

MIL-M-18351F(SH)  
 22 April 1981  
 SUPERSEDING  
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 4 January 1972  
 (See 6.5)

## MILITARY SPECIFICATION

### MATTRESSES AND MATTRESS TICKS, BERTH, SYNTHETIC CELLULAR RUBBER, NAVAL SHIPBOARD

This specification is approved for use by the Naval Sea Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

#### 1. SCOPE

1.1 Scope. This specification covers low smoke polychloroprene foam rubber berth mattresses for shipboard use, with removable treated cotton tick. Replacement ticks may be acquired separately (see 3.2.5).

1.2 Classification. Mattresses shall be of the following types and sizes, as specified (see table I and 6.2.1):

#### Surface slips

- Type I - Crew
  - Size 1
  - Size 2
  - Size 3
- Type II - CPO
  - Size 1
  - Size 2
- Type III - Officer
  - Size 1 - (also for hospital berths)
  - Size 2
  - Size 3
  - Size 4

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Naval Sea Systems Command, SEA 3.12, Department of the Navy, Washington, DC 20362 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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Submarines

Type IV - Crew  
Size 1  
Size 2  
Type V - CPO and officers

2. APPLICABLE DOCUMENTS

2.1 Issues of documents. 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.

SPECIFICATIONS

FEDERAL

V-T-276 - Thread, Cotton.  
UU-P-31 - Paper; General Specifications and Methods of Testing.  
CCC-C-436 - Cloth, Ticking Twill, Cotton.  
PPP-B-636 - Box, Snapping, Fiberboard.

MILITARY

MIL-F-10884 - Fasteners, Snap.  
MIL-R-20092 - Rubber Sheets and Assembled and Molding Snaps, Cellular, Synthetic Open Cell (Foamed Latex).

STANDARDS

FEDERAL

FED-STD-191 - Textile Test Methods  
FED-STD-751 - Stitches, Seams, and Stitchings

MILITARY

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

(Copies of specifications, standards, drawings, and publications required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

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

NATIONAL MOTOR FREIGHT TRAFFIC ASSOCIATION, INC. AGENT  
National Motor Freight Classification

(Application for copies should be addressed to the National Motor Freight Traffic Association, Inc., ATA TRAFFIC Dept., 1616 "P" Street, N.W., Washington, DC 20036.)

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## UNIFORM CLASSIFICATION COMMITTEE AGENT

## Uniform Freight Classification Ratings, Rules and Regulations

(Application for copies should be addressed to the Uniform Classification Committee Agent, Tariff Publication Officer, Room 1106, 222 South Riverside Plaza, Chicago, IL 60606.)

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

## 3. REQUIREMENTS

3.1 First article. When specified (see 6.2.1), the contractor shall furnish unit(s) for first article inspection and approval (see 4.2 and 6.3).

3.2 Construction3.2.1 Mattress inserts.

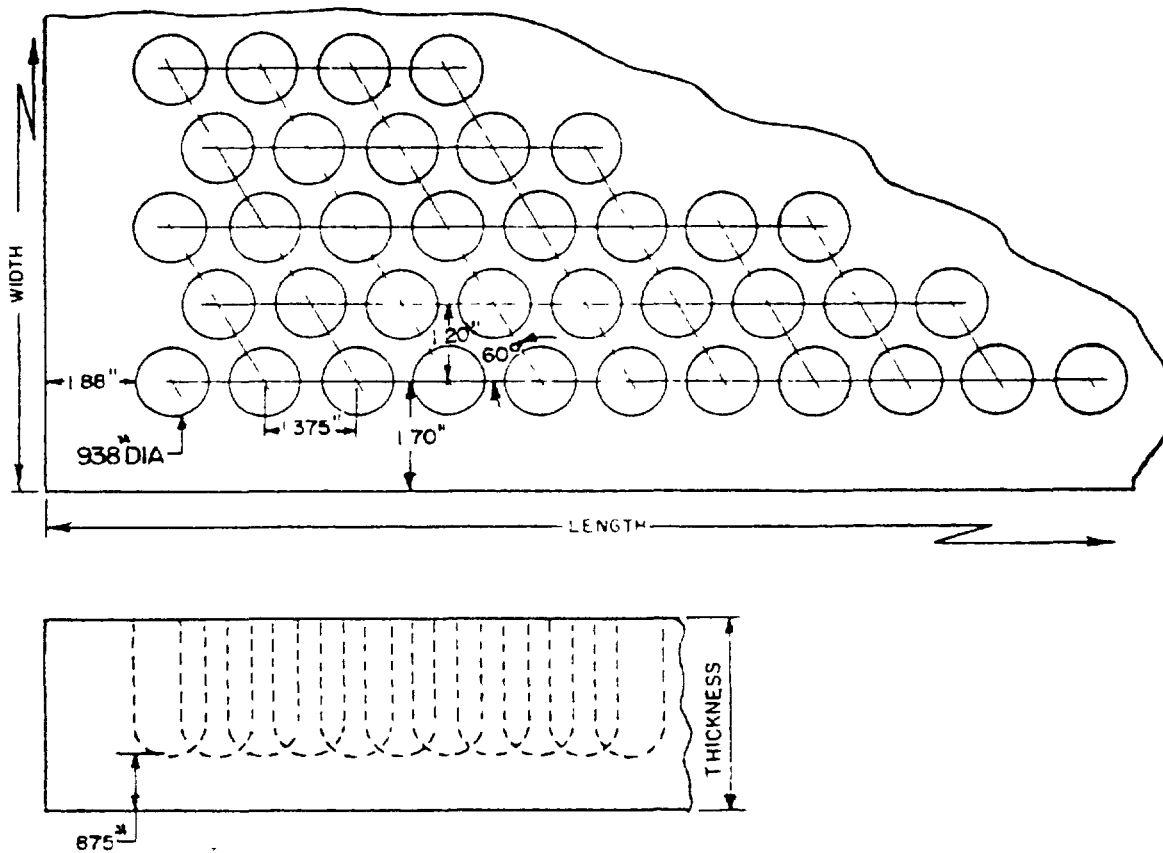
3.2.1.1 Mattress inserts shall be constructed of synthetic cellular rubber conforming to type I or type II, class 5, medium firm condition of MIL-R-20092. Mattress inserts may be molded in one piece, or may be assembled by laminating to achieve thickness, and by butting to achieve width or length. However, not more than four butt joints per mattress shall be permitted, two along the width, and two along the length. When type II inserts are used, the test requirements and test methods of type I shall apply.

