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U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE SPECIFICATION
PACKSACK

Beneficial comments (recommendations, additions, deletions) and any pertinent data that may be used in improving this document should be addressed: via electronic mail <wo_mtdc_webmaster@fs.fed.us> or U.S. mail to the U.S. Department of Agriculture, Forest Service, National Technology and Development Program, 5785 Highway 10 West, MT 59808.

 FSC 8465

RECORD OF REVISIONS

This is a complete revision. Numbered sections and appendixes no longer correspond to those in the previous revision. Major changes are listed below. Minor changes that do not modify the intent of the specification are not listed.

Change	Reason
Added Record of Revisions	Provide continuity between updates
Added Table of Contents	Increase ease of navigation
Added definitions section and introduced a list of definitions	Clarity

1. SCOPE

1.1. Scope.

This specification covers one type of general packsack intended for use in a wide variety of field-related activities.

1.2. Interpretations and Definitions.

1.2.1. Interpretation.

To carry out the provisions of this document, the word shall is to be understood as mandatory.

1.2.2. Definitions.

Defect: A departure of a quality characteristic from its intended level or state that occurs with a severity sufficient to cause an associated product or service not to satisfy intended normal, or foreseeable, usage requirements (per ANSI/ASQ Z1.4).

Lot: All sets of one type and size presented together in one delivery shall be considered a lot for the purpose of inspection. A sample unit shall be one packsack.

Nonconformity: A departure of a quality characteristic from its intended level or state that occurs with severity sufficient to cause an associated product or service not to meet a specification requirement (per ANSI/ASQ Z1.4).

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

A-A-55634 – Zipper (Fastener, Slide, Interlocking)

A-A-59826 – Thread, Nylon

MILITARY

MIL-C-5040 – Cord, Fibrous, Nylon

MIL-DTL-32075 – Label: For Clothing, Equipage, and Tentage (General Use)

MIL-C-43204 – Cloth, Spacer (Olefin)

MIL-W-17337 – Webbing, Textile, Woven Nylon USDA

USDA FOREST SERVICE

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

STANDARDS

FEDERAL

FED-STD-123 – Marking for Shipment (Civil Agencies)

FED-STD-376 – Preferred Metric Units for General Use by the Federal Government

(Unless otherwise indicated, copies of federal and military specifications and standards are available online at http://assist.daps.dla.mil/quicksearch/ or in hard copy from the Standardization Documents Order Desk, Building 4D, 700 Robbins Ave., Philadelphia, PA 19111-5094. Copies of USDA Forest Service specifications are available from the preparing activity, 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 shall be those in effect on the date of the invitation for bids or request for proposals (see 6.2).

DRAWINGS

USDA FOREST SERVICE

MTDC-920 – Packsack

(The Forest Service drawing is available from the preparing activity, 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.

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA (AIA)

NASM16491 – Grommet, Metallic

(Copies are available from Aerospace Industries Association of America, 1250 Eye Street, N.W., Suite 1200, Washington, D.C., 20005-3924, www.aia-aerospace.org, 202-371-8400.)

AMERICAN SOCIETY FOR QUALITY (ASQ)

Z1.4 – Sampling Procedures and Tables for Inspection by Attributes

(Copies are available from the American Society for Quality, PO Box 3005, Milwaukee, WI 53201- 3005, www.asq.org.)

ASTM

D 1056 – Standard Specifications for Flexible Cellular Materials - Sponge or Expanded Rubber

D 1974 – Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes

D 3575 – Standard Test Methods for Flexible Cellular Materials Made from Olefin Polymers

D 3576 – Standard Test Method for Cell Size of Rigid Cellular Plastics

D 3951 – Standard Practice for Commercial Packaging

D 5118 – Standard Practice for Fabrication of Fiberboard Shipping Boxes

D 6193 - Standard Practice for Stitches and Seams

(Copies are available from ASTM International, 100 Barr Harbor Dr., West Conshohocken, PA 19428- 2959, www.astm.org.)

NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC., AGENT

National Motor Freight Classification

(Address requests for copies to the American Trucking Association, Inc., Traffic Department, 1616 P St. NW, Washington, DC 20036.)

