

SPECIFICATION 5100-214E
March 1996
Superseding 5100-214D
July 1977

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

SPECIFICATION

PACKSACK

1. SCOPE

1.1 Scope. This specification covers one type of packsack intended for use in a wide variety of field related activities, including wildland fire suppression and controlled burning operations.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those in effect on the date of the invitation for bids or request for proposals (see 6.2).

SPECIFICATIONS

FEDERAL

V-F-106 - Fastener, Slide, Interlocking
V-T-295 - Thread, Nylon
DDD-L-20 - Label: For Clothing, Equipage, and Tentage (General Use)

MILITARY

MIL-W-4088 - Webbing, Textile, Woven Nylon
MIL-G-16491 - Grommet, Metallic
MIL-C-43204 - Cloth, Spacer (Olefin)
MIL-W-43668 - Webbing, Textile, Bulked Nylon

USDA FOREST SERVICE

5100-86 - Cloth, Duck, Nylon (Polyurethane Coated)

Beneficial comments (recommendations, additions, deletions) and any pertinent data that may be used in improving this document should be addressed to: USDA Forest Service, Missoula Technology and Development Center, Building 1, Fort Missoula, Missoula, MT 59801-7294 by using the Specification Comment Sheet at the end of this document or by letter.

5100-214E

STANDARDS

FEDERAL

- FED-STD-123 - Marking for Shipment (Civil Agencies)
- FED-STD-376 - Preferred Metric Units for General Use by the
Federal Government
- FED-STD-751 - Stitches, Seams, and Stitchings

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Building 4D, 700 Robbins Ave., Philadelphia, PA 19111-5094. The Forest Service specification is available from the preparing activity (see 6.7).

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those in effect on the date of the invitation for bids or request for proposals.

DRAWINGS

USDA FOREST SERVICE

- MTDC-920 - Packsack

(The Forest Service drawing is available from the preparing activity (see 6.7).)

2.2 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those in effect on the date of the invitation for bids or request for proposals.

AMERICAN SOCIETY FOR QUALITY CONTROL (ASQC)

- ANSI/ASQC Z1.4 - Sampling Procedures and Tables for Inspection
By Attributes

(Address requests for copies to American Society for Quality Control, 611 East Wisconsin Ave., Milwaukee, WI 53202.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- D 1974 - Standard Practice for Methods of Closing, Sealing, and
Reinforcing Fiberboard Shipping Containers
- D 3951 - Standard Practice for Commercial Packaging
- D 5118 - Standard Practice for Fabrication of Fiberboard
Shipping Boxes

(Address requests for copies to American Society for Testing and Materials, 1916 Race St., Philadelphia, PA 19103-1187.)

5100-214E

NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC., AGENT

National Motor Freight Classification

(Address requests for copies to American Trucking Associations, Inc., 2200 Mill Rd., Alexandria, VA 22314.)

(Non-Government standards and other publications normally are available from the organizations that prepare and distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. In the event of conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.4) in accordance with 4.3.

3.2 Materials and components. Materials and components shall be as specified herein and in the referenced drawing: MTDC-920.

3.2.1 Cloth, duck, nylon (polyurethane coated). The nylon duck shall conform to type II of Forest Service specification 5100-86 and shall be bottle green in color to match the standard shade sample (see 6.3).

3.2.2 Cloth, spacer (olefin). The spacer cloth shall conform to type III of MIL-C-43204.

3.2.3 Webbing, nylon.

3.2.3.1 1-15/16 inch. The 1-15/16-inch webbing shall conform to class 2, type XXIV of MIL-W-4088. The color shall be black.

3.2.3.2 1 inch. The 1-inch webbing shall conform to type III or type III (alternate) of MIL-W-43668. The color shall be black.

3.2.3.3 3/4 inch. The 3/4-inch webbing shall conform to type IV of MIL-W-43668. The color shall be black.

3.2.4 Harness padding. The harness padding shall be a 1/2-inch-thick vinyl/nitrile conforming to Rubatex Corp. stock no. R-310-V (see 6.5). The color shall be buff.

3.2.5 Cord, nylon. The nylon cord shall be flat braid tubular nylon, 1/4 inch wide, conforming to Synthetic Textiles style no. 32D400 (see 6.5). The color shall be black.

5100-214E

3.2.6 Thread, nylon. The thread shall conform to type II, class A of V-T-295. The color shall be black. The thread for all stitching except bartacking and taping shall be size FF. For bartacking and taping, the thread shall be size E. Size E may also be used as an alternative for attaching labels.