3.2.1.2 All uncured surfaces shall have a flat surface. An acceptable coring arrangement is shown on figure 1. Alternate methods of coring which will produce the same compression ratio and not exceed the maximum weight specified in table I will be acceptable. Where laminated assembly is employed to achieve thickness of type I material, mattress inserts shall be assembled with the core surfaces cemented together.

3.2.1.3 All 12 edges of the mattress shall be covered with a fire-resistant, pressure-sensitive adhesive tape, 2 inches wide, in accordance with 3.2.3. The tape shall be centered on each edge.

3.2.1.4 The mattress insert shall be sized by the manufacturer so that the mattress tick will fit as required by 3.2.5, and the complete unit (mattress insert and tick) will comply with the sizes specified in table I.

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NOTE This figure shows an acceptable coring arrangement (see 3.2.1)

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FIGURE 1. Core arrangement

3.2.2 Allowable manufacturing practices. Defects in mattress inserts which occur incident to standard manufacturing practices and assembly will be allowed if they are corrected as indicated, and the resulting product conforms to this specification.

3.2.2.1 Molded mattress inserts. The following repairs will be acceptable for molded mattress inserts

- (a) Surface tears and tears extending between core holes where no material is missing shall be cemented. The total accumulative length of such cemented tears shall not exceed 50 lineal inches per mattress. For type II material, tears shall not exceed 50 inches on either side of the mattress.

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- (b) Not more than six core post replacements (areas between core holes) per mattress.
- (c) Set-in repairs:
  - 3 - each set-in of 48 square inches (max).
  - 2 - each set-in of 72 square inches (max).
  - 1 - each set-in of 144 square inches (max).
- (d) Edge repairs: Edge repairs of 64 square inches or less which do not extend more than 8 inches from the edge and not more than 4 such repairs per mattress. An edge is described as being the full thickness of the mattress and not just the angular corner.

3.2.2.1.1 The total accumulative area of the repairs listed in 3.2.2.1(c) and (d) shall not exceed 10 percent of the surface area of each side (length by width) of the mattress.

3.2.2.2 Laminated mattress inserts. The following repairs will be acceptable for laminated mattress inserts: All repairs to laminated mattress inserts shall be accomplished prior to assembly of the laminae into the finished product.

- (a) Set-in repairs to individual lamina
  - 3 - each set-in of 48 square inches (max) per mattress.
  - 2 - each set-in of 72 square inches (max) per mattress.
  - 1 - each set-in of 144 square inches (max) per mattress.
- (b) Tears where no material is missing shall be cemented. The total accumulative length of such cemented tears shall not exceed 50 lineal inches per mattress, including tears between core holes in type I material.
- (c) Where scrim reinforcing is damaged or removed, such damaged or removed material shall be repaired/or replaced with material identical to the base material. Edges of the patching material shall be cemented to the base material with an overlap so that the cemented joint will demonstrate adhesion between the scrim surfaces greater than that between the scrim and the cellular rubber.

