

Issued 2000-11
Cancelled 2007-08

Superseding AS27444

Net, Cargo Tiedown, Pallets, HCU-7/E,
HCU-15/C, HCU-11/C, and HCU-16/C

RATIONALE

This document had been taken directly from U.S. Military Specification MIL-N-27444C (USAF), Notice 1, and adopted in 2000-11 as an SAE standard under the provisions of the SAE Technical Standards Board (TSB) Rules and Regulations (TSB 001) pertaining to accelerated adoption of government specifications and standards. Subsequent discussions with Air Force engineering resulted in the concern that MIL-N-27444C, become an SAE commercial specification was no longer under the control of the Air Force, the manager for cargo nets. As far as engineering could determine, there are no commercial applications for the cargo net specified by MIL-N-27444C. The net is currently being procured according to government drawings maintained by the Air Force. It was accordingly requested and agreed that AS27444 (MIL-N-27444C) should be cancelled as an SAE document.

CANCELLATION NOTICE

This document has been declared "CANCELLED" as of August 2007. By this action, this document will remain listed in the Numerical Section of the Aerospace Standards Index.

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NOTICE

This document has been taken directly from U.S. Military Specification MIL-N-27444C (USAF), Notice 1 and contains only minor editorial and format changes required to bring it into conformance with the publishing requirements of SAE technical standards. The initial release of this document is intended to replace MIL-N-27444C (USAF), Notice 1. Any part numbers established by the original specification remain unchanged.

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SAE AS27444 Revision A

1. SCOPE:

1.1 This specification covers pallet cargo tiedown nets, designated HCU-7/E, HCU-15/C, HCU-11/C and HCU-16/C.

1.2 Classification:

Type I - Net Cargo Tiedown, Pallet HCU-7/E
Type II - Net Cargo Tiedown, Pallet HCU-15/C
Type III - Net Cargo Tiedown, Pallet HCU-11/C
Type IV - Net Cargo Tiedown, Pallet HCU-16/C

2. APPLICABLE DOCUMENTS:

2.1 Government documents:

2.1.1 Specification, standards, and handbook: Unless otherwise specified (see 6.2), the following specifications, standards, and handbooks of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDSS) specified in the solicitation, form a part of this specification to the extent specified herein.

SPECIFICATIONS

Federal

PPP-B-601	Boxes, Wood, Cleated-Plywood
PPP-B-621	Boxes, Wood, Nailed and Lock-Corner
PPP-B-636	Boxes, Fiberboard

Military

MIL-P-116	Preservation, Methods of
MIL-W-4088	Webbing, Textile, Woven, Nylon
MIL-I-6903	Ink, Marking (For Parachutes And Other Textile Items)
MIL-W-27265	Webbing, Textile, Woven, Nylon Impregnated
MIL-I-45208	Inspection System Requirements

STANDARDS

Federal

595	Colors
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2.1.1 (Continued):

Military

MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129	Marking for Shipment and Storage
MIL-STD-810	Environmental Test Methods
MIL-STD-1186	Cushioning, Anchoring, Bracing, Blocking, and Waterproofing, With Appropriate Test Methods

“(Copies of specifications, standards, handbooks, drawings, publications and other Government documents required by contractors in connection with specific acquisition functions should be obtained from the contracting 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 specification to the extent specified herein. Unless otherwise specified, the issues shall be those in effect on the date of the solicitation.

DRAWING

Air Force

67F46303	Type I - Net-HCU-7/E, Side
67E46290	Type II - Net-HCU-15/C, Top
67F46476	Type III - Net-HCU-11/C, Side
67E46475	Type IV - Net-HCU-16/C, Top

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

2.1.3 Order of precedence: In the event of a conflict between the text of this specification and the references cited herein, the text of this specification takes precedence.

3. REQUIREMENTS:

3.1 Preproduction:

This specification makes provisions for preproduction testing.

3.2 General requirements:

The requirements of applicable drawings of required net type and details thereto apply as requirements of the specification, with the exceptions and additions specified herein. In cases of conflict between the specification and drawings, the specification shall govern.

3.2.1 Materials: The nets shall be constructed of materials as specified on the detail drawings.

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3.3 Construction:

The nets shall be so constructed that no part will work loose in service. It shall be built to withstand the strains, jars, vibrations, and other conditions incident to shipping, storage, and service.