3.2.7 Fastener, slide, interlocking. The slide fastener shall conform to type I, style 1A, size MS of V-F-106, except that the slider shall be nonlocking. The chain shall be nylon or polyester continuous monofilament in a coil type configuration conforming to the requirements below.

3.2.7.1 Fastener chain. The diameter of the chain filament shall be 0.028 to 0.040 inch. The width of the chain when closed shall be 0.220 to 0.300 inch. The chain shall be sewn to the tapes. Color of the chain shall be black. All performance requirements governing the crosswise strength of the chain are not applicable except the crosswise breaking strength requirement, which shall be 155 pounds minimum. The crosswise breaking strength shall be performed as specified in V-F-106 except the fastener shall be preconditioned.

3.2.7.2 Slide fastener tape. The slide fastener tape shall be 3/4 \pm 1/16 inch wide, dyed black, and shall be water repellent treated. The tape shall show good fastness to laundering.

3.2.7.3 Fastener slider and pull. The fasteners shall have sliders conforming to the standard long tab pull nonlocking type as specified in V-F-106. The sliders shall properly fit the chain and shall be brass, aluminum, or other noncorroding metal. The color shall be black.

3.2.7.4 Slide fastener components. All components of the slide fasteners shall be manufactured by the same company to ensure compatibility of components.

3.2.8 Grommets, metallic. The grommets shall be brass, bright finish conforming to type III, class 1, size 0 of MIL-G-16491.

3.2.9 Plastic hardware. The plastic items specified by 3.2.9.1 through 3.2.9.3 shall be black acetal plastic. Where more than one source is listed, the mating components making up a single item shall be manufactured by the same company to ensure compatibility of the components (see 6.5).

3.2.9.1 Cord lock, spring. The spring cord lock shall conform to ITW Waterbury Barreloc, part no. 302-0000; American Cord & Webbing Cord Lock-1, part no. CL; or National Molding Corp. Ova-Cord Lock, part no. 4759.

3.2.9.2 Buckle, 3/4 inch. The 3/4-inch buckle shall conform to ITW Waterbury Side Release Buckle, part no. 101-0075; National Molding Corp. Mojave Side Squeeze Buckle, part nos. 5205/5206 (male/female); or American Cord and Webbing BSR-A 3/4 inch.

3.2.9.3 Double-bar buckle, 1 inch. The 1-inch double-bar buckle shall conform to ITW Waterbury Standard Ladderloc, part no. 104-0100; American Cord & Webbing Double Bar Single Lock, part no. DB 1"; or National Molding Corp. Standard Tensionlock Buckle, part no. 4199.

5100-214E

3.2.10 Identification and cleaning label. The identification and cleaning label shall be a sewn-on coated cloth label conforming to type VI, class 5 of DDD-L-20, except "size" shall be deleted, and shall be a minimum of 2 by 3 inches. Inscription characters for the identification label shall be a minimum 3/16 inch high. Label location shall be as shown in drawing MTDC-920. Label contents shall be as follows:

PACKSACK
 DATE OF MANUFACTURE _____
 CONTRACT NO. _____
 NSN _____
 MANUFACTURER _____

CLEANING

DIRT -- LET DRY; REMOVE WITH STIFF BRISTLE BRUSH.
 LIGHT OIL -- BRUSH WITH WARM WATER DETERGENT SOLUTION; RINSE THEN DRY.
 HEAVY OIL -- DEGREASE WITH PERCHLOROETHYLENE; BRUSH WITH SPRAY
 CLEANERS OR DETERGENT AND WATER; RINSE THEN DRY.
 DO NOT BLEACH!

3.2.10.1 Label margins. All labels shall be provided with a 1/4 + 1/16-inch blank margin on all four sides for sewing purposes.

3.2.10.2 Date of manufacture. The date of manufacture shall be the month and year manufacturing starts under the contract in force.

3.3 Construction. Construction shall conform in all respects to drawing MTDC-920 and as specified herein.

3.3.1 Stitches, seams, and stitchings. All stitching, except bartacking, shall conform to type 301 of FED-STD-751, 6 to 8 stitches per inch.