### 3.2.3 Tape.

3.2.3.1 Fire performance. The tape shall not exhibit an average afterflame of more than 6.0 seconds nor an average char length in excess of 2-1/2 inches. No one specimen shall have an afterflame greater than 10 seconds, when tested in accordance with 4.4.1.4.

3.2.3.2 Adhesive strength. Adhesive strength of the tape shall be not less than 10 ounces per inch of width, when tested in accordance with method 100 of UU-P-31.

3.2.3.3 Tearing strength. Tape shall have a tearing strength of not less than 12 ounces when tested in accordance with method 5134 of FED-STD-191. Dimensions of the specimens shall be 2 inches by 8 inches.

3.2.3.4 Breaking strength. Tape shall have a breaking strength of not less than 28 pounds per inch in the lengthwise direction, when tested in accordance with method 5102 of FED-STD-191.

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3.2.3.5 Inthread count. Tape shall have a thread count of 30 threads per inch in both the warp and filling directions, when tested in accordance with method 5050 of FED-STD-191.

3.2.4 Cement bond. Cement used to adhere the various sections of cellular rubber or reinforcing scrim shall form a bond stronger than the adjoining rubber, when separated by hand. Also, cemented seams shall be soft and similar to the rest of the rubber, so that they cannot be felt with the flat of the hand.

3.2.5 Mattress tick.

3.2.5.1 Tick for the mattress inserts shall be fabricated of treated cotton in accordance with type II, class 2, of CCC-C-436. Tick shall be of box construction fabricated from five separate sections: top; bottom; two sides and one end. The other end shall be left open for the insertion and removal of mattresses. The open end shall have two flaps, one attached to the top section and one to the bottom section of the tick. Each of the two flaps shall be constructed with a piece of tick folded in half with faces together, the ends stitched in accordance with class SSa-1 of FED-STD-751, and turned inside out. The outer edges shall be stitched with a 1/8 inch margin. The flaps shall be attached to the top and bottom sections with an LSq-2 class seam in accordance with FED-STD-751.

3.2.5.2 End flaps shall be securable by at least four snap fasteners conforming to style 3, finish 1, of MIL-F-10884. The outer snaps shall be 1 inch  $\pm$  1/8 inch from the corners. All snaps are to be equally spaced. When the flaps are closed, one flap shall overlap the other by not less than 1 inch.

3.2.5.3 Four handles shall be constructed from the same basic tick and attached to the side sections at 39-inch centers and shall be equidistant from the corners of the removable tick. Handles shall be approximately 1-1/2 inches wide when formed and constructed according to stitch class EFp-2 of FED-STD-751 with two lines of stitches, one on each of the folded edges, approximately 1/8 inch from the edges of the handles. Stitching on the handles may be either 301 or 401 type of FED-STD-751, 8 to 10 stitches per inch. The cut length of the handles shall be 1/2 inch in excess of the cut width of the side section.

3.2.5.4 The two ends of the side section shall be hemmed with a 1 inch  $\pm$  1/8 inch hem class Efb-1 stitch type 301 of FED-STD-751 and the rolled edge of the hem shall be on the inside of the mattress tick when completed.

3.2.5.5 The side sections and handles shall be sewn to the two sides and ends of the top and bottom sections with flaps, using seam class SSe-2 and stitch type 301, of FED-STD-751. All stitching, except that on handles, shall be stitch type 301, minimum 10 stitches per inch, and all ends of stitching shall be securely backstitched not less than 1/2 inch when not caught in another seam or row stitching. Seam stitch and stitching types shall be in accordance with FED-STD-751.

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3.2.5.6 Mattress ticks when purchased as an end item (see 6.2.1), shall be as specified in 3.2.5.1, except that the requirement "snugly fitted" will not be applicable. In lieu thereof, the following tolerances shall apply:

Length - minus 0 inch, plus 1/2 inch.

Width - minus 0 inch, plus 1/4 inch.

Depth - minus 0 inch, plus 1/8 inch.

3.2.6 Inseam (machine stitching) Sewing thread shall be cotton, and shall conform to type IA1, 3, 4, or 6 cord, ticket No. 30 of V-I-276.

3.3 Weight and dimensions. Finished mattress, complete with tick, shall be of the weight and dimensions specified in table I.

TABLE I. Weights and dimensions.

