

INCH-POUND

MIL-P-44403
16 March 1990

MILITARY SPECIFICATION
PASSAGEWAY, COMPLEXING KIT

1. SCOPE

1.1 Scope. This specification covers the requirements for two types of passageways for the complexing kit.

1.2 Classification. The passageway for the complexing kit shall be of the following types and classes:

- Type I - International Organization for Standardization (ISO) shelter to ISO shelter with ramp
- Type II - ISO shelter to Tent Extendable Modular Personnel (TEMPER) tent
 - Class A - with ramp
 - Class B - with stairs

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 listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 8340

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SPECIFICATIONS

FEDERAL

- A-A-1687 - Tape, Pressure-Sensitive Adhesive (Medium Tensile Strength, Transparent, Glass Filament Reinforced)
- V-T-285 - Thread, Polyester
- MMM-A-121 - Adhesive, Bonding Vulcanized Synthetic Rubber to Steel
- PPP-B-601 - Boxes, Wood, Cleated-Plywood

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- MIL-T-704 - Treatment and Painting of Materiel
- DOD-P-15328 - Primer (Wash), Pretreatment (Formula No. 117 For Metals) (Metric)
- MIL-P-23377 - Primer Coatings: Epoxy Polyamide, Chemical and Solvent Resistant
- MIL-C-43285 - Cloth, Coated (Chloroprene Base Coated, Chlorosulphonated Polyethylene Top Coated)
- MIL-C-46168 - Coating, Aliphatic Polyurethane, Chemical Agent Resistant
- MIL-P-53022 - Primer, Epoxy Coating, Corrosion Inhibiting, Lead and Chromate Free
- MIL-P-53030 - Primer Coating, Epoxy, Water Reducible, Lead and Chromate Free
- MIL-C-53039 - Coating, Aliphatic Polyurethane, Single Component, Chemical Agent Resistant
- MIL-C-53072 - Chemical Agent Resistant Coating (CARC) System Application Procedures and Quality Control Inspection

QUALIFIED PRODUCTS LIST

- QPL-MMM-A-121- Adhesive, Bonding Vulcanized, Synthetic rubber to Steel

STANDARDS

FEDERAL

- FED-STD-595 - Colors
- FED-STD-751 - Stitches, Seams and Stitching

STANDARDS

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- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes

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- MIL-STD-129 - Marking for Shipment and Storage
- MIL-STD-130 - Identification Marking of U.S. Military Property
- MIL-STD-1595 - Qualification of Aircraft, Missile and Aerospace Fusion Welders

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Bldg. 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

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 are those cited in the solicitation.

DEPARTMENT OF THE ARMY TECHNICAL MANUALS

- TM 10-5411-203-13 - TEMPER Tent Vestibule Frame
- TM 10-8340-224-13+P - TEMPER Tent Vestibule

(Copies of the Army Technical Manuals required by contractors in connection with specific acquisition functions are available from the contracting activity or as directed by the contracting activity.)

DRAWINGS

U.S. Army Natick Research, Development, and Engineering Center

- 5-4-4197 - HEADER ASSEMBLY
- 5-4-4200 - FRAME UPRIGHT
- 5-4-5891 - FOOT SWIVEL
- 5-4-6942 - DIAPER, PASSAGEWAY
- 5-4-6730 - PASSAGEWAY, TYPE II, CLASS A
- 5-4-6731 - PASSAGEWAY, TYPE II, CLASS B
- 5-4-6732 - PASSAGEWAY, TYPE I

(Copies of drawings are available from the U.S. Army Natick Research, Development, and Engineering Center, Attn: STRNC-EMSS, Natick, MA 01760-5014.)

2.2 Non-Government publications. The following document forms a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

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AMERICAN WELDING SOCIETY (AWS)

Applicable American Welding Society Specification

(Application for copies should be addressed to the American Welding Society, 550 N.W. LeJeune Road, P.O. Box 351040, Miami, FL 33135.)

(Non-Government standards and other publications are normally available from the organizations that prepare or 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 6.3) in accordance with 4.3.