(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 a 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. During the term of the contract the contractor shall be required to notify the contracting officer in writing when a component, or the component supplier, changes in any way; when a major manufacturing process changes in any way; and when a manufacturing location changes. The contracting officer may at any time require the contractor to submit a new first article sample when substantive changes occur during the term of the contract.

3.2. Materials and components.

Materials and components shall be as specified herein and in 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 unless otherwise specified (see 6.2) 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. As an alternate material, 4 lb. expanded ethylene-vinyl acetate copolymer foam 1/4 inch thick may be used as a substitute.

3.2.3. Webbing, nylon.

3.2.3.1. 2 inch.

The 2-inch webbing shall conform to class 2 of MIL-W-17337. The color shall be black.

3.2.3.2.

3.2.3.3. 1 inch.

The 1-inch webbing shall conform to class 2 MIL-W-17337. The color shall be black.

3.2.3.4. 3/4 inch.

The 3/4-inch webbing shall conform to class 2 of MIL-W-17337. The color shall be black.

3.2.4. Shoulder padding.

The padding for the shoulder straps shall be soft, flexible, 3/8 inch thick, closed-cell, expanded ethylene-vinyl acetate copolymer foam with the characteristics of Table 1. The padding shall be gray in color.

Table 1 – Physical characteristics of padding

Characteristic	Requirement	Test Method
Density	2.2 lb./cu ft. minimum	ASTM D 3575
Water absorption	5% maximum	ASTM D 1056
Cell size	0.025 inch maximum	ASTM D 3576

3.2.5. Drawstring, nylon.

The nylon drawstring shall be flat braid tubular nylon, 1/4 inch wide, conforming to MIL-C-5040 type 2A or similar. The color shall be black.

3.2.6. Thread, nylon.

The thread shall conform to type II, class A of A-A-59826. The color shall be black. The thread for all stitching shall be size FF except as noted. Size E thread may be used for bartacking and label attachment.

3.2.7. Zipper.

The zipper shall be type I, style 2, size 7 of A-A-55634, nonlocking slider. The chain shall be nylon or polyester continuous monofilament in a coil type configuration conforming to the following requirements:

3.2.7.1. Zipper 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 inches. The chain shall be sewn to the tapes. The 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 A-A-55634 except the fastener shall be preconditioned.

3.2.7.2. Zipper tape.

The zipper tape shall be 3/4 +1/16 inch wide, dyed black, and shall be water repellent treated. The tape shall show good fastness to laundering.

3.2.7.3. Zipper slider and pull.

The zippers shall have sliders conforming to the standard long tab pull nonlocking type as specified in A-A-55634. 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. Zipper components.

All components of the zippers shall be manufactured by the same company to ensure the compatibility of components.

3.2.8. Grommets, metallic.

The grommets shall be brass, bright finish conforming to type I, class 1, size 0 with a raised neck, or alternatively a brass dull black grommet and neck washer, type I, class 3, size 0 with raised neck, of NASM16491.

3.2.9. Plastic hardware.

The plastic items specified by 3.2.9.1 through 3.2.9.3 shall be black nylon plastic. Where more than one source is listed, the mating components shall be manufactured by the same company to ensure the compatibility of the components (see 6.5).

3.2.9.1. Cord lock, spring.

The black nylon spring cord lock shall conform to American Cord & Webbing CL Black Heat Stabilized FireLoc, part no. 93735 or equal.

3.2.9.2. Buckle, 3/4 inch.

The 3/4” black nylon side release male buckle shall be National Molding part no. 5179. The 3/4” black nylon side release female buckle shall be National Molding part no. 5180 or equal. The male and female pieces shall securely mate and any items supplied as an “equal” shall completely mate with the specified part numbers.

3.2.9.3. Double-bar buckle, 1 inch.

The 1" black nylon buckle shall be a heavy-duty double bar buckle, American Cord and Webbing, Part no. 91655 or equal.