Mattresses Types and sizes				Mattress inserts (including tick)	
Surface snips	Width (± 1/4) inches	Length (± 1/2) inches	Thick- ness, inches	Total weight, pounds (max)	
				Type I (cored)	Type II (uncored)
I - Crew					
Size 1	26	72 - 1/2	3 } + 3/16	27.0	34.0
Size 2	26	76	3 } - 1/8	28.5	35.5
Size 3	26	80	3 }	30.0	37.0
II - CPO					
Size 1	28	76	4 } + 3/16	38.5	50.0
Size 2	28	80	4 } - 1/8	40.5	53.0
III - Officers					
Size 1 (also for hos- pital berths)	28	76	6 } + 1/4 - 3/16	59.5	70.3
Size 2	34 - 3/4	76	6 }	73.5	87.5
Size 3	28	80	6 }	62.5	79.0
Size 4	34 - 3/4	80	6 }	77.0	97.5
<u>Submarines</u>					
IV - Crew					
Size 1	24	72	4 - 1/2	35.5	42.0
Size 2	24	76	4 - 1/2 } + 3/16	37.0	45.0
V - CPO and officer	26	76	4 - 1/2 } - 1/8	40.0	52.0

### 3.4 Labels.

3.4.1 Each mattress or tick, when acquired separately, shall have a label attached to conform to the legal requirements of the state in which the mattress or tick is manufactured.

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3.4.2 The mattress shall also have a cloth label showing the item name, specification number, type, size, manufacturer's name, contract number, and lot number. The label shall be secured within the stitching at one end of the tick. This information may be placed on one label, if permitted by the state concerned, and be attached as specified. The rubber insert shall also be marked with the item name and the lot number, in addition to other specified markings. As an item name description, only "Neoprene Low-Smoke Foam Rubber" shall be used.

3.4.3 The mattress tick shall have a separate cloth label stating, "Fire-retardant treated ticking. Do not launder or dry clean. Replace only".

3.5 Odor. The mattress tick shall be aired and the synthetic rubber insert shall be cured to prevent any objectionable odor. Certification to the effect that this has been accomplished shall be furnished by the contractor (see 4.6 and 6.2.2).

3.6 Workmanship. Workmanship shall meet all applicable requirements of this specification. The finished mattresses and ticks shall be free from defects affecting appearance or which may impair serviceability. The mattress and ticks shall be examined for defects as specified in 4.4.

## 4 QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, 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 the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.2 First article inspection. First article inspection shall consist of the following:

- (a) End item (see 4.3 and 4.4)
- (b) Components (see 4.5 and table III).

The first article is defined as being the first production line item.

4.2 First article inspection report. The contractor shall furnish a first article inspection report in accordance with the data ordering document included in the contract (see 6.2.2).

4.3 Sampling

4.3.1 Lot. A lot shall consist of all complete mattresses of each type and size offered for delivery at one time.

4.3.2 Sampling for visual, dimensional, and weight examination. Random samples of complete mattresses (including tick), type and size as required (see 6.2.1), shall be selected from each lot offered for examination in accordance with MIL-STD-105. For visual examination, inspection



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Level II and an Acceptable Quality Level (AQL) of 2.5 percent defective for major defects and 6.5 for minor defects shall apply. For measurement of mattress inserts and the weighing and measurement of the end item, the inspection level shall be S-3 and the AQL 4.0 percent defective for each examination. Thickness of samples submitted for examination shall be the same thickness as the mattresses being acquired. Each item in the sample shall be inspected for the critical characteristics identified in table II. In the event that any items of the sample do not meet the specified requirements, the entire lot shall be rejected.

4.4 Visual, dimensional, and weight examination Each of the sample finished mattresses selected in accordance with 4.3.2 shall be carefully examined to determine conformance with the requirements of this specification. Measurements of weight and dimensions shall be made as specified in 4.4.1. The tick shall then be removed from each sample mattress and the synthetic rubber mattress inspected. When acceptable to the inspector and expedient for the manufacturer, an intermediate examination of the completed foam rubber inserts would preclude the removal of the mattress tick for the above examination. This intermediate examination does not prevent the inspector from requesting the ticks to be removed during final examination when desired.

4.4.1 Methods of measurements.

4.4.1.1 Weight. Weight shall be determined under prevailing atmospheric conditions. In the settlement of disputes, the weight of the mattress and tick shall be determined after having been brought to equilibrium with an atmosphere having a relative humidity of  $65 \pm 2$  percent and a temperature of  $75^{\circ}\text{F} \pm 5^{\circ}\text{F}$ . The material shall be considered to be in equilibrium, when successive weighings made at intervals of 1 hour are not greater than 0.25 percent.

4.4.1.2 Thickness. Thickness shall be taken as the average of measurement at each of the four corners of a finished mattress, complete with tick.

4.4.1.3 Length and width. Length and width shall be taken as the average of three measurements in each direction of a finished mattress complete with tick.

4.4.1.4 Flame/glow propagation and char length. Flame/glow propagation and char length shall be determined by method 5903 of FED-STD-191, except that the metal specimen holder shall have dimensions to accommodate a 2-inch by 12-inch specimen so as to leave a center strip 1-1/2 inches wide exposed to the flame. The specimen shall be prepared by bonding the adhesive surface of one piece of tape to the adhesive surface of a similar piece of tape, with both pieces having identical dimensions of 2 inches by 12 inches. Bonding shall be effected by applying a uniform pressure to the entire specimen upon a level surface.