3.2 Materials and components. Materials and components shall be as specified herein and on all applicable drawings. Materials not definitely specified shall be of the quality normally used by the contractor provided that the completed item complies with all the requirements of this specification. It is encouraged that recycled material be used when practical as long as it meets the requirements of this specification.

3.2.1 Finish. Unless otherwise specified on the applicable drawings or in the contract (see 6.2), all metal components or assemblies shall be treated and finished in accordance with MIL-T-704, Type G (Chemical Agent Resistant Coating) (CARC) and as tailored herein. Cleaning, pretreatment, priming, and topcoating shall be performed in accordance with the general CARC requirements of MIL-C-53072 (where conflicts occur, MIL-T-704, shall apply).

3.2.1.1 Pretreatment. The pretreatment shall be a wash primer conforming to DOD-P-15328.

3.2.1.2 Primer. The primer shall be type I of MIL-P-23377, MIL-P-53022, or MIL-P-53030.

3.2.1.3 Topcoat. The CARC topcoat shall be in accordance with MIL-C-46168 or MIL-C-53039, Green, color No. 34094 or sand color No. 33303 of FED-STD-595.

3.2.1.4 Finish notes.

(1). All primers and topcoat materials shall be from only qualified products in accordance with the comparable Qualified Products Lists (QPL).

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(2). Finish materials shall be stored, handled, and applied in accordance with applicable specification and material supplier recommendations.

(3). The word "CARC" shall be applied to those components as specified on the applicable drawings. The lettering color shall be black, No. 37030, using either MIL-C-46168 or MIL-C-53039.

(4). Finish shall not be applied to those areas excluded on the applicable drawings, such as, fabric, cables, seals, etc.

(5). Workmanship shall result in a finish complying with the thickness requirements of MIL-T-704 along with all other requirements of the applicable referenced specifications.

3.2.2 Thread, polyester. Dyed polyester thread shall conform to V-T-285 as specified on the drawings, and shall show colorfastness to weathering equal to or better than the standard shade sample. When no standard sample is available, the dyed thread shall show good colorfastness to weathering. The thread shall not be lubricated. Thread sizes shall be as follows:

For all stitching except bartacking and stitching indicated by "Z" or drawings	- Size FF for needle and bobbin or size F for needle and bobbin
For bartacking	- Size E
For stitching indicated by "Z" on drawings	- Size F for needle, size E for looper

3.2.3 Dusting compound. The dusting compound shall be whiting, talc, or other finely divided mineral material. The compound shall not support mildew growth.

3.2.4 Adhesive for strapping and fabric repair. The adhesive shall be in accordance with MMM-A-121. Containers of the adhesive shall be stored in accordance with manufacturer's instructions. The adhesive shall not be used after the manufacturer's expiration date.

3.2.5 Fabric. The connector fabric shall conform to type I, class 3 of MIL-C-43285, except that the face side and back side top coats and undercoating shall be in accordance with the colors specified in 3.3.6 and 6.2.

3.3 Construction. Each type and class of passageway shall conform to the requirements specified on the referenced drawings (see 2.1.2), and all the subsidiary drawings as specified herein. No deviation beyond the prescribed dimensional tolerances is permissible.

3.3.1 Stitching.

3.3.1.1 Types of stitching. All stitch types except bartacking shall conform to FED-STD-751 as follows:

For all stitching except zig zag stitching and stitching indicated by "Z" on the drawings	- Type 301, 5 to 7 stitches per inch
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For zig zag stitching

- Type 304, 10 to 14
stitches per inch

For bartacking

- Bartack $5/8 + 1/16$ inch
in length, $1/8$ inch in
width (bight) and shall
be free of thread
breaks or loose
stitching

3.3.1.2 Thread breaks. Thread breaks in stitching shall be overstitched not less than 1 inch at each break on stitch type 301, and not less than $3/4$ inch at each break on stitch type 304. Thread breaks noted during inspection shall be repaired by overstitching starting from a distance of 1 inch before the break, across the defective area, to a distance of 1 inch beyond the break. The ends of repair stitching are not required to be backstitched.

