Designation: F 1085 – 88 (Reapproved 1994)ε1

An American National Standard

Standard Specification for Mattress and Box Springs, Berths[1]

This standard is issued under the fixed designation F 1085; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

ε[1] NOTE—Section 12 was added editorially in June 1994.

1. Scope

1.1 This specification covers the construction of motel and hotel quality innerspring mattresses and box springs that are also suitable for use in marine berths for officers, crew, and passengers.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

2. Referenced Documents

2.1 *2.1 Federal Standard*

16CFR (Part 1632) Standard for the Flammability of Mattresses and Mattress Pads (FF 4-72 Amended)[2]

3. Descriptions of Terms Specific to This Standard

3.1 *box spring*—resilient box-type support for the mattress and covered by fabric matching the mattress cover as defined in Section 5.

3.2 *mattress*—fabric covered, box-type unit containing springs and cushioning material that supports the sleeping surface.

4. Classification

4.1 The mattress and box spring are each furnished in the following two types:

4.1.1 *Type I*—A mattress or box spring with nominal overall dimensions of 53 in. wide by 79½ in. long by 7 in. thick (1345 mm wide by 2020 mm long by 180 mm thick).

4.1.2 *Type II*—A mattress or box spring with nominal overall dimensions of 38 in. wide by 79½ in. long by 7 in. thick (965 mm wide by 2020 mm long by 180 mm thick).

4.2 The mattress is additionally furnished in the following two grades:

4.2.1 *Grade 1*—Degree of firmness of mattress shall be firm as defined in Section 7.

4.2.2 *Grade 2*—Degree of firmness of mattress shall be extra firm as defined in Section 7.

5. Ordering Information

5.1 Orders for items purchased under this specification shall define the following:

5.1.1 *Mattresses*—Quantity, type, and grade for each mattress ordered.

5.1.2 *Box Springs*—Quantity and type for each box spring ordered.

5.1.3 Color and pattern of covers for mattress and box spring.

5.1.4 If a certificate of firmness is required (see 7.2).

5.1.5 If first article inspection is required (see 9.2).

5.1.6 Marking required (see 11.1).

6. Materials and Manufacture

6.1 *Mattress*:

6.1.1 The mattress shall be all wire spring units with knotted coil construction.

6.1.2 The mattress (only) shall meet the requirements of 16CFR, Part 1632.

6.1.3 Coil springs shall be made of 13-gage (0.092-in. (2.34-mm) diameter) tempered steel spring wire for Grade 1 (firm) mattress, and 12½-gage (0.099-in. (2.51-mm) diameter) tempered steel spring wire for Grade 2 (extra firm) mattress.

6.1.3.1 Coils, or the complete spring unit assembly shall be given suitable thermal treatment to relieve residual stresses caused by coiling.

6.1.4 Border wire shall be made of 6-gage (0.192-in. (4.88-mm) diameter) spring wire.

6.1.5 Minimum spring coil count shall be 338 for Type I and 234 for Type II mattresses.

6.1.6 *Fill*—Fill shall be 1-in. (25-mm) level cut prime grade urethane or equivalent amount of fire retardant cotton felt and a 2-oz/ft^2 (0.61-kg/m^2) insulator pad backed with polypropylene mesh on each side. Each corner shall be reinforced with 2- by 5- by 12-in. (50- by 130- by 305-mm) polyurethane foam. The fill shall be layered as indicated above on each side of the spring unit. The fill shall be firmly secured to the spring unit by hog-rings to prevent slippage.

[1] This specification is under the jurisdiction of ASTM Committee F-25 on Shipbuilding and is the direct responsibility of Subcommittee F25.03 on Outfitting.
Current edition approved Jan. 12, 1988. Published March 1988.

[2] Available from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

6.1.7 *Cover*—The cover shall be a minimum of 6⅕-oz/ft^2(1.9-kg/m^2) woven twill cotton-polyester blend ticking, with flanged construction to prevent slippage, that meets the requirements of 6.1.2.

6.1.8 *Border*—The border shall be multi-needled to the urethane foam fill. The urethane foam fill shall have a minimum thickness of ¼ in. (6 mm).

6.1.9 *Tape*—The tape shall be ⅞-in. (20-mm) fire-retardant type.

6.1.10 *Labels*:

6.1.10.1 The label must indicate that the mattress meets the requirements of 16CFR, Part 1632.

6.1.10.2 The mattress must display trade labels as required by law, and "Contract Bedding" label.

6.2 *Box Spring*:

6.2.1 Coil springs shall be made of 9½-gage (0.142-in. (3.61-mm) diameter) tempered steel spring wire.

6.2.1.1 Coils, or the complete spring unit assembly, shall be given suitable thermal treatment to relieve residual stresses caused by coiling.