4.4.2 Classification of defects. Classification of defects shall be conducted as specified in table II (see 4.3.2 for inspection levels and AQL's).

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TABLE II. Classification of defects in accordance with MIL-STD-105.

Categories	Defects
Critical:	
1	Material not as specified.
2	Butt joints exceeding permitted number (see 3.2.1).
	MATTRESS INSERTS (Cellular rubber)
Major:	
101	Any unrepaired, damaged reinforcing scrim.
102	Has objectionable odor.
103	<p>Voids uncored surfaces: (A void shall be considered a small crater on an otherwise smooth surface of the uncored surface of the mattress. It should not be confused with the minute pin holes of a sunburst area. These pin holes shall not exceed 1/16 inch in diameter with no limit on their depth.)</p> <p>a. Any void or surface tear (material missing) 1/4 inch through 3/8 inch deep and more than 1/2 square inch area.</p> <p>b. Any void over 3/8 inch deep.</p> <p>c. Any void or an edge or corner over 3 inches in length or projecting more than 3/8 inch into a plane</p>
104	<p>Skin, loose, greater than 2 inches in diameter.</p> <p>More than two "loose skin" areas, regardless of size, per mattress.</p>
106	Low core area. Any, exceeding 1/4 inch in depth.
107	Shrinkage mark over .8 inch in depth.
108	Tape omitted
109	Any of the 12 taped edges showing lack of adhesion completely across the tape for a distance exceeding 2 inches; that is, extending from one side edge of the tape to the opposite side edge of the tape.
110	Repaired surface not level <sup>1</sup> or not neatly accomplished.
111	Any alteration not level <sup>1</sup> or neatly accomplished.
112	Material used in alteration not same as basic latex material
113	<p>Uncemented tears (a tear shall be considered as such when it extends through the entire wall separating core holes</p> <p>a. More than two 1/8-inch through 1/4 inch in depth in any 2 foot square area</p> <p>b. More than one over 1/4 inch in depth but not exceeding 1/2 inch in depth, in any 1-foot square area.</p> <p>c. More than three total per mattress, extending more than 1/2 inch in depth.</p> <p>d. Uncemented surface tear (sides, ends, and uncored surfaces) three or more inches in length.</p>

See footnote at end of table.

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TABLE II. Classification of defects in accordance with MIL-STD-105. -  
Continued

Categories	Defects
Major - Continued	MATTRESS INSEPTS (Cellular rubber) - Continued
114	Repaired area not similar to rest of insert.
115	Cemented bond of cellular rubber or reinforcing scrim not stronger than adjacent cellular rubber.
116	Surface area appears scorched or damaged.
117	Hard spot or large lump which can be felt through tick.
118	Evidence of separation, delamination, or internal splitting.
119	Tough, dense skin, or greater density surface layer than adjacent areas
120	Skin wrinkled and distorted
	TICK
121	Broken or missing yarns: a. Three or more contiguous, regardless of length b. Two contiguous, 2 inches or more in length
122	Grease, hard, permanently embedded
123	Hole, cut, or tear.
124	Smash.
125	Tint or open place
126	Floats or skips - multiple 1/2 inch in combined warp and filling directions
127	Light place or fine filling bar, clearly noticeable
128	Less than four snap fasteners used to effect closure.
129	Snap fastener omitted, misplaced, or damaged, and may affect serviceability.
130	Any fastener not functioning properly, that is, fails to effect a secure closure or exceptionally difficult to open.
131	Tick other than type specified.
132	Stitch type other than 301.
133	Less than eight stitches per inch.
134	Any open seam on both rows of stitching
135	Raw edge over 1 inch in length.
136	Stitching omitted where required
137	Any mend or patch
	MEASUREMENTS (End item)
138	Dimensions, width, length, or thickness exceeding tolerances specified in 3.3.
139	Weight exceeding maximum weight specified in 3.3.
140	Thickness of any lamina less than one inch.

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TABLE II. Classification of defects in accordance with MIL-STD-105. -  
Continued