3.3.1.3 Stitching ends. The ends of type 301 stitching shall be overstitched not less than 1 inch except where ends are turned under in a hem or held down by other stitching. Where type 301 stitching is performed automatically on stitch patterns such as box, box with cross stitch, "W" stitching or straight line tacking, at least three tying, overlapping or back stitches shall be used to secure the ends of stitching. The ends of type 304 stitching shall be firmly secured by back stitching or overstitching or by increasing the number of stitches per inch at the ends for a minimum of $1/4$ inch.

3.3.1.4 Skipped stitches. Two or more consecutively skipped stitches occurring in types 301 or 304 stitching shall be overstitched not less than 1 inch. Skipped stitches noted during inspection shall be repaired as specified for thread breaks (see 3.3.1.2).

3.3.1.5 Lubrication of thread. The addition of any lubrication to the polyester sewing thread prior to or during the sewing operations is prohibited.

3.3.1.6 Strapping of stitched seams. Stitched seams shall be strapped as specified on the applicable drawings. Bonding of strapping shall be in accordance with 3.3.10. The surface color of strapping shall match the color of the fabric being strapped.

3.3.2 Splicing of cloth. There shall be no splicing of the connector material unless specified on the drawings.

3.3.3 Setting of grommets. Holes 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 grommets shall be securely clinched without cutting the materials.

3.3.4 Fusing of webbing ends. Cut ends of nylon webbing shall be fused and, after fusing, shall be free from frayed edges and loose fibers.

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3.3.5 Fusing of polyester cord. The cut ends of polyester cords shall be fused to prevent fraying.

3.3.6 Color of fabric. All visible outside surfaces of coated cloth components and assemblies shall be one color as specified (see 6.2). Interior surfaces shall be black.

3.3.7 Setting of rivets. Rivets shall be securely set and neatly headed.

3.3.8 Repair of damaged components. Components damaged during fabrication, when judged repairable and when approved by the contracting officer, shall be repaired in accordance with the requirements specified herein. No repair is authorized without approval of the contracting officer.

3.3.8.1 Repair of the fabric assembly. Cuts, holes, or tears to the fabric assembly shall be repaired by applying a patch to both sides of the fabric. Patches shall be the same material as specified for the damaged assembly and shall extend not less than 3 inches beyond the damaged area. A maximum length of 3-1/2 inches of damage shall be allowed and not more than two patches per passageway shall be allowed. All patches shall have rounded corners. Bonding of repair patches shall be in accordance with 3.3.10. Surface colors of the patches shall match the color of the fabric being repaired.

3.3.8.2 Repainting of metal assemblies.

a. Areas requiring touch-up shall be light scuff sanded whenever top coat has fully cured, when required for surface blending, or when base metal is exposed; cleaned; primed when base metal is exposed; and spot painted with top coat paint.

b. Painted surfaces requiring repair welding shall have the CARC primer and top coat abraded off to the base metal. Any weld area (adjacent to or behind the repair weld) that will be heated in excess of 375°F (approximately) should have the top coat and primer abraded off to the base metal.

3.3.9 Wicking of sewing thread (cup test). There shall be no wicking of water through the passageway stitching when the passageway is tested as specified in 4.5.1. The cup test is intended to ensure that non-wicking thread has been utilized and that no lubrication has been added to the polyester thread prior to or during the sewing operation.

3.3.10 Fabric bonding. Fabric bonding of strapping (3.3.1.6) and repair patches (3.3.8.1) shall be in accordance with the following procedures:

3.3.10.1 Surface preparation - Surfaces to be bonded shall be clean and dry prior to application of the adhesive. Coated cloth surfaces to be bonded shall be thoroughly cleaned by rubbing with toluene-wetted clean cloths or pads, which may contain a mild, bonded abrasive of 80 or finer grit size, or may be of a

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coarse weave (as for scouring). If abrading is exercised, there shall be no scuffing or abrading of the polyester base cloth. Separate clean cloths and clean solvent shall be used for final cleaning wipes. Abrasive coated cloths or pads shall not be used directly on stitching at seams.

