

INCH-POUND

AA-C-571H
September 20, 1993
SUPERSEDING
AA-C-571G
December 16, 1982

FEDERAL SPECIFICATION

COT, FOLDING

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

1. SCOPE

1.1 Scope. This specification covers the requirements for one type of aluminum frame folding cot (see 6.1 and 6.4).

2. APPLICABLE DOCUMENTS

2.1 Government documents. Unless otherwise specified, the following documents of the issue in effect on date of invitation for bids or request for proposal form a part of this specification to the extent specified herein.

Federal Specification:

A-A-203 - Paper, Kraft, Untreated

Federal Standards:

FED-STG-123 - Marking for Shipment (Civil Agencies)
FED-STG-751 - Stitches, Seams and Stitchings

(Activities outside the Federal Government may obtain copies of Federal specifications, standards, and commercial item descriptions as outlined under General Information in the Index of Federal Specifications, Standards and

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be used in improving this document should be addressed to: U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5017, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 7105

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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Commercial Item Descriptions. The Index, which includes cumulative bimonthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

(Single copies of this specification, and other Federal specifications and commercial item descriptions required by activities outside the Federal Government for bidding purposes are available without charge from General Services Administration Business Service Centers in Boston, MA; New York, NY; Philadelphia, PA; Washington, DC; Atlanta, GA; Chicago, IL; Kansas City, MO; Fort Worth, TX; Houston, TX; Denver, CO; San Francisco, CA; Los Angeles, CA; and Seattle, WA.)

(Federal Government activities may obtain copies of Federal standardization documents, standards, and commercial item descriptions, and the Index of Federal Specifications, from established distribution points in their agencies.)

Military Standards:

- MIL-STD-105 - Sampling Procedures and Tables for Inspection
by Attributes
- MIL-STD-129 - Marking for Shipment and Storage
- MIL-STD-147 - Palletized Unit Loads

(Copies of Military specifications and standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting activity.)

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.

DRAWINGS

U.S. ARMY NATICK RESEARCH, DEVELOPMENT, AND ENGINEERING CENTER

- 2-5-65 - Cot Folding; Method of Folding for Shipment
- 2-5-72 - Cot, Folding; Assembly Complete

(Copies of drawings are available from the U.S. Army Natick Research, Development, and Engineering Center, ATIN: SATNC-UXT, Natick, MA 01760-5017.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on date of invitation for bids or request for proposal shall apply.

American Society for Testing and Materials (ASTM)

- B 633 - Electrodeposited Coatings of Zinc on Iron and Steel
- D 3950 - Strapping, Plastic (and Seals)
- D 3951 - Standard Practice for Commercial Packaging
- D 3953 - Strapping, Flat Steel and Seals

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.)

(Technical society and technical association specifications and standards are generally available for references from libraries. They are also distributed among technical groups and using Federal agencies.)

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 specification shall take precedence. Nothing in this specification, however, shall supersede 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. Materials shall conform to the requirements specified herein and the subsidiary documents applicable thereto. Materials not definitely specified shall be of the quality normally used by the manufacturer for the frame and cover, provided the end item complies with all provisions 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 Hardware, miscellaneous. Bolts, nuts and washers shall be steel, commercial quality, of the size and type shown on the drawings. Rivets shall be steel, commercial quality, semitubular or solid type, except the rivet used on the strap shall be brass of commercial quality, tubular, flathead, with brass cap. All steel miscellaneous hardware shall have a corrosion-resisting plating in accordance with manufacturer's commercial practice. The rivets shall be of sufficient length to provide a minimum of 1/8 inch for peening or rolling, as applicable. Blind rivets shall be aluminum, commercial type, 3/16-inch body, 5/8-inch head, break stem, large flange (see 6.6).

3.3 Construction. The construction of the cots shall conform in all respects to Drawing 2-5-72 and all subsidiary drawings pertaining thereto, and as specified herein. At the option of the contractor, covers shall be

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fabricated from either cotton duck or from nylon duck. The cots shall be capable of being assembled, disassembled and compactly folded as intended without causing damage to any component.

3.3.1 Stitches, seams and stitching. Stitching shall conform to stitch type 301 of FED-STD-751, with 8 to 10 stitches per inch.

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

3.3.1.2 Type 301 stitching. Ends of all stitching shall be backstitched or overstitched not less than 1 inch except where ends are turned under or caught in other seams and stitching. Thread tensions shall be maintained so that there will be no loose stitching resulting in loose bobbin or top thread or excessively tight stitching resulting in puckering of the materials sewn. The lock shall be imbedded in the materials sewed.