Categories	Defects
	MATTRESS INSERTS (Cellular rubber)
Minor	
201	Not flat surface $\frac{1}{16}$ on any uncured surface. (This defect will not be scored when an insert repair is made by replacing a defective area with good stock or when a seam results from the lamination of a section to achieve width or length or a matching grille.)
202	Voids, uncured surfaces. (See category 103 for definition of "void".) <ul style="list-style-type: none"> <li>a. Any void or surface tear (material missing) <math>\frac{1}{4}</math> inch through <math>\frac{3}{8}</math> inch deep from <math>\frac{1}{4}</math> square inch through <math>\frac{1}{2}</math> square inch in area.</li> <li>b. Any void or an edge or corner over 1-1/2 inches in length but less than 3 inches in length or projecting <math>\frac{1}{4}</math> inch through <math>\frac{3}{8}</math> inch into a plane.</li> </ul>
203	Skin, loose, greater than $\frac{1}{2}$ inch through 2 inches in diameter
204	Not having a flat surface $\frac{1}{16}$
205	Low core area <ul style="list-style-type: none"> <li>a. Any, less than <math>\frac{1}{4}</math> inch in depth and exceeding 15 square inches in area.</li> <li>b. Total accumulative area per mattress exceeds 50 square inches</li> </ul>
206	Shrinkage mark $\frac{1}{16}$ inch through $\frac{1}{8}$ inch in depth.
207	Any of the 12 taped edges showing lack of adhesion completely across the tape for a distance of 1 inch through 2 inches, that is extending from one side edge of the tape to the opposite side edge of the tape or 12 inches along one side
208	Uncemented tears (see category 103 for definition of "tear") <ul style="list-style-type: none"> <li>a. Two, <math>\frac{1}{8}</math> through <math>\frac{1}{4}</math> inch in depth, in any 2-foot square area</li> <li>b. One, over <math>\frac{1}{4}</math> inch in depth but not exceeding <math>\frac{1}{2}</math> inch in depth, in any 1-foot square area.</li> <li>c. Three total per mattress, up to <math>\frac{1}{4}</math> inch in depth</li> <li>d. Uncemented surface tears (see category 103 d for definition of tears), less than 3 inches in length</li> </ul>

See footnote at end of table.

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TABLE II. Classification of defects in accordance with MIL-STD-105. -  
Continued

Categories	Defects
	MATTRESS INSERTS (Cellular rubber) - Continued
Minor: - Continued	
209	Insert repairs: a. More than three per mattress, each exceeding 48 square surface inches. b. More than two per mattress, each exceeding 72 square surface inches. c. Any, exceeding 144 square surface inches. d. Area grand total (length by width of all repairs exceeding 10 percent of total surface area of each side of the mattress).
210	Inserted edge repairs: a. More than two on any side or end. b. More than four total per mattress. c. Any, exceeding 64 square surface inches. d. Any, extending more than 8 inches in towards the center, when measured from a point on one edge to its corresponding point on the opposite edge.
	MEASUREMENTS (Mattress inserts)
211	Thickness of wall separating core holes, less than approved.
212	Thickness of side shoulder, $\frac{2}{3}$ less than approved
213	Thickness of end shoulder, $\frac{2}{3}$ less than approved
	TICK
214	Abrasion mark clearly noticeable.
215	Broken or missing yarns - single 2 inches or more missing, or two contiguous - 2 inches or more in length a. Tick, mattress, overlapping flaps - less than 1 inch.
216	Slut, slough off, or coarse yarn more than $\frac{1}{8}$ inch thick
217	Floats or skips - multiple less than $1\frac{1}{2}$ inch in combined warp and filling directions, or single $\frac{1}{2}$ inch or more in length.
218	Spot, stain, or streak clearly noticeable.
219	Trash, any noticeable accumulation
220	Snap fasteners misplaced - affecting appearance or serviceability, but only marginally.
221	Fastener not type or size specified or not as on approved sample.
222	Tick loose or puckered to an extent adversely affecting appearance.

See footnotes at end of table.

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TABLE II. Classification of defects in accordance with MIL-STD-105. -  
Continued

Categories	Defects
	TICK - Continued
Minor - Continued	
223	Any top, bottom, side, or end section of cover not one piece of ticking.
224	Furrow, lump, or bulge affecting appearance.
225	Seam type used in attaching the borders to the top and bottom sections other than type SSe-2.
226	Less than 10, but not less than eight stitches per inch.
227	Any open seam on one row of stitching.
228	Seam pleated or badly twisted.
229	Seam in wrong location.
230	Seam uneven affecting appearance.
231	Needle chew.
232	More than one broken stitch not resulting in an open seam.
233	More than two skipped stitches.
234	Raw edge up to and including 1 inch in length
235	More than two thread ends not trimmed off.
236	Loose tension resulting in loose seam.
237	Tight tension (stitches break when normal strain is applied to the seam or stitching).
238	Not unbleached cotton thread.
239	Legal and identification labels missing, incorrect, text incomplete, or illegible.
240	Handles not as specified (see 3.2 5.3).

1/ The surface shall be considered not flat or not level when a minimum one yard flat ruler, placed in any direction over the area, shows a separation in excess of 1/2 inch between the bottom of the ruler and the surface of the mattress insert.

2/ The shoulder of a foam-unit is that portion extending from the outside edge to the first row of major core holes.

#### 4.5 First article testing and inspection.

4.5.1 Testing of components In addition to the quality assurance provisions of the subsidiary specifications and drawings, inspection shall be performed on components and material for the characteristics specified in table III.