3.3.10.2 Adhesive application - Adhesive shall be as specified in 3.2.4. Containers for adhesive transfer and use shall be clean prior to each filling. Adhesive in the containers shall be covered during transit to work stations and during sustained periods of nonuse to prevent loss of solvent by evaporation. The adhesive shall be used in accordance with the manufacturer's instructions. The adhesive shall be used only while sufficiently spreadable to obtain an even coat. Adhesive tending to produce drag or showing stringiness when being brushed out shall be discarded. A minimum of two coats of adhesive shall be evenly spread on the cleaned surface to be bonded. The first coat shall be dry to the touch before the application of the second coat. Prior to assembly, the adhesive coated surface shall not be allowed to be contaminated by dust or other foreign matter. Applied adhesive shall be free of heavy smears of excessively thick areas (resulting from insufficient spreading), thin starved areas, uncoated areas, or other defects characteristic of improper application. The second coat shall be dried as appropriate for the assembly method utilized. Precautions shall be taken to prevent adhesive application, assembling or curing of an assembly at a temperature below 60°F.

3.3.10.3 Fabric application - Application of the material to be bonded shall be made when the tack and grab of the adhesive coated surfaces are in a suitable range. Care shall be exercised to avoid finger contact in the adhesive coated areas. The bonded fabric shall be rolled with a roller to assure proper adhesion. The bonded fabric shall not be moved too soon or in such a way as to result in edge lifting or a decreasing strength of bond until the adhesive has set. Surfaces shall be assembled on the same day that they were coated, or a third coat of adhesive shall be applied to each surface. When surfaces have been assembled in an incorrect location, the adhesive bond may be immediately separated and reset in the proper location. To facilitate separation, toluene may be applied at the bond line by squirt can or atomizer and the toluene then allowed to evaporate before resetting the surfaces. When incorrectly located strapping/patches are separated and the adhesive is not in an active condition or has transferred to the other surface, the affected surface shall be given an additional coat of adhesive before re-assembling. No adhesive residue shall extend further than 1/2 inch beyond the edges of the patch. Any exposed adhesive within the 1/2 inch allowance shall be dusted with the dusting compound specified in 3.2.4. There shall be no unsightly smearing or spreading of adhesive and care shall be exercised to ensure that surrounding areas are kept clean.

3.4 Marking. Frame assemblies, stairs and ramp assemblies shall be marked for identification in accordance with MIL-STD-130, and as specified on drawings.

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3.5 Government Furnished Property. The following will be furnished for fit testing of the Complexing Kit, Passageway (see 2.1.2, 4.4.3 and 6.6).

TEMPER Tent Vestibule	NSN: 8340-01-186-3026
Technical Manual	# 10-8340-224-13&P
TEMPER Tent Vestibule Frame	NSN: 8340-01-186-3010
Technical Manual	# 10-5411-203-13

3.6 Workmanship. Cloth components shall be free of holes, cuts, tears, thin or weak places caused by abrasion, exposed fabric, blisters, tunnels, unadhered pockets, loose edges, delamination of coating, creases, wrinkles, or coating missing. Webbing shall contain no frayed or scalloped edges. Rope components shall be free of cuts, abrasions, or breaks. Thread tension shall be maintained so that there will be no loose stitching, and seam allowances shall be maintained with seams properly sewed so that no run-offs, pleats, or open seams shall result. Care shall be taken in sewing so that there shall be no needle chews. All thread ends shall be trimmed to 1/2 inch or less. All components of the finished frames and ramp assemblies shall not be bent out of shape and shall be free from split, puncture, fracture, twist, malformation, sharp edge, and burr. Roll of a rivet shall be free from more than one split. Rivets shall not be loose. Welds shall be free from burn through, pits, slag, inclusion, porosity, crack, flash, and excess flux deposit.

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 their 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 materiel, either indicated or actual, nor does it commit the Government to accept defective material.

4.1.2 Responsibility for dimensional requirement. 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

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be examined on the end item, the inspection shall be made at any point, or at all points in the manufacturing process to ensure compliance with all dimensional requirements.

4.1.3 Certificates of compliance. When certificates of compliance are submitted, the Government reserves the right to inspect such items to determine the validity of the certification.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. First article inspection (see 4.3).
- b. Quality conformance inspection (see 4.4).