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 MIL-DTL-32075, 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. The label location shall be as shown in drawing MTDC-920. Label contents shall be as follows:

PACKSACK

NSN 8465-00-205-3493

NFES 0744

USFS SPECIFICATION 5100-214

CONTRACT NUMBER: [1/]

DATE OF MANUFACTURE: [mm/yy 1/]

CLEANING

DIRT – LET DRY, REMOVE WITH STIFF BRISTLE BRUSH

LIGHT OIL – BRUSH WITH WARM WATER DETERGENT SOLUTION; RINSE THEN DRY

MAY BE MACHINE WASHED, COLD WATER, GENTLE CYCLE ONLY, AIR DRIED

DO NOT BLEACH

1/ The contractor shall insert the applicable information indicated.

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 ASTM D 6193, 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 embedded in the materials sewn.

3.3.1.1.1. Repairs of type 301 stitching.

Repairs of type 301 stitching shall be as follows (when making the following repairs, the ends of the stitching are not required to be backstitched):

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.
b. Except for prestitching, thread breaks or two or more consecutive skipped or runoff stitches noted during an inspection of the item (in-process or end item) shall be repaired by overstitching. The stitching shall start a minimum of 1 inch in back of the nonconforming area (1/2 inch on box-x), continue over the nonconforming area to a minimum of 1 inch into existing stitching. Loose or excessively tight stitching shall be repaired by removing the nonconforming 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.

Bartacking shall be free from thread breaks and loose stitching. Unless otherwise specified, bartacks shall be as follows:

Length	**Width**	**Min. Stitches Per Bartack**
1/2 ± 1/16 inch	1/8 ± 1/32 inch	28

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. Grommets.

Holes shall be pre-punched to receive the grommets. Holes pre-punched 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 inches (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.

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 non-conforming components.

During the spreading, cutting, and manufacturing process, components having material non-conformities or damages that are classified as nonconformities in 4.3.4.1 shall be removed from production and replaced with conforming 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 zipper pocket parts of the packsack and on the back panel containing the spacer cloth.

3.3.9. Spacer cloth positioning.

The ribs of the spacer cloth shall run vertically.

3.4. Marking.

The letters "NFES" 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 "NFES" 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 MIL-DTL-32075. The 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 the product established by this document. The occurrence of non-conformities shall not exceed the applicable acceptable quality levels. There shall be no non-conformities 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.

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 nonconforming material, either indicated or actual nor does it commit the Government to accept nonconforming 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, the 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 (COC).

Unless otherwise specified, COC's 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 ASQ Z1.4. The inspection level and acceptable quality level (AQL) shall be as specified. All packs 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. 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. Packing and packaging is not part of the first article inspection. The presence of any nonconformity or failure to pass any test shall be cause for rejection of the first article.

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.

4.3.1.1. Certificates of Compliance (COC).

Unless otherwise specified (see 6.2), as part of first article presentations and lot inspections, it shall be acceptable for the contractor to provide COCs for all materials and components in lieu of actual lot by lot testing, except as specified in 4.3.2. The contractor shall also furnish a certificate of compliance for the requirement of 3.3.1.5 prohibiting the use of thread lubricants before or during sewing. 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
Purchase source, address, and telephone number
Purchase date
Lot number traceable to materials used in production
Contract number

4.3.2. 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 the 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.

4.3.2.1. COCs required.

The following COCs shall be provided:

Cloth, duck, nylon (3.2.1)
Cloth, spacer (olefin) (3.2.2)
2-inch nylon webbing (3.2.3.1)
1-inch nylon webbing (3.2.3.2)
¾-inch nylon webbing (3.2.3.3)
Shoulder padding (3.2.4)
Drawstring, nylon (3.2.5)
Thread, nylon (3.2.6)
Zipper (3.2.7)
Grommets, metallic (3.2.8)
Cord lock (3.2.9.1)
¾-inch buckle (3.2.9.2)
1-inch double-bar buckle (3.2.9.3)
Label (3.2.10)
No thread lubricant (3.3.1.5)

4.3.3. In-process inspection.

The inspection shall be made at any point or during any phase of the manufacturing process to determine whether cut lengths, cut parts, markings for the location of components, and location of assembled component parts are in accordance with specified requirements. The 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 pre-punched 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.

