

March 31, 1994

MILITARY SPECIFICATION

BOXES, WOOD-CLEATED, SKIDDED, LOAD-BEARING BASE

This forms a part of MIL-B-26195C, dated 15 May 1987, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

1.1, line 3: After "designed for", ALL "non-hazardous".

Add the following paragraph:

"1.1.1, Hazardous Materials Boxes. Boxes up to a maximum net mass of 882 pounds and intended for shipment or storage of regulated hazardous materials must meet all the requirements of this specification including the requirements of this Appendix."

PAGE 2

2.1.1, Under "SPECIFICATIONS, Federal:

Delete "FF-B-584 Bolts, Finned Neck; Key Head;
Machine. Ribbed Neck; Square Neck; Tee Head"

Delete "QQ-S-7 81 Strapping, Steel and Seals"

Delete "NN-P-530 Plywood, Flat Panel"

Add "A-A-55057 Panels, Wood/Wood Based; Construction
and Decorative"

Add "FF-3-584 Bolts, Square Neck and Tee Head"

Under "SPECIFICATIONS, Military:"

Add "MIL-S-46163 Sealing, Lubricating and Wicking
Compounds: Thread-Locking, Anaerobic, Single-Component"

DISTRIBUTION LINE MISSING FROM ORIGINAL DOCUMENT

PAGE 3

2.2, Under "American National Standards Institute (ANSI):"

Delete "HP 1983 American National Standard for
Hardwood and Decorated Plywood"

Add "HPMA MP-1983 Hardwood and Decorative Plywood-Delete
"American Society for Testing and Materials (ASTM) • and
substitute "ASTM"

Add "ASTM D 3953 Standard Specification for Strapping,
Flat Steel and Seals (DOD Adopted)"

Delete "ASTM E380" and substitute "ASTM E 380"

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3.1.2, line 7: Delete "NN-P-530" and substitute "A-A-55057".

Add as new paragraph 3.1.5.1:

"3.1.5.1 Commercial parts. Unless otherwise specified,
commercial parts may be substituted to the maximum extent,
consistent with reliability, maintainability, and performance.
Commercial utility parts with suitable properties, such as nails,
staples, lag bolts, carriage boles and washers, may be used
provided they can be replaced with standard parts (MS and AN)
without alteration."

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Table I, note 1/: Delete "See 6.3" and substitute "See 6.3.1".

Table II, note 1/: Delete "See 6.3" and substitute "See 6.3.1".

PAGE 8

3.2.4, lines 1-6: Delete the first two sentences and substitute
"Unless otherwise specified (see 6.2), rubbing strips of 3 inches
(-1/8 inch) thickness shall be applied to skids to facilitate
forklift entry. Rubbing strips shall be applied with two
staggered rows of thirty penny nails spaced 12 inches apart in
each row with a minimum of 5 nails required for each rubbing
strip."

PAGE 9

3.3 line 2- Delete "FED-STD 731" and substitute "MIL-STD-731" .

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3.3.0, lines ? and 4: Delete "{outside of headers}' and substitute "(outside edge of headers)"

3.3.0.2.1, line 17- Add the following after "inside length"(see figure 6)

PAGE 10

3.3.0.3. line 11: Delete and substitute: "application of a thread-locking compound in accordance with MIL-B-46168".

PAGE 11

3.4.2.1, line 4: Delete sentence beginning with "Additional lag bolts shall" and substitute "Additional lag bolts shall be equally spaced between the two end bolts with no distance exceeding 12 inches on crates 60 inches or greater in length and 18 inches on crates 60 inches or less."

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3.4.2.4, lines 1-4: Delete and substitute "3.4.2.4 Corner, Straps- When specified (see 6.2), corner straps shall conform to ASTM D3 953, Type 1 or 2, regular duty. Finish A, not less than 3/4 inch wide by 0.020 inch thick .by 12 inches in length. Corner-Strapping shall be".

3.5, line 5: After "provided with a baffle", add "located on the inside of the box".

3.5, line 8: Delete and substitute "equally between the sides and ends of the box, and each of these areas must have a baffle."