4.3 First article inspection. When a first article is required (see 3.1 and 6.2), it shall be examined for the defects specified in 4.4.3, and 4.4.4, and tested in accordance with 4.5.

4.4 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with MIL-STD-105.

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

4.4.1.1 Component and material certification. A certificate of compliance may be acceptable as evidence that the dusting compound conforms to the requirements specified in 3.2.3.

4.4.1.2 Welder certification. The welding specification cited for this document requires welder certification to MIL-STD-1595. In lieu of this type of certification, welders would be considered certified if they have been previously certified to any Government aluminum welding specification or to an American Welding Society (AWS) certification procedure.

4.4.1.3 Paint and Primer. When the drawings specify finish requirements for painting with Chemical Agent Resistant Coating (CARC), the inspection provisions of MIL-T-704 shall apply.

4.4.2 In-process inspection. Inspection of sub-assemblies shall be made to ascertain that construction details which cannot be examined in the finished product are in accordance with specified requirements. The Government reserves the right to exclude from consideration for acceptance, any material or service for which in-process inspection has indicated nonconformance. Whenever nonconformance is noted, correction shall be made to the materials or service affected and the operation. Items which cannot be corrected, shall be removed from production. Examination shall be made of the following operations and requirements to establish conformance to specified requirements:

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- a. Finishing of metal components (see 3.2.1, 3.2.2, and specified drawings).
- b. Prohibition on lubrication of polyester thread (see 3.3.1.5).
- c. Fabric assembly exterior and interior surface colors (see 3.3.6).
- d. Surface preparation for bonding (see 3.2.10.1).
- e. Application of adhesives (see 3.3.10.2).
- f. Application of fabric during bonding (see 3.3.10.3).
- g. Welds and welding (see 3.6 and specified drawings).

4.4.3 End item visual examination.

4.4.3.1 Fabric assembly. The fabric assembly part of the passageway shall be examined for the defects listed in table I. The lot size shall be expressed in units of fabric assemblies. The sample unit shall be one fabric assembly. The inspection level shall be II, and an Acceptable Quality Level (AQL), expressed in terms of defects per hundred units shall be 4.0 for major defects and 25 for total (major and minor combined) defects.

TABLE I. End item visual defects for fabric assembly

Examine	Defect	Classification	
		Major	Minor
Cloth, coated	Hole, cut, or tear; exposed fabric; delamination of coating; crease or wrinkles; blister; tunnel; scratch or abrasion	101	
	Lump or heavy coated area		201
Webbing	Frayed or scalloped		202
	End not fused		203
Rope	Cut, broken, or abraded yarn	102	
	End not fused		204
Hardware	Broken	103	
	Malformed	104	
	Not finished as specified or Corroded area		205
	Burr or sharp edge which may cause injury in handling or damage to fabric	105	

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TABLE I. End item visual defects for fabric assembly (cont'd)

Examine	Defect	Classification		
		Major	Minor	
Cementing	Pucker, loose edge, unadhered pocket or tunnel		206	
	Excessive adhesive in sag or lump evident through outer layer of fabric		207	
	Adhesive exposed beyond the over-coated area on interior surface		208	
Becket loops	Incorrect number, wrong length, wrong material, not attached as specified	106		
Touch and close fastener tapes	Hook or pile incorrectly positioned, damaged, wrong width, or not attached as specified	107		
Seams and stitching	Open seams:			
	- 1 inch or more	108		
	- for less than 1 inch		209	
	NOTES: A seam shall be classified as open when one or more skipped or run-off stitches occur. On double stitched seams, a seam shall be considered open when either one or both sides of a seam are open.			
	Thread breaks overstitched less than 1 inch before and beyond break		210	
	Needle chews resulting in cut, tear, or hole	109		
	One or more required rows of stitching omitted (except on box stitching)	110		
	Skipped stitches or run-offs overstitched less than 1 inch		211	
	NOTES: Skipped stitches and run-offs not overstitched shall be classified as open seams.			
	Wrong seam type	111		
Wrong stitch type	112			
Stitch tension	Loose, resulting in an exposed bobbin or top thread for more than 6 inches		212	
	Tight as evidenced by puckering on fabric for more than 6 inches	113		