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

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

b. Thread breaks, or two or more consecutive skipped or run-off stitches noted during inspection of the item (in-process or end item) shall be repaired by overstitching. The stitching shall start a minimum of one inch in back of the defective area (1/2 inch on box-x stitching), and continue over the defective area and continue a minimum of one inch (1/2 inch on box-x stitching) 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. 1/

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

3.3.2 Setting of rivets.

3.3.2.1 Tubular rivets and caps. All rivets shall be securely and neatly set with a rivet cap and without causing damage to the webbing. Holes punched in the straps to receive blind rivets that attach the strap to the aluminum frame shall be smaller than the outside diameter of the rivet body so that the rivet must be forced through the hole in the strap.

3.3.2.2 Solid or tubular rivets without caps. All rivets shall be properly driven with heads flush against steel stampings. The ends of solid rivets shall be peened without burrs or sharp edges. The ends of tubular rivets shall be firmly clinched with even metal distribution.

3.3.3 Steel stampings. The steel stampings (L's, S's and T's) shall be securely riveted or bolted as shown on the applicable drawings and the flanges of the stampings shall be pressed down and fitted tightly against the adjacent parts.

3.3.4 Plug, end. End plugs shall be riveted, pinned or cemented into the bottom of the legs and both ends of the end rails to prevent removal. The adhesive, when used, shall be such, as recommended by the adhesive manufacturer for adherence of plastic to aluminum alloy.

3.4 Finish.

3.4.1 Aluminum alloy frame. Ends shall be cut clean and be free of sharp or rough edges. The rims of all holes shall be free of sharp or rough edges.

3.4.2 Plating. All steel stampings (L's, S's and T's) shall be zinc plated in accordance with type I, service condition 3 (SC3) of ASTM B 633.

3.5 Markings for identification.

3.5.1 Frame and cover. The identification marking shall be as specified on the applicable drawing.

3.6 Workmanship. Cloth components shall be clean and free of holes, cuts, tears, or cloth defects such as multiple floats or broken or missing yarns. Webbing and tapes shall contain no frayed or scalloped edges. 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 runoffs, twists, 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 1/4 inch or less. Blind rivets shall be securely and neatly set. Metal components shall be free of burrs, sharp edges and corroded areas, and shall not be broken, malformed, or dented. The finished product shall also conform to the quality of product established by this specification and the occurrence of defects shall not exceed the applicable acceptable quality levels.

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.

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Except as otherwise specified in the contract or purchase order, the contractor may use his 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.

4.2 Classification for 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. Any nonconformance shall be cause for rejection of the first article.

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 subjected in accordance with all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

4.4.2 In-process inspection. Inspection shall be made to determine that the following are as specified:

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- a. Holes punched to receive blind rivets (see 3.3.2.1).
- b. Setting of solid or tubular rivets (see 3.3.2.2).
- c. Setting of end plugs in bottom of legs and end rails of cots (see 3.3.4).

Whenever nonconformance is noted, correction shall be made to the items affected and the process. Parts which cannot be corrected shall be removed from production.

4.4.3 End item visual examination. The end items shall be examined for the defects listed in table I. The lot size shall be expressed in units of cots. The sample unit shall be one cot. The inspection level shall be II and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be 6.5 for major defects and 15 for total (major and minor combined) defects.

TABLE I. End item visual defects

Examine	Defect	Classification	
		Major	Minor
Fabric	Any hole, except drill holes, cut, or tear	101	
	Broken or missing yarn, or open place clearly visible at normal inspection distance (approximately 3 feet)	102	
	Shade bar		201
Tape and webbings	Not firmly and tightly woven; edges frayed or scalloped	103	
	Multiple floats		202
	Any cut, hole, tear, or smash	104	
	Abrasion mark, slub, broken end, or pick		203
	Ends not fused as specified (where required)		204
Hardware (Bolts, nuts, washers, and rivets)	Broken	105	
	Malformed:		
	- fails to perform intended function	106	
	- but will perform intended function		205
	Any burr or sharp edge	107	
	Missing, damaged:		
	- one		206
	- two or more	108	
	Not type or size specified		207