3.3.1.1 Type 301 stitching. Ends of stitching shall be backstitched or overstitched not less than 1 inch (1/2 inch for box-x) except where ends are turned under or caught in other seams or stitching. Thread tension shall be maintained so there will be no loose bobbin or top thread or excessively tight stitching resulting in puckering of the materials sewn. The interlock shall be imbedded in the materials sewn.

3.3.1.1.1 Repairs of type 301 stitching. Repairs of type 301 stitching shall be as follows:

a. When thread breaks or bobbin runouts occur during stitching, except presewing, the stitching shall be repaired by restarting the stitching a minimum of 1 inch (1/2 inch for box-x) back of the end of the stitching.

5100-214E

b. Except for prestitching, thread breaks, or two or more consecutive skipped or runoff stitches noted during inspection of the item (inprocess or end item) shall be repaired by overstitching. The stitching shall start a minimum of 1 inch in back of the defective area (1/2 inch on box-x), continue over the defective area and continue a minimum of 1 inch beyond the defective area onto the existing stitching. Loose or excessively tight stitching shall be repaired by removing the defective stitching, without damaging the materials, and restitching in the required manner.

(When making the above repairs, the ends of the stitching are not required to be backstitched.)

3.3.1.2 Bartacking. Unless otherwise specified, bartacks shall be as follows:

<u>Length</u>	<u>Width</u>	<u>Tolerance</u>		<u>Stitches Per Bartack</u>
		<u>Length</u>	<u>Width</u>	
1/2 inch	1/8 inch	± 1/16 inch	± 1/32 inch	28
3/4 inch	1/8 inch	± 1/16 inch	± 1/32 inch	42

Bartacking shall be free from thread breaks and loose stitching.

3.3.1.3 Automatic stitching. Automatic machines may be used to perform any of the stitch patterns provided the requirements for the stitch pattern, stitches per inch, size, and type of thread are met; and at least three or more tying, overlapping, or backstitches are used to secure the ends of the stitching.

3.3.1.4 Thread ends. All thread ends shall be trimmed to 1/4 inch maximum length.

3.3.1.5 Lubrication of thread. There shall be no lubrication of the thread by any means, before or during sewing (see 4.3.2).

3.3.1.6 Stitching margins. Unless otherwise specified, all stitching margins shall be 1/8 inch.

3.3.2 Setting of grommets. Holes shall be prepunched to receive the grommets. Holes prepunched to receive the grommets shall be smaller than the outside diameter of the grommet barrel so that the barrel must be forced through the hole. The grommet shall be securely clinched without cutting the adjacent material.

3.3.3 Fusing ends of nylon webbing and cord. All ends of nylon webbing and cord shall be fused before being assembled for stitching. The apparatus used to fuse the webbing and cord ends shall provide enough heat to create a smooth edge with the cut ends of all webbing and cord yarns fused together.

3.3.4 Location marks. Location marks may be drilled, providing the drill diameter does not exceed 0.076 inch (see 4.3.3). All drill holes shall be covered on the finished item. Printed markings shall not be more than 1/32 inch in width.

5100-214E

3.3.5 Repairs. Repairs such as mends, darns, patches, or splices are not permitted on any component of the packsack.

3.3.6 Piecing. No piecing or splicing of materials is allowed.

3.3.7 Replacement of defective components. During the spreading, cutting, and manufacturing process, components having material defects or damages that are classified as defects in 4.3.4.1 shall be removed from production and replaced with nondefective and properly matched components.

3.3.8 Coated cloth surface. The coated side of the cloth shall face the inside of the completed packsack, except the coated sides shall be face-to-face on the flap pocket parts of the packsack and on the back panel containing the spacer cloth.

3.3.9 Positioning of spacer cloth. The ribs of the spacer cloth shall run vertically.

3.4 Marking. The letters "FSS" shall be silk-screen printed to the face side of the cloth with a black marking medium in the location and size characters shown in drawing MTDC-920. Unless otherwise specified the "FSS" marking shall be 1 inch high $-0/+1/8$ inch and $3/4$ inch wide $-0/+1/8$ inch. Marking shall conform to type IV, class 9 of DDD-L-20. Fastness of the class 9 marking shall be as specified for class 5 marking. The color of the cloth components shall not be visible under the marking.

3.5 Dimensions. All dimensions except pattern sizes are finished dimensions, unless otherwise specified.

3.6 Patterns. Standard patterns for textile components other than tape or webbing are shown full scale on drawings and provide allowances for all seams and shall be used for making working patterns. The working patterns shall be identical to Government standard patterns, which shall not be altered in any way. All parts shall be within $1/8$ inch of the location(s) shown on the pattern(s).