PAGE 13

Add the following paragraph:

3.8 Fire retardant markings. When fire retardant boxes are specified, the words 'FIFE RETARDANT' shall be marked, in minimum 1-nch high letters, on two sides of the box."

PAGE 19

6.2 (a), line 1: Delete the word "data" and substitute "date".

6.2 (o), line 2: Delete and substitute "(See 3.5)."

6.2 LINE NOT CLEAR FROM ORIGINAL DOCUMENT

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Table VII, line 6 Add the following references to the "60 in. dimension":
"3.4.2.1, 3.4.2.3, Fig 6".

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Table VII, line 18: Add the following references to the "18 in" dimension-
"3.4.2.1, Fig 6".

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Table VII, line 33- Add the following references to the "2-1/2 in" dimension:
"3.4.2.3".

PAGE 23

Add as new paragraph 6.3.1 after table VII: "6.3.1 Nominal sizes shall be
defined in accordance with MIL-STD-731, table I."

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Figure 1, Style A container: The line at the bottom of the lower
horizontal filler cleat should be extended across the bottom of
the left vertical edge cleat.

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Figure 4, "LOAD CONDITION A", line 1: Delete the "s" from the
end of the word "one-sixths".

Figure 4, "LOAD CONDITION B", line 2: Delete the "s" from the
end of the word "one-sixths".

PAGE 29

Figure 6: Add the following note to the "12" max dimension, "18"
max for crates 60 inches or less".

Figure 6: Add an arrowhead with leader pointing to the drain
holes and then label, "DRAIN HOLES".

PAGE 30

Figure 7 Lateral supports shown shall be moved closer together to show more accurate gap of
1 5/8" to 1 3/4"

Figure 7, Note 1: Delete and substitute LATERAL SUPPORT FOR JOIST. Lateral
joists shall be placed such that a GAP OF 1 5/8" to 1 3/4" is created.

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Figure 9, end view: The upper cleat should be shown on the opposite side of the panel rather than on the same side as the baffle. (This would change the upper cleat lines to hidden lines on the cut view.)

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Add an appendix to this specification as follows.

APPENDIX

HAZARDOUS MATERIALS REQUIREMENTS

10. SCOPE

10.1 Scope. This Appendix is a mandatory part of this specification. The information contained herein is intended for compliance if hazardous materials are to be shipped in the subject containers. Hazardous Material Boxes with a maximum net mass of 882 pounds and intended for shipment or storage of regulated materials as defined in 49 Code of Federal Regulations (CFR), Part 173 or international transportation regulations (ICAO "Technical Instructions for the Safe Transport of Dangerous Goods by Air" or IMO "International Maritime Dangerous Goods" herein referred to as "hazardous material boxes". Substitutions or deviations must be approved by the ordering activity and comply with 49 CFR 178.601 as different packaging. All Department of Defense shipments must meet the requirements for shipping by land, sea and air.

20. APPLICABLE DOCUMENTS

20.1 Government documents

20.1.1 Other government documents and publications. The following other Government documents and publications form a part of this Appendix to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

DEPARTMENT OF TRANSPORTATION

49 Code of Federal regulations, parts 100-199

(Application for copies should be addressed to the

UNCLEAR ADDRESS U.S. Government Printing Office, Washington, D.C. UNCLEAR
ZIP

APPENDIX

20.2 Non-Government publication. The following documents form a part of this Appendix to the extent specified herein. Unless otherwise specified, the issues of the documents which are Duo adopted are those listed in the issue of the DODISS specified 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.

ASTM

D 4919 Standard Specification for Testing of
 Hazardous Materials Packagings

(Application for copies of the ASTM standards by serial designation and title should be made to ASTM, 1916 Race Street, Philadelphia PA 19103.)

INTERNATIONAL CIVIL AVIATION ORGANIZATIONS (ICAO)

Technical Instructions for the Safe Transport of
Dangerous Goods by Air

(Applications for copies should be addressed to Labelmaster Division, American Labelmark Company, 5724 North Pulaski Rd., Chicago IL 60646.)