4.5.1.1 In-process inspection. Inspection shall be made at any point or during any phase of the manufacturing process to determine whether operations or assemblies are accomplished as specified. The Government reserves the right to exclude from consideration for acceptance any material for which in-process inspection was indicated nonconformance.

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4.5.2 Intermediate inspection completed foam rubber inserts shall be performed (see 4.4)

4.5.2.1 Visual and dimensional examination of the intermediate examination of the product lot size shall be expressed in units of completely fabricated synthetic rubber inserts. The inspection level shall be II and the AQL shall be 1.5 percent defective for major and 4.0 percent defective for total defects. Defects found during the examinations shall be classified in accordance with table II. The sample unit for these examinations shall be one completely fabricated synthetic rubber insert prior to insertion into the tick.

TABLE III Component testing

Component and lot expression in terms of	Characteristic	Requirement paragraphs	Test method	Requirement applicable to sample unit	Determinations per sample unit	Results reported as	Sample unit	Inspection level	AQL
Treated tick (1 ft)	Air permeability		Method 5450, Fed-Std-101	X	5	Average of 5 determinations to nearest 0.1 c.f.t. per minute per sq ft	1/2 yard full width	S-1	6.5
Foam rubber (1 unit)	Apparent density	3.2	MIL-R-20092	X	3	Average of 3 determinations to nearest 0.0001 lb/in <sup>3</sup>	Inree 6-inch by 6-inch pieces (specified thickness)	S-1	6.5
Tape	Fire performance a After flame b Char length Adhesive strength a Avg	3.2.3.1  3.2.3.2	Method 5903, Fed-Std-191  Method 100, MIL-P-31	X  X  X	5  5  5	Average of 5 determinations to nearest 0.1 sec. Nearest 0.1 inch Average of 5 determinations to nearest 0.1 oz.	  2/  2/	S-1  S-1  S-1	6.5  6.5  6.5

See footnotes at end of table

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TABLE III Component testing. - Continued

Component and lot expressed in terms of	Characteristic	Requirement paragraph	Test method	Requirement applicable to sample unit	Determinations per sample unit	Results reported as	Sample unit	Inspection level	AQL
Tape - Continued	Tearing strength a. Avg	3 2 3 3	Method 5124, Fed-Std-191	X	5	Average of 5 determinations to nearest lb.	2/	S-1	5 5
	Breaking strength a. Avg	3 2 3 4	Method 5102, Fed-Std-191	X	5	Average of 5 determinations to nearest lb.	2/	S-1	5 5
	Integral count a. Wrap b. Filling	3 2 3 5	Method 5050, Fed-Std-191	X X	5 5	Average of 5 determinations to nearest whole number	2/	S-1	5 5

1/ Other testing shall be as required by CCC-C-436.

2/ One 10-yard sample of tape from each different lot of tape shall be provided for these parts

4.6 Certificate of compliance. Certificates showing conformance with the applicable material specifications shall be available to the inspector (see 6 2 2). Certification shall contain actual test, examination, or other verifiable quality data

4.7 Packaging inspection. An examination shall be made to determine that packaging, packing, and marking requirements of section 5 of this specification are complied with. Defects shall be scored in accordance with the list below. The sample unit shall be one snipping container fully prepared for delivery with the exception that it need not be sealed. Defects of closure listed below shall be examined on snipping containers



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fully prepared for delivery. Lot size shall be the number of shipping containers in the end item inspection lot. Inspection level shall be S-2 and the AQL shall be 4.0 defects per hundred units.

<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 damaged, affecting serviceability.
Workmanship	Any component missing. Inadequate application of components, such as incomplete closure of container flaps, inadequate stapling, loose strapping, improper or loose taping. Bulging or distortion of containers.

## 5. PACKAGING

(The preparation for delivery requirements specified herein apply only for direct Government acquisitions. For the extent of applicability of the preparation for delivery requirements of referenced documents listed in section 2, see 6.4.)

5.1 Preservation-packaging. (Not required).

5.2 Packing. Packing shall be level A, B, or C, as specified (see 6.2.1)

5.2.1 Level A Mattresses shall be individually packed in a snug fitting fiberboard box conforming to class weather-resistant of PPP-B-636. Inside box dimensions will be waived. Minimum bursting strength of board shall be 275 pounds. Box closure and waterproofing shall conform to method V closure, as specified in the appendix to the box specification. Box reinforcement shall utilize pressure-sensitive reinforced tape or nonmetallic banding in lieu of steel strapping.

5.2.2 Level B Mattresses shall be individually packed in a snug fitting fiberboard box conforming to class domestic of PPP-B-636. Inside box dimensions will be waived. Minimum bursting strength of board shall be 275 pounds. Box closure shall conform to method I as specified in the appendix to the box specification.