3.7 Deviations and waivers. Deviations and waivers to the materials or construction specified herein shall not be allowed unless authorized in writing by the contracting officer.

3.8 Workmanship. All packsacks shall conform to the quality of product established by this document. The occurrence of defects shall not exceed the applicable acceptable quality levels. There shall be no defects that affect use, appearance, or serviceability.

3.9 Metric products. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch/pound units, provided they fall within the tolerances specified using conversion tables contained in the latest revision of FED-STD-376, and all other requirements of this specification are met.

3.10 Recovered materials. The contractor is encouraged to use recovered material in accordance with Federal Acquisition Regulation 23.4 to the maximum extent possible.

5100-214E

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his/her 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 this specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.1.2 Responsibility for dimensional requirements. Unless otherwise specified in the contract or purchase order, the contractor is responsible for ensuring that all specified dimensions have been met. When dimensions cannot be examined on the end item, inspection shall be made at any point or at all points in the manufacturing process necessary to ensure compliance with all dimensional requirements.

4.1.3 Certification of compliance. Unless otherwise specified, certificates of compliance supplied by the manufacturer of the item, component, or material, listing the specified test method and test results obtained, may be furnished in lieu of actual lot by lot testing performed by the contractor (see 4.3.2). 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 Sampling for inspections and tests. Sampling for inspections and tests shall be made in accordance with ANSI/ASQC Z1.4. The inspection level and acceptable quality level (AQL) shall be as specified. All packsacks manufactured at one time shall be considered a lot for purposes of acceptance inspection and test. A sample unit shall be one complete packsack.

4.3 Quality conformance inspection. Each end item lot shall be sampled and inspected as specified in 4.3.4.1 and 4.3.4.2. The packaging shall be sampled as specified in 4.4. Packaging is not required when first articles are presented. Unless otherwise specified (see 6.2), first articles submitted in accordance with 3.1 shall be inspected as specified in 4.3.4.1 and 4.3.4.2. The presence of any defect or failure to pass any test shall be cause for rejection of the first article.

5100-214E

4.3.1 Component and material inspection. In accordance with 4.1, components and materials shall be inspected in accordance with all the requirements of referenced documents, drawings, and standards unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

4.3.2 Certification. Unless otherwise specified (see 6.2), as part of first article presentations and lot inspections, it shall be acceptable for the contractor to provide certificates of compliance for all materials and components in lieu of actual lot by lot testing, except as specified in 4.3.2.1. In addition, when the contractor changes component or material suppliers, a new certification based on actual test results shall be required. All certificates shall include as a minimum:

- Product description, including specification, type, class, and form when applicable
- Quantity purchased
- Date of manufacture
- Purchase source, address, and telephone number
- Purchase date
- Lot number traceable to materials used in production
- Contract number

The contractor shall indicate the type of nylon used for the basic cloth. The contractor shall also furnish a certificate of compliance for the requirement of 3.3.1.5 prohibiting use of thread lubricants before or during sewing.

4.3.2.1 Test values. The contractor shall provide actual test values for the characteristics of the basic cloth (3.2.1) in accordance with Forest Service specification 5100-86 for each new lot of cloth purchased. Such test reports, traceable to each lot of component materials used in production of the packsack, shall be maintained at the inspection point specified in the contract. Copies of these test reports shall be made available to the Government representative upon request.

4.3.3 In-process inspection. Inspection shall be made at any point or during any phase of the manufacturing process to determine whether cut lengths, cut parts, markings for location of components, and location of assembled component parts are in accordance with specified requirements. Inspection shall be made to determine that holes drilled for location marking do not exceed 0.076 inch diameter and are placed in such a manner that each shall be covered in the finished item (see 3.3.4). In addition, inspection shall be made to determine that prepunched holes for receiving grommets are smaller than the outside diameter of the hardware barrel. Whenever nonconformance is noted, corrections shall be made to the parts affected and lot in process. Components that cannot be corrected shall be removed from production.

5100-214E

4.3.4 End item examination.

4.3.4.1 End item visual examination. The end items shall be examined for the defects list in table I on a lot by lot basis. The lot size shall be expressed in units of complete packsacks. The inspection level shall be S-3, and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 4.0 for major defects and 15.0 for combined major and minor defects. Unless otherwise specified, defects shall be scored on an individual basis, i.e., each seam, each stitching end, each dimension, etc.