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TABLE I. End item visual defects for fabric assembly (cont'd)

Examine	Defect	Classification	
		Major	Minor
Stitches per inch	Less than minimum specified:		
	- one stitch		213
	- two or more stitches		214
	More than maximum specified:		
	- one or more stitches		215
Stitching margin	Larger than specified by more than 3/16 inch:		
	- for more than 2 inches, but not more than 4 inches in length		216
	- for more than 4 inches in length	114	
Stitching gage	Not as specified		217
Stitching ends	Not overstitched	115	
	Overstitched less than 1 inch (except where ends are held down by other stitching, cementing, or turned under in a hem)		218
Boxstitching	Wrong stitch type	116	
	Incomplete:		
	- one row of stitching omitted		219
	- two or more rows of stitching omitted	117	
Components and assembly	Any component part not fabricated of applicable referenced material	118	
	Any component or assembly with repairs beyond specified allowances	119	
	Any component that will not assemble with its mating component	120	
Marking	Omitted, incorrect, illegible, or misplaced		220

4.4.3.2 Metal principal assembly. Metal principal assemblies shall be examined for the defects listed in table II. The lot size shall be expressed separately in terms of each type of metal principal assembly (exterior frame assembly, frame assembly, ramp, or stairs), and the sample unit shall be one principal assembly. The inspection level shall be II, and an AQL expressed in terms of defects per hundred units shall be 2.5 for major defects and 6.5 for total (major and minor combined) defects.

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TABLE II. End item visual defects for metal principal assembly.

Examine	Defect	Classification	
		Major	Minor
Finish	Not finished	101	
	Not adherent; e.g., blistered, peeled, or flaky		201
	Coating not continuous or uniform; i.e., not coated or area of no film		202
	Corroded area		203
	Scratch, dig, or abrasion exposing bare metal		204
Construction and workmanship	Component missing	102	
	Any component not fabricated of applicable referenced material	103	
	Split, puncture, burr, deformed, rough or sharp edge	104	
Welding	Missing, incomplete, burned through, cracked, porous, fractured, or otherwise not fused	105	
	Not type specified, not smooth, flux and scale not removed		205
Metal fasteners	Missing, not type specified, broken, stripped, or loose	106	
Rivets and riveting	Rivet missing	107	
	Rivet not set or peened; i.e., can be removed by hand	108	
	Not specified type or size		206
	More than one split in roll of rivet		207
	Loose rivet		208
Seals	Missing, not properly bonded, not type specified, or bonded over finish	109	
Marking	Missing, incomplete, illegible, or incorrect		209

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4.4.4 End item dimensional examination.

4.4.4.1 Fabric assembly. The fabric assembly part of the passageway shall be examined for the defects listed in table III. The lot size shall be expressed in units of fabric assemblies. The sample unit shall be one fabric assembly. The inspection level shall be S-3, and an AQL expressed in terms of defects per hundred units shall be 2.5 for major defects and 15 for total (major and minor combined) defects.

TABLE III. End item dimensional defects for fabric assembly.

Examine	Defect	Classification	
		Major	Minor
Overall dimensions	Smaller than specified dimensions less applicable minus tolerance indicated on drawings	101	
	Larger than specified dimensions and applicable plus tolerance indicated on drawings		201
Location dimensions	Not within specified tolerance		202

4.4.4.2 Metal principal assembly. Metal principal assemblies shall be examined for conformance with all dimensions specified on the drawings. Only those dimensions that can be evaluated without damaging or disassembling the end items shall be examined. Any dimensions not within the specified tolerance shall be classified as a defect. The lot size shall be expressed separately in terms of each type of metal principal assembly (exterior frame assembly, frame assembly, ramp, or stairs). The sample unit shall be one metal principal assembly. The inspection level shall be S-3, and the AQL, expressed in terms of defects per hundred units, shall be 2.5.

4.4.5 Packaging examination. The fully packaged end items shall be examined for the defects listed below. The lot size shall be expressed in units of shipping containers. The sample unit shall be one shipping container fully packaged. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 2.5.