3.4 Reliability:

The nets shall be constructed as specified herein to assure the optimum service life under all service conditions specified herein, and shall be acceptably demonstrated during the testing specified herein.

3.5 Net configuration:

The nets shall be constructed in accordance with applicable drawings.

3.6 Net assembly:

A net assembly shall consist of two side nets and one top net. Combination of Types I and II makes one set. Combination of Types III and IV makes one set.

3.7 Webbing:

The webbing shall conform to MIL-W-4088 and condition R of MIL-W-27265 except, for testing purposes, the minimum breaking strengths of the webbing shown below shall be considered to be:

Type	Minimum Breaking Strengths (lbs)
VII	5500
VIII	3600
XIII	6500

Webbing colors shall be as follows and shall conform to FED-STD-595:

Type I, Olive Drab, Color Number 14087, 24087, or 34087

Type II, Yellow, Color Number 13538, 23538, or 33538

Type III, Strata Blue, Color Number 15045

Type IV, Green, Color Number 24108 or 34108

3.8 Hardware:

All hardware shall be installed in accordance with the applicable detail drawing. All hardware shall be securely sewed to the webbing or otherwise attached to the net.

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3.9 Stitching:

Stitching design and thread shall be selected by the contractor. They shall meet the requirements of the specification and the tests in Section 4.

3.10 Strength:

The following factors and load configuration shall be used in the construction of the nets:

- 3.10.1 Maximum stock height and load: The cargo stock height shall be 96 inches maximum for the Types I and II nets, 72 inches maximum for the Types III and IV nets. The total maximum load for Types I and II shall be 10,000 pounds, for Types III and IV 5,000 pounds.
- 3.10.2 Load configuration: The load shall be considered to be rectangular boxes approximately 20 inches wide by 20 inches long by 12 inches high for Types I and II nets. For Types III and IV, the load shall be boxes approximately 20 inches wide by 24 inches long by 12 inches high. All boxes are free to move relative to adjacent boxes.
- 3.10.3 Maximum range of adjustment: The Type I net set shall enclose on 84 inches wide by 108 inches long load. The Type III net set shall enclose on 54 inches wide by 88 inches long load.

3.11 Performance:

The nets shall be capable of withstanding the following condition; vibration incident to use in aircraft.

3.12 Special marking:

The nets shall be marked with 1-inch high block letters to indicate outside, top or side as applicable in accordance with type required, and 463L. Nets shall be stenciled with ink in accordance with MIL-I-6903. The colors shall be as in accordance with FED-STD-595 and as follows:

Type II, Blue, Color Number 15102 or 25102

Types I, III, and IV, Yellow, Color Number 13538, 23538, or 33538

3.13 Workmanship:

Workmanship shall be of the highest quality to insure proper functioning under conditions to which the nets may be subjected. Unsatisfactory workmanship such as loose, cocked, or inadequately headed rivets; distorted or loose bushing and pins; loose, broken, or incomplete stitching and rough malformed, misaligned, or improperly fabricated fittings shall be defects. Corners shall be rounded, and sharp edges, burrs, or other protrusions that could damage the webbing will not be permitted.

3.14 Dimensional tolerances:

Dimensions and tolerances not specified shall be consistent with best commercial practices. Where dimensions and tolerances may affect the interchangeability, operation, or performances of the net, they shall be held or limited accordingly.

4. QUALITY ASSURANCE PROVISIONS:

4.1 Responsibility for inspection:

Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to 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.

4.1.1 Inspection: The requirements of MIL-I-45208 apply.

4.2 Classification of tests:

The inspection and testing of the nets shall be classified as follows:

- a. Preproduction testing - 4.3
- b. Acceptance testing - 4.4

4.3 Preproduction testing:

4.3.1 Preproduction test sample. The preproduction test sample of each type net shall consist of the following:

- a. Two complete nets of each type shall be produced and examined in accordance with 4.5.1. One net shall be used for test specimens and one net shall be retained for comparison with production nets. The retained net shall be shipped as one of the last shipments of the contract.
- b. Test specimens shall be selected from one of the nets and shall be as assembled in the net. A specimen shall be selected for each type hardware, except the loop stop, combined with each type of attached webbing. In places where two or more types of webbing are attached to one piece of hardware (an example of this is the ring) a specimen shall be selected for each type of webbing, thread and sewing pattern used. In places where two pieces of hardware are assembled together, the test specimen shall include the assembly. Each test specimen shall be tested in accordance with 4.5.2.