4.3.4. End item examination.

4.3.4.1. End item visual examination.

The end items shall be examined for the non-conformities list in table 2 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 non- conformities per hundred units, shall be 4.0 for major non-conformities and 15.0 for combined major and minor non-conformities. Unless otherwise specified, non-conformities shall be scored on an individual basis, i.e., each seam, each stitching end, each dimension, etc.

Table 2 – Lot acceptance inspection and testing.

Examine	Nonconformity	Major Classification	Minor Classification
Nylon duck cloth	Not type specified	X	
	Any hole (except location marks), cut or tear	X	
	Any abrasion mark, smash, slub, broken or missing yarn, multiple floats, or open place, clearly visible at normal inspection distance of 3 feet	X	
	Improper positioning of 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.		
	Color not as specified	X	
	Shade bar, fine or coarse filling bar		X
	Coating non-conforming or partially omitted		X
Webbing	Size or type not as specified	X	
	Color not as specified		X
	Any hole, cut, tear, or smash	X	

	Abrasion mark, slub, broken end, or pick		X
	Cut ends not fused or not fused as specified	X	
	Not firmly and tightly woven	X	
	Edges frayed or scalloped	X	
	Multiple floats		X
Zipper	NOTE: Each zipper shall be fully closed and opened three times to determine whether fastener operates smoothly and provides a secure closure.		
	Type, size, or color not as specified	X	
	Does not provide a smooth and secure closure full length of openings	X	
	Slider jams or fails to interlock chain scoops	X	
	Any portion of fastener broken, bent, missing, or not aligned making fastener unusable	X	
	Zipper tape not specified width	X	
	Zipper slider not specified type	X	
	Zipper slider not attached as specified	X	
	Zipper chain not material or configuration specified	X	
	Length not as specified	X	
	Components not all manufactured by the same company	X	
Thread	Type, class, or size not as specified	X	
	Any thread lubricated		X
	Color not as 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	
Side release buckle	NOTE: Plastic buckles shall be latched and unlatched three times to determine whether they operate smoothly and provide a secure closure.		
	Type, size, or color not as buckles specified	X	
	Mating components not from the same manufacturer	X	
	Latch and latch receptacle do not mate	X	
	Webbing incorrectly threaded through male buckle	X	
	Male buckle upside down	X	
Drawstring, Nylon	Cut, chafed or abraded	X	
	Ends not fused	X	
	Ends not knotted as specified		X
	Not threaded through grommets as specified		X
	Missing	X	
Spring cord lock	Not type specified or missing	X	
Grommets	Clinched excessively tight, cutting adjacent material Insecurely clinched to a degree that grommet may be detached from material	X	
	Clinched loosely, allowing grommet to rotate in the hole but not to degree that it can be expected to become detached during use		X
	Washer installed on the incorrect side of the material		X

	Eyelet barrel split		X
Open seam	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 stitches or run-offs occur. On double stitched seams, a seam shall be considered open when either one or both sides of the seam are open.		
	1/2 inch or less		X
	More than 1/2 inch	X	
Raw Edge (on edge required to be finished)	More than 1/2 inch when securely caught in the stitching		X
	Note: Raw edge not securely caught in stitching shall be classified as an open seam.		
Run-off	See open seam		
Seam and stitch type	Seam or stitch type not as specified	X	
	A required row of stitching omitted or not located as specified	X	
Bartacks	One or more bartacks omitted	X	
	Any bartack not as specified or not in the specified location		X
	Stitching loose, incomplete, or broken		X
Stitch tension	NOTE: Non-conformities to be scored only when the condition exists for a continuous 4 inches or more, or in several areas with an accumulated distance of 8 inches or more. Applicable to individual seams.		
	Loose, resulting in loose bobbin or top thread		X
	Excessively tight, resulting in puckering of material		X

Stitches per inch	NOTE: Variation in the number of stitches per inch caused by the operator speeding up the machine and pulling the cloth in order to sew over heavy places or in turning corners shall be classified as follows: Within the minor non-conformity classification - no non-conformity; Within the major non-conformity classification - minor non-conformity; Non-conformities to be scored only when a condition exists on any one seam for a length of 6 inches or more or when the combined length of several areas exceeds 10 inches.		
	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 the maximum specified		X
Stitching margin (not otherwise specified)	NOTE: Non-conformities 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.		
	Exceeds specified tolerance, up to 1/16 inch		X
	Exceeds specified tolerance, over 1/16 inch	X	
Stitching ends	Not secured as specified		X
Thread breaks, skipped stitches or run-offs (unless otherwise classified herein)	NOTE: Thread breaks or two or more consecutive skipped stitches or run-offs not overstitched shall be classified as open seams.		
	Not overstitched as specified		X