6.2.2 Border wire shall be made of 3½-gage (0.234-in. (5.94-mm) diameter) tempered steel wire.

6.2.3 The spring coil count shall be 99 for Type I and 66 for Type II box springs. Coil springs shall be mounted on clear kiln dried lumber slatted frame using coil on slat construction.

6.2.4 *Box Spring Wood Frame*:

6.2.4.1 The wood shall be Number 1 Eastern Canadian Spruce or Southern Yellow Pine. Any other species must be tested for suitability before use.

6.2.4.2 The moisture content of the wood shall not exceed 15 %.

6.2.4.3 Wood for frame and slats shall be free of splits, checks, ditch, wane, or bark. Knots shall not be over ¾ in. (20 mm) in diameter. The knots must be sound and spaced no closer than 24 in. (610 mm) on centers.

6.2.4.4 Nails or staples must be clinched.

6.2.4.5 Wood frames must be square and true.

6.2.4.6 All perimeter bottom edges shall be eased (sharp corner blunted by sanding).

6.2.5 *Fill*—A minimum of ⅜-in. (10-mm) insulator pad shall be installed on the top side of the box spring coils. Each corner shall be reinforced with 2- by 5- by 12-in. (50- by 130- by 305-mm) polyurethane foam.

6.2.6 *Cover*:

6.2.6.1 The cover shall be a minimum of 6⅕-oz/ft^2 (1.9-kg/m^2) woven twill cotton-polyester blend ticking to match the mattress unit.

6.2.6.2 The bottom cover shall be a nonwoven polyester dust cover.

6.2.7 *Tape*—Tape shall be ⅞ in. (20 mm) wide.

6.2.8 *Corner Guards*—Plastic corner guards shall be installed in each corner.

7. Performance Requirements

7.1 Firmness for Type I and Type II mattress spring units shall be determined by the deflection test listed in 7.2. The load versus the deflection for each firmness grade shall be as specified in Table 1.

TABLE 1 Load versus Deflection for Each Firmness

Deflection, in. (mm)	Force, lbf (or N)	
	Grade A (Firm)	Grade B (Extra Firm)
1 (25)	40–55 (180–240)	55–70 (240–310)
1½ (38)	65–75 (290–330)	75–100 (330–440)
2 (50)	83–100 (370–440)	110–135 (490–600)

7.2 *Load Deflection Test*—The load versus deflection test shall be conducted on an un-upholstered inner spring unit. A platen 11½ by 11½ in. (290 by 290 mm) shall be placed at the center of the unit and a uniform load applied. A load sufficient to deflect the unit 2 in. (50 mm) shall be applied. This load shall then be released and spring unit allowed to relax for 1 min after which the unit shall be compressed to 1, 1½ , and 2 in. (25, 38, and 50 mm) with the loading required for these deflections noted. The results shall be compared to the requirements in Table 1. The manufacturer of the spring unit shall supply a certificate that the units supplied meet the requirements for firm or extra firm, if required by the purchase order.

8. Dimensions

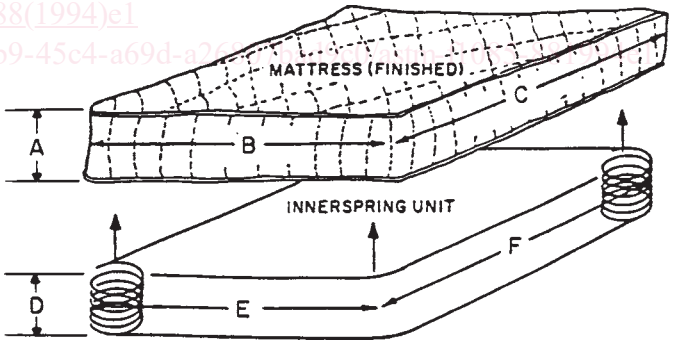
8.1 For dimensions, see Table 2 and Table 3.

9. Workmanship, Finish, and Appearance

9.1 All workmanship and material shall be of specified quality in keeping with the best commercial marine practice so as to produce each item suitable for its intended use.

TABLE 2 Type I and Type II Mattress

NOTE 1—See 6.1 for description of mattress.



Designation		in. (mm)	
		Dimension	Tolerance, ±
Dimensions for Type I Mattress			
Finished thickness	A	7 (180)	½ (12)
Finished width	B	53 (1345)	½ (12)
Finished length	C	79½ (2020)	½ (12)
Width, inner spring unit	D	51½ (1310)	¼ (6)
Length, inner spring unit	E	78 (1980)	¼ (6)
Dimensions for Type II Mattress			
Finished thickness	A	7 (180)	½ (12)
Finished width	B	38 (965)	½ (12)
Finished length	C	79½ (2020)	½ (12)
Width, inner spring unit	D	36½ (930)	¼ (6)
Length, inner spring unit	E	78 (1980)	¼ (6)