TABLE I. End item visual defects

Examine	Defect	Classification	
		Major	Minor
Nylon cloth and spacer cloth	Not type specified	X	
	Any hole (except location marks) cut, or tear	X	
	Any abrasion mark, smash, large slub, broken or missing yarn, multiple float, or open place, clearly visible at normal inspection distance (3 feet)	X	
	Improper positioning (spacer cloth)	X	
	Needle chew	X	
	NOTE: Needle holes visible as the result of broken or skipped stitching or stitching that has been removed shall not be considered as needle chews providing that the holes are spaced as in normal stitching.		
Webbing	Color not as specified	X	
	Shade bar, fine or coarse filling bar		X
	Coating defective or partially omitted on nylon cloth		X
	Not size, type, or class specified	X	
	Not color specified		X
	Any hole, cut, tear, or smash	X	
Webbing	Abrasion mark, slub, broken end or pick		X
	Cut ends not fused as specified	X	
	Treatment not as specified		X
	Not firmly and tightly woven	X	
	Edges frayed or scalloped	X	
	Multiple floats		X

5100-214E

TABLE I. End item visual defects - Continued

Examine	Defect	Classification		
		Major	Minor	
Slide fastener	Not specified type, size, or color	X		
	Does not provide a smooth and secure closure full length of pocket opening	X		
	Slider jams or fails to interlock chain scoops	X		
	Any portion of fastener broken, bent, missing, or not aligned making fastener unusable	X		
	Fastener tape not specified width	X		
	Slider not specified type	X		
	Slider not attached as specified	X		
	Chain not material or configuration specified	X		
	NOTE: Each slide fastener shall be fully closed and opened three times to determine whether fastener operates smoothly and provides a secure closure.			
	Not length specified	X		
Components not all manufactured by same company	X			
Thread	Not type, class, or size specified	X		
	Any thread lubricated		X	
	Not color specified		X	
Hardware general	Any part broken, cracked, chipped, distorted, twisted or out of shape	X		
	Any dirt or flash		X	
	Any deep scratch or gouge		X	
	Gates not trimmed		X	
	Surface not smooth		X	
	Any pit, void, crazing, air pocket, blister, or imbedded foreign matter that will affect serviceability	X		
	Evidence of spray or jetting marks	X		
	Not size or type specified	X		
Buckles	Mating components not from same Manufacturer	X		
	Latch and latch receptacle do not mate	X		
	Webbing incorrectly threaded through male buckle	X		
	Male buckle upside down	X		

5100-214E

TABLE I. End item visual defects - Continued

Examine	Defect	Classification	
		Major	Minor
	NOTE: Plastic buckles shall be latched and unlatched three times to determine whether they operate smoothly and provide a secure closure.		
Nylon cord	Cut, chafed, or abraded	X	
	Ends not fused		X
	Ends not knotted as specified		X
	Not thread through grommets as specified		X
	Missing	X	
Spring cord lock	Not type specified or missing	X	
Brass grommets	Clinched excessively tight, cutting adjacent material	X	
	Insecurely clinched to a degree that grommet may be detached from material	X	
	Clinched loosely, allowing grommet to rotate in hole but not to degree that it can be expected to become detached during use		X
	Washer installed on incorrect side of material		X
	Eyelet barrel split		X
Seams and stitching:			
Open seam	1/2 inch or less		X
	More than 1/2 inch	X	
	NOTE: A seam shall be classified as open when one or more stitches joining a seam are broken or when two or more consecutive skipped or run-off stitches occur. On double stitched seams, a seam shall be considered open when either one or both sides of the seam are open.		

5100-214E

TABLE I. End item visual defects - Continued

Examine	Defect	Classification	
		Major	Minor
Raw edge (on edge required to be finished)	More than 1/2 inch when securely caught in stitching		X
	NOTE: Raw edge not securely caught in stitching shall be classified as open seam.		
Run-off (see open seam)			
Seam and stitch	Seam or stitch type not as type specified	X	
	Required row of stitching omitted or not located as specified	X	
Bartacks	Any bartack omitted	X	
	Any bartack not as specified or not in specified location		X
	Loose stitching, incomplete or broken		X
Stitch tension	Loose, resulting in a loose bobbin or top thread		X
	Excessively tight, resulting in puckering of material		X
	Note: Defects to be scored only when the condition exists for 4 inches or more or in several areas with an accumulated distance of 8 inches or more. Applicable to individual seams.		
Stitches per inch	Up to two stitches less than minimum specified		X
	Three or more stitches less than minimum specified	X	
	Two or more stitches in excess of maximum specified		X