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

Examine	Defect	Classification	
		Major	Minor
Hardware (Bolts, nuts, washers, and rivets) (cont'd)	Any evidence of rust or corrosion	109	
	Bolt or nut loose, washer missing		208
	Rivet not securely set or neatly headed	110	
	Rivet length insufficient and peening or rolling as applicable	111	
End clips	Improperly clinched, i.e., webbing not flat at point of entrance into clips	112	
	Clinched excessively tight, cutting webbing or loosely clinched, i.e., clip becomes disengaged from webbing	113	
Steel stampings (L's, S's & T's)	Not riveted or bolted as specified on applicable drawings	114	
	Not fitted tightly against adjacent parts		209
	Not finished as specified	115	
	Any evidence of corrosion, exposed bare metal, or bare spots	116	
Seams and stitching	Open seam: - for more than 1/4 inch but not more than 1/2 inch		210
	- for more than 1/2 inch	117	
NOTE: A seam shall be classified as "open" when one or more stitches joining a seam are broken or when one or more skipped or runoff stitches occur. On double stitched seams, a seam shall be classified as "open" when either one or both sides of a seam are open.			
	Raw edge: - more than 3/4 inch but not more than 1-1/2 inches		211
	- more than 1-1/2 inches	118	
	Thread break overstitched less than 1 inch		212

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

Examine	Defect	Classification	
		Major	Minor
Seams and stitching (cont'd)	Needle chew resulting in cut or tear: longer than 1/8 inch in length, or larger than 1/8 inch in diameter	119	
	One or more required rows of stitching omitted (except on boxstitching)	120	
Boxstitching	Incomplete:		213
	- one row of stitching omitted - two or more rows of stitching omitted	121	
Seam type	Wrong seam type	122	
Stitch type	Wrong stitch type	123	
Stitch tension	Loose, resulting in an exposed bobbin thread for more than 2 inches		214
	Tight, as evidenced by puckering of fabric for more than 2 inches		215
Stitches per inch	Less than minimum specified:		
	- one stitch		216
	- two or more stitches	124	
	One or more stitches in excess of maximum specified		217
	NOTE: Variation in the number of stitches per inch at corners shall be classified as follows:		
	a. Within the minor defect classification - no defect		
	b. Within the major defect classification - minor defect		
Stitching margin; stitching gage	Not as specified		218
Stitching ends	Overstitched less than 1 inch (except when ends are held down by other stitching, turned under in a hem or		

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

Examine	Defect	Classification	
		Major	Minor
Stitching ends (cont'd)	where stitching is performed automatically)		219
	Secured with less than three tying, overlapping or backstitches when automatic stitching is performed		220
Hems	Twisted or pleated		221
	Constructed with partial turnunder when double turnunder is required		222
Securing patch (when required)	Missing	125	
Binding	Loosely applied but not exposing raw edge of material		223
	Loosely applied exposing raw edge of material	126	
Frame	Bent or deformed	127	
	Dented	128	
	Any sharp edge, burr, or sliver	129	
End rail	Hole for dowel plug missing, not as specified	130	
	Hole for spacer plug missing or not drilled as specified	131	
	Stay missing	132	
	Stay not firmly fixed with blind rivet	133	
Leg, long	Strap, buckle or end clip missing	134	
	Strap not securely fastened to leg	135	
End plug	Not securely fastened in place		224
	One missing		225
	More than one missing	136	
Spacer plug	Missing	137	
Dowel plug	Missing	138	

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

Examine	Defect	Classification	
		Major	Minor
Assembly	Cot cannot be fully opened	139	
	Cot cannot be easily closed or compactly folded	140	
	Any component not material specified	141	
	Any component part or operation omitted (unless otherwise classified herein)	142	
Marking	Omitted, incorrect, illegible, or misplaced		226
Cleanness	Grease or oil stains, thread ends not trimmed to 1/4 inch or less		227

4.4.4 End item dimensional examination. The end items shall be examined for conformance to the dimensions specified on the drawings. Only those dimensions that can be evaluated without damaging or disassembling the end items shall be examined. Any dimension not within the specified tolerance shall be classified as a defect. The lot size shall be expressed in units of cots. The sample unit shall be one cot. The inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 4.0.

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
Workmanship	Inadequate application of components, such as: incomplete sealing or closure of flap, improper taping, loose strapping, or inadequate stapling Bulged or distorted container
Content	Number per container is more or less than required

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4.4.6 Palletization examination. The fully packaged and palletized end items shall be examined for the defects listed below. The lot size shall be expressed in units of palletized unit loads. The sample unit shall be one palletized unit load, fully packaged. The inspection level shall be S-1 and the AQL, expressed in terms of defects per hundred units, shall be 6.5.