5.2.3 Level C. Mattresses shall be packed in containers acceptable to the common carrier which will insure safe delivery at destination in a satisfactory condition at the lowest applicable rate. Containers, packing, or method of shipment shall comply with Uniform Freight or National Motor Freight Classification Rules or Regulations or other carrier rules, as applicable to the mode of transportation.

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5.3 Marking. In addition to any special marking required by the contract, (see 6.2.1), marking of shipments shall be in accordance with MIL-STD-129. Each fiberboard box shall contain a caution marking on one side in large letters of at least one inch in height which reads:

"MATTRESSES TO BE AIRED FOR ONE WEEK PRIOR TO ISSUE TO DISSIPATE RESIDUE ODOR. CARE AND MINIMUM HANDLING SHOULD BE EXERCISED TO PREVENT TEAR AND DAMAGE DO NOT BEND MATTRESSES UNNECESSARILY."

## 6. NOTES

6.1 Intended use. Mattresses covered by this specification are intended for all officer, CPO, and crew berths (see table I for detailed differences).

6.2 Ordering data.

6.2.1 Acquisition requirements. Acquisition documents should specify the following:

- (a) Title, number, and date of this specification.
- (b) Type and size required (see 1.2 and 4.3.2).
- (c) When a first article is required for inspection and approval (see 3.1, 4.2, and 6.3).
- (d) If ticks are to be acquired separately (see 3.2.5.6)
- (e) Maximum unit weight required (see 3.3).
- (f) Level of packing required (see 5.2).
- (g) Special marking, if required (see 5.3).

6.2.2 Data requirements. When this specification is used in a contract which incorporates a DD Form 1423 and invokes the provisions of 9(r) of the Defense Acquisition Regulation (DAR), the data requirements identified below will be developed as specified by an approved Data Item Description (DD Form 1664) and delivered in accordance with the approved Contract Data Requirements List (DD Form 1423) incorporated into the contract. When the provisions of DAR-7-104.9(n) are not invoked, the data specified below will be delivered by the contractor in accordance with the contract requirements. Deliverable data required by this specification is cited in the following paragraphs:

<u>Paragraph</u>	<u>Data requirement</u>	<u>Applicable DID</u>	<u>Option</u>
4.2.1	First article inspection report	DI-I-4902	
4.6	Certificate of compliance	DI-E-2121	

(Copies of data item descriptions required by the contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

6.2.2.1 The data requirements of 6.2.2 and any task in section 3, 4, or 5 of the specification required to be performed to meet a data requirement may be waived by the contracting/acquisition activity upon certification by the offeror that identical data were submitted by the offeror and accepted by the Government under a previous contract for

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identical item acquired to this specification. This does not apply to specific data which may be required for each contract, regardless of whether an identical item has been supplied previously (for example, test reports).

6.3 First article inspection Invitations for bids should provide that the Government reserves the right to waive the requirement for samples for first article inspection as to those bidders offering a product which has been previously acquired or tested by the Government, and that bidders offering such products, who wish to rely on such production or test, must furnish evidence with the bid that prior Government approval is presently appropriate for the pending contract.

6.4 Sub-contracted material and parts. The preparation for delivery requirements of referenced documents listed in section 2 do not apply when material and parts are acquired by the contractor for incorporation into the equipment and lose their separate identity when the equipment is shipped.

6.5 Changes from previous issue. Asterisks (\*) are not used in this revision to identify changes with respect to the previous issue, due to the extensiveness of the changes

Preparing activity  
Navy - SH  
(Project 7210-N243)

**INSTRUCTIONS** In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (*DO NOT STAPLE*), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

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

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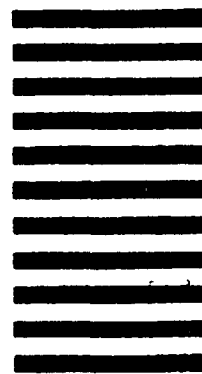
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## STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

*(See Instructions - Reverse Side)*

1 DOCUMENT NUMBER	2 DOCUMENT TITLE
3a. NAME OF SUBMITTING ORGANIZATION	4 TYPE OF ORGANIZATION <i>(Mark one)</i>
b ADDRESS <i>(Street City State ZIP Code)</i>	<input type="checkbox"/> VENDOR  <input type="checkbox"/> USER  <input type="checkbox"/> MANUFACTURER  <input type="checkbox"/> OTHER <i>(Specify)</i> _____
5 PROBLEM AREAS	
a. Paragraph Number and Wording	
b. Recommended Wording	
c. Reason/Rationale for Recommendation	
6 REMARKS	
7a NAME OF SUBMITTER <i>(Last First MI) - Optional</i>	b WORK TELEPHONE NUMBER <i>(Include Area Code) - Optional</i>
c MAILING ADDRESS <i>(Street City State ZIP Code) - Optional</i>	8 DATE OF SUBMISSION <i>(YYMMDD)</i>