5100-214E

TABLE I. End item visual defects - Continued

Examine	Defect	Classification	
		Major	Minor
	<p>NOTE: Variation in the number of stitches per inch caused by the operator speeding up the machine and pulling the fabric in order to sew over heavy seams or in turning corners, shall be classified as follows:</p> <p>(a) Within the minor defect classification - no defect</p> <p>(b) Within the major defect classification - minor defect</p>		
Stitching margin (not otherwise classified herein)	<p>Exceeds specified tolerance, up to 1/16 inch</p> <p>Exceeds specified tolerance, more than 1/16 inch</p>		X
	<p>NOTE: Defects to be scored only when condition exists on major portion of seam. Applicable to each individual seam.</p>		
Stitching ends	Not secured as specified		X
Thread breaks, skipped stitches or runoffs (unless otherwise classified herein)	Not overstitched as specified		X
	<p>NOTE: Thread breaks or two or more consecutive skipped or runoff stitches not overstitched shall be classified as open seams.</p>		
Rows of stitching	<p>Any row missing except on box-x stitching</p> <p>On box-x stitching</p> <p>- One row of stitching omitted</p> <p>- Two or more rows of stitching omitted</p>	X	X
		X	

5100-214E

TABLE I. End item visual defects - Continued

Examine	Defect	Classification	
		Major	Minor
Components and assembly	Any component part omitted or not as specified or any operation omitted or not as specified (unless otherwise classified herein)	X	
	Needle chews	X	
	Any mend, darn, patch, splice, or other unauthorized repair	X	
	Any material pleated or caught in stitch line where not specified		X
Piecing	Any piecing or splicing	X	
Cleanness	Grease, oil, dirt or ink stains, clearly noticeable		X
	Thread ends not trimmed as specified		X
Harness padding	Wrong type or thickness	X	
	Wrong color		X
Identification and cleaning label	Wrong type or class	X	
	Incorrect type size or information	X	
	Not in location specified	X	
	Incorrect label margins		X
Location markings	Drill mark exceeding size specified		X
	Drill mark not covered on finished item		X
	Printed marking more than 1/32 inch in width or not covered by component part		X
Markings: "FSS"	Omitted, incorrect, illegible, misplaced, or size of characters not as specified	X	
	Cloth color visible under black marking medium		X

5100-214E

4.3.4.2 End item dimensional examination. End items shall be examined for the defects listed in table II on a lot by lot basis. Only those dimensions that can be evaluated without damaging or disassembling the end items shall be examined. The inspection level shall be S-3. An AQL, expressed in terms of defects per hundred units, shall be 6.5 major defects and 15.0 for combined major and minor defects.

TABLE II. End item dimensional defects

Examine	Defect	Classification	
		Major	Minor
Dimensions (overall)	Smaller than nominal dimensions less applicable minus tolerance indicated on drawings, but not smaller than nominal dimensions less twice the applicable minus tolerances		X
	Smaller than nominal dimensions less twice the applicable minus tolerance	X	
	Larger than nominal dimensions and applicable plus tolerance		X
Component and location dimensions (not otherwise class- ified herein)	Not within specified tolerance		X
Box-x stitching	Dimensions not as specified		X
Stitch margin and gauge	Not within specified tolerance		X
Grommets	Set off center on hems by more than 1/4 inch		X

4.4 Packaging inspection. An examination shall be made to determine that the preservation, packing, and marking comply with the section 5 requirements. Defects shall be scored in accordance with the list below. The sample unit shall be one shipping container fully packaged with the exception that it need not be closed. Examination of closure defects listed below shall be made on shipping containers fully packaged. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be S-2 and the AQL shall be 2.5 defects per 100 units.

5100-214E

<u>Examine</u>	<u>Defect</u>
Marking (exterior and unit pack)	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 container flaps, loose strapping, improper taping, or inadequate stapling Bulged or distorted container Open or noncontinuous heat-sealed seams and closures of polyethylene bags Incorrectly fabricated polyethylene bag
Contents	Number of items per shipping container is more or less than required

5. PACKAGING

5.1 Preservation. Preservation shall be in accordance with ASTM D 3951 and as specified in the contract or purchase order.