<u>Examine</u>	<u>Defect</u>
Finished dimensions	Length, width, or height exceeds specified maximum requirement
Palletization	Pallet pattern not as specified Load not bonded as specified
Weight	Exceeds maximum load limits
Marking	Omitted; incorrect; illegible; of improper size, location, sequence, or method of application

5. PACKAGING

5.1 Preservation. Preservation shall be level A.

5.1.1 Level A preservation. Each cot shall be folded as shown in steps 1 through 9 of drawing 2-5-65.

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

5.2.1 Level A packing. Two cots, preserved as specified, shall be nested as shown in step 10 on Drawing 2-5-65. The two cots shall be wrapped with a double thickness of kraft paper, basis weight 60 pounds, conforming to any style of A-A-203. The wrapped cots shall be strapped with two straps. The straps shall be steel 1/2 inch wide by .015 inch thick conforming to type I of ASTM D 3953, or plastic 1/2 inch wide by .024 inch thick conforming to type II or III of ASTM D 3950. Each strap shall be placed approximately 8 inches from each end of the bundle.

5.2.2 Commercial packing. Cots, preserved as specified in 5.1, shall be packed in accordance with ASTM D 3951.

5.3 Palletization. Cots, packed as specified, shall be palletized on a 4-way entry pallet in accordance with load type II of MIL-STD-147. Each prepared load shall be bonded with straps in accordance with bonding means C and D or film bonding means F or G.

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5.4 Marking. Marking shall be in accordance with 5.4.1 or 5.4.2 as specified (see 6.2).

5.4.1 Civil agencies. Two tags shall be wired to each bundle (one to each steel or plastic strap) with not less than 0.036 inch diameter annealed wire. The tags and marking shall be in accordance with FED-STD-123 or ASTM D 3951, as applicable.

5.4.2 Military requirements. Two tags shall be wired to each bundle (one to each steel or plastic strap) with not less than 0.036 inch diameter annealed wire. The tags and markings shall be in accordance with MIL-STD-129 or ASTM D 3951, as applicable.

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 cot covered by this specification is for use in field camps and other temporary quarters.

6.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number, and date of this specification.
- b. When a first article is required (see 3.1, 4.3 and 6.3).
- c. Level of packing required (see 5.2).
- d. When palletization is required (see 5.3).
- e. Type of marking required (see 5.4).

6.3 First article. When a first article is required, it shall be inspected and approved under the appropriate provisions of Federal Acquisition Regulation (FAR) 52.209-4. The first article should be a preproduction sample. The contracting officer should specify the appropriate type of first article and the number of 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.

6.4 Insect net pole supports. Insect netting and wood pole supports conforming to MIL-I-82265 and MIL-P-17662, respectively, may be used on the cot covered by this specification.

6.5 Standard pack (Civil agencies). The standard pack for this commodity shall be as specified in 5.2.1. The standard pack requirements are intended for use in procurements of stores' stock replenishments. Procuring officers

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should use the standard pack requirements when it is known that the material will be shipped from a supplier to a domestic warehouse, supply depot, or immediate storage point for temporary storage, subsequent issue or shipment to eventual user.

6.6 Commercial products. The United Shoe Machinery Corporation's "Pop" rivet AD66ABSLF has been found satisfactory to meet the requirements of 3.2.1.

6.7 Subject term (key word) listing.

Collapsible bed
Collapsible frame
Field bed
Folding frame

MILITARY INTERESTS:

Custodians

Army - GL
Navy - YD
Air Force - 99

Review Activities

Army - MD
Navy - MC
Air Force - 84
DLA - GS

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS
DOJ - FPI

PREPARING ACTIVITY:

Army - GL

(Project 7105-0265)

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7.
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

I RECOMMEND A CHANGE:		1. DOCUMENT NUMBER AA-C-571H	2. DOCUMENT DATE (YYMMDD) 1993 September 20
3. DOCUMENT TITLE COT, FOLDING			
4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)			
5. REASON FOR RECOMMENDATION			
6. SUBMITTER			
a. NAME (Last, First, Middle Initial)		b. ORGANIZATION	
c. ADDRESS (Include Zip Code)		d. TELEPHONE (Include Area Code) (1) Commercial (2) AUTOVON (If applicable)	e. DATE SUBMITTED (YYMMDD)
7. PREPARING ACTIVITY			
a. NAME U.S. Army Natick RD&E Center		b. TELEPHONE (Include Area Code) (1) Commercial 508-651-4531 (2) AUTOVON/DSN 256-4531	
c. ADDRESS (Include Zip Code) Commander, U.S. Army Natick RD&E Center ATTN: SATNC-UXT Natick, MA 01760-5017		IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT: Defense Quality and Standardization Office 5203 Leesburg Pike, Suite 1403, Falls Church, VA 22041-3466 Telephone (703) 756-2340 AUTOVON 289-2340	