INTERNATIONAL MARITIME ORGANIZATION

International Maritime Dangerous Goods (IMDG) Code

(Applications for copies should be addressed to Labelmaster Division, American Labelmark Company, 5724 North Pulaski Rd. Chicago IL 60646.)

20.3 Order of precedence. Nothing in this Appendix supersedes applicable laws and regulations unless a specific exemption has been obtained in writing from their competent authority.

30. REQUIREMENTS

30.1 Hazardous materials boxes. Boxes, also known as packagings, for hazardous material storage and transportation shall conform to 49 CFR (Part 173 Subpart B and Part 178 Subpart L) , IMDG, or ICAO Technical Instructions (Part 3, Chapter 1 and Part 7). The Department of Defense considers the vibration test outlined in 30.1.2.3 as mandatory.

30.2 Test requirements.

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30.2.1 Rough handling (drop) test. Samples shall not exhibit any damage to the outer packaging which might adversely affect safety during transport. In addition, the inner packages shall not allow any leakage of filling substances into the outer packaging (see 40.2.1).

30.2.2 Stacking test. Test specimens shall not leak. For composite or combination packages, the filling substance shall not leak from the inner receptacle or packaging. Test samples shall not show any deterioration which might adversely affect transportation safety or any distortion which might reduce their strength, cause instability in stacking, or cause damage to inner packaging (see 40.2.2).

30.2.3 Vibration test. At the conclusion of the vibration test, there shall be no rupture or leakage from any of the packages. Test samples shall not show any distortion which could reduce packaging strength or any deterioration which might adversely affect transportation safety (see 40.2.3).

40 PERFORMANCE REQUIREMENTS

40.1 Specimen preparation. Properly assemble test load, including all internal configurations, place in box, and close as for transport. Complete all applicable preparation required by 49 CFR Part 178 Subpart M prior to initiation of testing. If an inner receptacle contains a liquid, the absorbent requirement shall conform to 49 CFR 173.27(e). Perform tests as required by 49 CFR 178 Subpart M using ASTM D 4919 guidance.

40.2 Performance tests. Hazardous materials boxes, as defined in paragraph 10.1 of this Appendix and domestic and international transportation regulations, shall pass the following tests.

40.2.1.1 Test load. The test load shall consist of a properly assembled load configuration as for shipment. This actual test load shall consist of one of the following:

4.0.2.1.1.1 The actual item.

40.2.1.1.2 An accurate load simulation. (This includes, but is not limited to, accurate physical (i.e. fragility and [^]ass) and additional characteristics.)

40.2.1.1.3 A simulated load per 49 CFR **THIS SENTENCE UNCLEAR FROM ORIGINAL DOCUMENT** the approved variations.

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40 2.2 Stacking test. Perform test per 49 CFR 178 Subpart M.

40.2.3 Vibration test. Perform test per 49 CFR 178 Subpart M.

5.0 TEST REPORTS

5.0.1 Hazardous material, boxes test reports. The manufacturer or mark certifying activity, as defined in 49 CFR 178.2, shall supply two copies of the test report as required by the purchase (see 70.1 (c)). The mark certifying activity's test report shall document packaging limitations as identified by 49 CFR 178.2; results of the box testing required by 49 CFR 173.24, 49 CFR 178, and ASTM D 4919; and shall include the test configuration assembly. The format of the test report shall comply with Data item Description DI-PACK-81059.

60. MARKINGS

S0.1 Hazardous materials boxes. The markings for hazardous materials boxes shall conform to 49 CFR Part 178 Subpart L and MIL-STD-12 9, Appendix E.

70. NOTES

70.1 Acquisition requirements. Acquisition documents must specify the following:

- (a) Hazardous materials box.
- (b) Physical characteristics of load including dimensions, weight, and density of contents.
- (c) Distribution of test reports.

Custodians:

Army - GL
Navy - SA
Air Force - 69

Preparing activity:
Air Force - 69

(Project 8115-0547)

Review activities:

Army - AT, AR
Navy - AS, SH, YD
Air Force - 70, 71

Unclear activities:

Army - Av
Navy - CG, MC