5.1.1 Folding. With the pack lying flat, front down, and flap pocket slide fastener close, the pack shall be folded in half, side to side with the harness straps in the center. The approximate size of the folded packsack shall be 10 inches by 21 inches.

5.1.2 Unit pack. Each packsack prepared in accordance with 5.1 and folded in accordance with 5.1.1 shall be inserted into a snug-fitting clear polyethylene film bag. Bag closure shall be effected by heat sealing, with the seal made as close as possible to the open end and excess air within the bag being expelled during the final heat-sealing closure operation.

5.2 Packing. Twenty packsacks packaged as specified shall be packed in a close-fitting fiberboard box, minimum burst strength 200 psi meeting the requirements of the latest version of ASTM D 5118. Boxes shall comply with the National Motor Freight Classification. Each box shall be closed in accordance with the latest version of ASTM D 1974, except that the inspection shall be in accordance with 4.4.

5.3 Marking. In addition to any special marking required by the contract or purchase order, shipping containers shall be marked in accordance with FED-STD-123. Bar code marking is required.

5100-214E

5.3.1 Unit pack marking. Each unit pack preserved in accordance with 5.1.2 shall have the required identification information legibly printed or stamped in black directly on the polyethylene bag across the center face or on a white paper label inserted within the bag permitting ready identification. The required information shall be as follows:

PACKSACK
 DATE OF MANUFACTURE _____
 CONTRACT NO. _____
 NSN _____
 MANUFACTURER _____

6. NOTES

6.1 Intended use. The packsack is intended for carrying a variety of items used in a wide range of resource activities including wildland firefighting and controlled burning operations.

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of the specification.
- b. When first article samples are not required (see 3.1, 4.3, and 6.4).
- c. When lot by lot testing is required in lieu of certificates of compliance (see 4.3.2).
- d. Preservation, packing, and marking required in addition to specification requirements (see section 5).

6.3 Standard shade sample. Color shade samples for the basic bottle green cloth may be obtained from the preparing activity (see 6.7).

6.4 First article. When first articles are required, they shall be inspected and approved under the appropriate provisions of Federal Acquisition Regulation 52.209. The first article shall consist of three complete packsacks covered by this specification and shall be preproduction samples. The contracting officer should include specific instructions regarding arrangements for selection, inspection, and approval of the first articles.

6.5 Suggested sources of supply.

Plastic Hardware
 American Cord & Webbing
 1 Carrington St.
 Lincoln, RI 02865

Harness Padding
 Rubatex Corp.
 P.O. Box 340
 Bedford, VA 24523-0340

ITW Waterbury
 952 South Main St.
 Waterbury, CT 06721

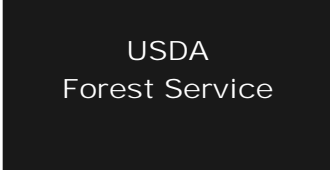
Nylon Cord
 Synthetic Textiles, Inc.
 2472 Eastman Ave., Bldg. 21-22
 Ventura, CA 93003

National Molding Corp.
 5 Dubon Court
 Farmingdale, NY 11735-1065

5100-214E

6.6 Notice. When Government drawings, documents, 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.

6.7 Preparing activity. USDA Forest Service, Missoula Technology and Development Center, Building 1, Fort Missoula, Missoula, MT 59801-7294.



Standardization Document Improvement Proposal

This form is provided to solicit beneficial comments that may improve this document and enhance it's use. Contractors, government activities, manufacturers, vendors, and users are invited to submit comments to:

USDA Forest Service
Missoula Technology and Development Center
Building 1, Fort Missoula
Missoula, MT 59804-7294

Attach any additional pertinent information that may be of use in improving this document to this form and mail in a envelope. A response will be provided when the submitter includes their name and address.

NOTE: This form shall not be used to submit requests for 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 document, or to amend contractual requirements.

Document Identification: **5100-214E - PACKSACK**

Submitter's Name (Optional. Please print or type): _____ Submitter's Organization and Address: _____

Vendor User Manufacturer _____

Phone Number: _____

Date: _____

Has any part of the Document created problems or required interpretation in procurement use?

Is any part of the Document too rigid, restrictive, loose, or ambiguous? Please explain below:

Give paragraph number and wording: _____

Recommended change(s): _____

Reason for recommended change(s): _____

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Missoula, MT 59804-7924

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