<u>Examine</u>	<u>Defect</u>
Marking (exterior and interior)	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application
Materials	Any component missing, damaged, or not as specified

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<u>Examine</u>	<u>Defect</u>
Workmanship	Inadequate application of components. Components not wrapped with cushioning material Bulged or distorted container Fabric or ramp assembly missing Fabric pinched in hinged frame Swivel foot not captivated
Content	Number per container is more or less than required

4.5 Methods of inspection.

4.5.1 Wicking test. The end item shall be tested once on a roof panel to side panel lap seam, and once on a floor field seam. The end item unit shall be laid over a $6 \pm 1/8$ inch diameter hoop so as to form a $1 \pm 1/4$ inch deep depression with the seam to be tested running through the center of the depression. A 500 mL quantity of water at $77 \pm 4^{\circ}\text{F}$ shall be slowly poured into the depression and the under surface shall be observed. Any wicking of water along the sewing thread, identified by a discoloration or darkening of the thread within 5 minutes after water is poured, shall be considered a test failure. Water leakage through the needle holes or between the plies of the lapped seamed fabrics shall not be considered a failure.

4.5.2 Erection/striking test. This test is to ensure that the hardware is constructed properly for the intended use. One first article unit of each type, will be erected and struck three times in accordance with TM10-5411-203-13 (see 2.1.2). Any inability to properly assemble or disassemble the item attributed to fabrication of the passageway shall constitute failure. Each sample passageway shall be erected using contractor fabricated simulated shelter openings, or a simulated shelter opening and a Government Furnished Property (GFP) (see 3.5 and 6.2) TEMPER Tent Vestibule and TEMPER Tent Vestibule Frame (as required). The vestibule and passageways shall be erected in accordance with respective TM (see 3.5). The tent vestibule and simulated shelter opening shall be separated by 40 ± 2 inches. The openings shall be $77.00 - .06$ inches high by $58.50 \pm .06$ inches wide and shall be $1.56 \pm .03$ inches thick where the frame mates to the opening. The simulated shelter openings shall be separated by $72 - 0.13$ inches.

5. PACKAGING

5.1 Preservation. Preservation shall be level A.

5.1.1 Level A preservation for type I. The frames shall be collapsed with the fabric laid out between the frames. Care shall be exercised to be sure that the fabric is not pinched in the hinged frames. The two frames shall be brought together while folding the fabric between the frames creating a sandwich. The components of one complete assembly (excluding the ramp) shall be placed onto the fabric diaper (Natick drawing 5-4-6942) and secured with the inner straps. The end flaps shall be folded over the contents and secured using the end strap. The sides shall then be folded over the contents and end flaps and secured using the two outer side straps.

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5.1.2 Level A preservation for type II. The frame shall be collapsed with the fabric laid out to one side of the collapsed frame. Care shall be exercised to be sure that the fabric is not pinched in the hinged frame. The fabric shall then be folded onto the hinged frame. The fabric/frame shall then be laid onto the fabric diaper (Natick drawing 5-4-6942). The exterior frame assembly shall be broken down into three subassemblies and laid on top of the fabric/frame assembly. The three subassemblies are Header Assembly (5-4-4197) and two Frame Uprights (5-4-4200) with the Swivel Foot (5-4-5891) captivated with the detent pin on the upright. The components of one complete assembly (excluding ramp or stairs) shall be placed onto the fabric diaper (Natick drawing 5-4-6942) and secured with the inner straps. The end flaps shall be folded over the contents and secured using the end strap. The sides shall then be folded over the contents and end flaps and secured using the two outer side straps.

5.2 Packing. Packing shall be level A.

5.2.1 Level A packing for type I.

5.2.1.1 Type I fabric and frame assembly packing. The fabric and frame assembly, preserved as specified in 5.1.1, shall be packed into a cleated plywood box conforming to overseas type, style A or J, grade B, load type 2 of PPP-B-601. Each container shall be provided with skids as specified in accordance with PPP-B-601. The box shall contain fork lift openings. Through holes shall be sealed. All components shall be cushioned, blocked or braced, and immobilized to insure safe transit during shipment. As a minimum, the preserved fabric and frame assembly shall be secured to the cleated floor in length and width directions, using webbing or ties, and padded to prevent chafing.

