD–129.

6. NOTES

6.1 Intended use.—The sacks covered by this specification are intended for use in the shipment of pulverized, powdered, granular, or crystalline products of a hygroscopic nature.

6.2 Ordering data.—Procurement documents should specify the following:

(*a*) Title, number, and date of this specification.

(*b*) Grade required (see 1.2.1).

(*c*) Capacities required (see 3.3 and 6.3).

(*d*) Level of packaging and packing required (see section 5).

6.3 Sack capacities for commodities.—For overseas shipments, it is recommended that wherever possible, capacities of sacks be limited to 50 pounds for bulk loads where practicable.

6.4 Availability of packing equipment, value of product, hygroscopic properties, chemical and physical characteristics, shipping conditions, number of transfers, destination, warehousing facilities, atmospheric conditions and exposure to elements, among other conditions, must be factors considered by procurement officers in determining minimum sack specifications and type required for a commodity to be packed, stored and shipped.

6.5 This specification adequately describes the characteristics necessary to secure the desired material and that, normally, no samples will be necessary prior to award to determine compliance with this specification. If, for any particular purpose, samples with bids are necessary, they should be specifically asked for in the invitation for bids and the particular purpose to be served by the bid sample should be definitely stated, the specification to apply in all other respects.

Notice. — When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data, is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use, or sell any patented invention that may in any way be related thereto.

MILITARY INTERESTS:
Army—Q C E O Sig T
Navy—S Sh Y MC
Air Force.

★ U. S. GOVERNMENT PRINTING OFFICE: 1957

Copies of this specification may be purchased for 10 cents each.

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