Rows of stitching	Any row missing except on box-x stitching	X	
	One row of stitching on box-x is omitted		X
	Two or more rows of stitching on box-x is omitted	X	
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 except as specified	X	
Cleanness	Grease, oil, dirt, ink, or other stains clearly noticeable		X
	Thread ends not trimmed to 1/4 inch or less		X
Shoulder padding	Wrong type or thickness	X	
	Wrong color		X
Identification and cleaning label	Type or class not as specified	X	
	Incorrect type, size, or information	X	
	Not in the location specified	X	
	Incorrect label margins		X
Location markings	Drill mark exceeds the size specified		X
	Drill mark not covered on the finished item		X
	Printed marking more than 1/32 inch in width or not covered by component part		
Marking: NFES	Omitted, incorrect, illegible, misplaced, or size of characters not as specified	X	
	Type or class not as specified	X	

	Cloth color visible under black marking medium		X

4.3.4.2. End item dimensional examination.

End items shall be examined for the non-conformities listed in table 3 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 non-conformities per hundred units, shall be 6.5 major non-conformities and 15.0 for combined major and minor non-conformities.

Table 3 – End item dimensional non-conformity.

Examine	Non-conformity	Major Classification	Minor Classification
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 classified herein)	Not within the specified tolerance		X
Box-x stitching	Dimensions not as specified		X
Stitch margin and gauge	Not within the specified tolerance		X
Grommets	Set off-center on hems by more than ¼ inch	X	

4.3.5. Packaging inspection.

The fully packaged end items shall be inspected for the nonconformities in Table 3. The sample unit shall be one shipping container fully prepared for delivery except that it need not be closed. Nonconformities of closure listed in Table 4 shall be examined on shipping containers fully prepared for delivery. The lot size shall be the number of shipping containers in the end item inspection lot. The inspection level shall be S-2 and the AQL, expressed in terms of nonconformities per hundred units, shall be 2.5.

Table 4 — Packaging inspection

Component	Nonconformity
Markings	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application.
Materials	Any component missing or not as specified. Any component damaged, affecting serviceability.
Workmanship	Inadequate application of components, such as incomplete closure of container flaps, improper taping, loose strapping, or inadequate stapling. Bulged or distorted container.
Contents	The number of items per 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.

5.2. Folding.

With the pack lying flat, front down, and zipper pocket closed, the pack shall be folded in half, side to side with the shoulder strap assemblies in the center. The approximate size of the folded packsack shall be 10 inches by 21 inches.

5.3. 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.

5.4. Packing.

Twenty (20) packsacks, packaged as specified, shall be packed into a 28” L X 20” W X 16” D fiberboard box, minimum burst strength 275 psi (ECT 44) meeting the requirements of the latest version of ASTM D 5118. Boxes shall be in compliance with the National Motor

Freight Classification. Each box shall be closed in accordance with the latest version of ASTM D 1974.

5.5. 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.

6. NOTES

6.1. Intended use.

The packsack is intended for carrying a variety of items used in a wide range of resource activities.

6.2. Acquisition requirements.

a. Acquisition documents should specify the following:
b. Title, number, and date of the specification.
c. If color other than green (3.2.1).
d. When first article samples are not required (see 3.1, 4.3, and 6.4).
e. When lot by lot testing is required in lieu of certificates of compliance (see 4.3.2).
f. 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) and will be provided only to the contractor.

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 Co., Inc. – 1 Carrington St, Lincoln, RI 02865

ITW Nexus – 195 Algonquin Road, Des Plains, IL 60016-6197, (847) 299-2222
www.itwnexus.com

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

YKK – 2165 Shermer Rd, Northbrook, IL 60062, 847-509-5205

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, National Technology and Development Program, 5785 Highway 10 West, Montana 59808.