5.2.1.2 Type I ramp packing. The ramp shall be packed in a cleated plywood box, as specified in 5.2.1.1.

5.2.2 Level A packing for type II, class A.

5.2.2.1 Type II fabric and frames assembly packing. The fabric and frames assembly, preserved as specified in 5.1.2, shall be packed in a cleated plywood box, as specified in 5.2.1.1.

5.2.2.2 Type II, class A ramp packing. The ramp shall be packed into a cleated plywood box, as specified in 5.2.1.

5.2.3 Level A packing for type II, class B.

5.2.3.1 Type II, fabric and frames assembly packing. The fabric and frames assembly, preserved as specified in 5.1.2, shall be packed in a cleated plywood box, as specified in 5.2.1.1.

5.2.3.2 Type II, class B stairs assembly packing. The stairs shall be packed into a cleated plywood box, as specified in 5.2.1. Note that components shall be separately braced, cushioned, or otherwise immobilized to prevent movement against the box or each other.

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5.3 Marking.

5.3.1 Marking for type I. The overseas plywood boxes shall be marked in accordance with MIL-STD-129. The boxes shall be marked "PASSAGEWAY, COMPLEXING KIT, TYPE I, ISO TO ISO" and a list of components and quantities within the box listed below the title.

5.3.2 Marking for type II.

5.3.2.1 Type II, class A. The overseas plywood boxes shall be marked in accordance with MIL-STD-129. The boxes shall be marked "PASSAGEWAY, COMPLEXING KIT, TYPE II, CLASS A, ISO TO TEMPER W/RAMP" and a list of components and quantities within the box listed below the title.

5.3.2.2 Type II, class B. The overseas plywood boxes shall be marked in accordance with MIL-STD-129. The boxes shall be marked "PASSAGEWAY, COMPLEXING KIT, TYPE II, CLASS B, ISO TO TEMPER W/STAIRS" and a list of components and quantities within the box listed below the title.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The passageway, complexing kit shall be used as a passageway between two ISO shelters or between an ISO shelter and a TEMPER tent. Type I covers a passageway between two ISO shelters with a ramp. Type II covers a passage between an ISO shelter and TEMPER tent. Type II, class A incorporates a ramp while type II, class B incorporates stairs.

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Title, number, and date of this document.
- b. Type and class required (see 1.2).
- c. Color required (see 3.3.6 and 6.5).
- d. Issue of the DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).
- e. When a first article is required (see 3.1, 4.3, and 6.3).
- f. Shipment and scheduling for Government Furnished Property (GFP) (see 3.5, 4.5.2, 6.6).

6.3 First article. When the first article is required, it shall be inspected and approved under the appropriate provisions of FAR 52.209. The first article should be a reproduction sample. The contracting officer should specify the appropriate type of first article and the number units to be furnished. The contracting officer should also include specific instructions in acquisition documents regarding arrangements for selection, inspection, and approval of the first article.

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6.4 Color. Fabric and hardware items shall be in the colors as specified below:

Fabric items

Face Desert Tan - Shade 459, Back Black - Shade 37030
Face Forest Green - Shade 433, Back Black - Shade 37030
Face Camouflage Green - Shade 483, Back Black - Shade 37030

Hardware items

Camouflage Green, No. 34094
Sand, No. 33303

(To obtain color samples, address the contracting activity issuing the invitation for bids, request for proposal or reference FED-STD-595).

6.5 Government Furnished Property. For access to samples of the TEMPER Tent Vestibule, TEMPER Tent Vestibule Frame, and manuals, address the contracting activity issuing the invitation for bids or request for proposal.

6.6 Subject term (key word) listing.

connector
covered shelter
Hallway
ISO
kit
TEMPER
tent

Custodians:

Army - GL
Navy - NU
Air Force - 99

Preparing activity:

Army - GL
(Project 8340-0520)

Review activities:

Army - MD
Air Force - 11
Air Force - 82
DLA - CT

User activities:

Navy - MC, MS