

INCH-POUND

MM-L-736D
6 MAY 2008
SUPERSEDING
MM-L-736C
March 9, 1973

FEDERAL SPECIFICATION

LUMBER; HARDWOOD

The General Services Administration has authorized the use of this federal specification by all federal agencies.

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers commercial species and grades of hardwood lumber commercially harvested and manufactured in the continental United States.

1.2 Classification. Hardwood lumber shall be of the following types, as specified (see 6.2):

Type I	- Standard hardwood cutting grades
Type II	- Hardwood construction lumber – including boards, dimension, and timbers
Type III	- Hardwood flooring

2. APPLICABLE DOCUMENTS

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

Military Specifications

MIL-L-14362	Lumber: Unitizing and loading of
MIL-L-19140	Lumber and Plywood, Fire-Retardant treated

(Copies of these documents are available online at <http://assist.daps.dla.mil> or from the Standardization Document Order Desk, 700 Robins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

Comments, suggestions, or questions on this document should be addressed to: Defense Supply Center Philadelphia, ATTN: DSCP-NASA, 700 Robbins Ave., Philadelphia, PA 19111-5096 or email to dscpg&ispeccomments@dlamail . Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at http://assist.daps.dla.mil .
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2.2 Other publications. The following documents forms a part of this specification to the extent specified herein. Unless a specific issue is identified, the issue in effect on the date of invitation for bids or request for proposal shall apply.

ASTM International

ASTM D4444 Standard Test Methods for Use and Calibration of Hand-held Moisture Meters

(Copies of this document are available from www.astm.org or ASTM International, 100 Barr Harbor Drive, W. Conshohocken, PA 19428-2959.)

American Society for Quality (ASQ)

ASQ Z1.4 Sampling Procedures and Tables for Inspection by Attributes

(Copies of this document are available from www.asq.org or the American Society for Quality, 611 East Wisconsin Avenue, Milwaukee, WI 53202.)

American Wood Protection Association (AWPA)

AWPA P1/P13	Standard for Creosote Preservative
AWPA P2	Standard for Creosote Solution
AWPA P3	Standard for Creosote-Petroleum Oil Solution
AWPA P5	Standard for Waterborne Preservative
AWPA P8	Standard for Oil-Borne Preservative
AWPA P9	Standards for Solvents and Formulations for Organic Preservative Systems

(Copies of these documents are available from www.awpa.com or from the American Wood Protection Association, P.O. Box 361784, Birmingham, AL 35236-1784.)

Maple Flooring Manufacturers Association, Inc.

Grading Rules for Hard Maple, Beech, and Birch Flooring.

(Copies of this document are available from www.maplefloor.org or from the Maple Flooring Manufacturers Association, 60 Revere Drive, Suite 500, Northbrook, IL 60062.)

National Hardwood Lumber Association (NHLA)

Rules for the Measurement and Inspection of Hardwood and Cypress Lumber.

(Copies of this document are available from www.nathardwood.org or from the National Hardwood Lumber Association, 6830 Raleigh-Lagrange Road, Memphis, TN 38184-0518.)

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National Oak Flooring Manufacturers Association

Flooring Grading Rules for Oak, Pecan, Beech, Birch, Hard Maple.

(Copies of this document are available from www.nofma.org or from the National Oak Flooring Manufacturers Association, 22 N. Front St., Suite 660, Memphis, TN 38103.)

The Society for Protective Coatings (SSPC)

SSPC-Paint 25 Zinc Oxide, Alkyd, Linseed Oil Primer for Use Over Hand Cleaned Steel Type I and Type II

(Copies of this document are available from www.sspc.org or from the Society for Protective Coatings, 40 24th Street, 6th Floor, Pittsburgh, PA 15222-4656.)

3. REQUIREMENTS

3.1 Material.

3.1.1 Hardwood lumber. Type I and type II lumber shall be of the species and grade specified (see 6.2) and shall conform to the National Hardwood Lumber Association (NHLA) Rules for the Measurement and Inspection of Hardwood and Cypress Lumber.

3.1.2 Hardwood flooring. Type III lumber shall be of the species and grade specified (see 6.2), and shall conform to the following grading rules as applicable:

- (a) National Oak Flooring Manufacturers Association.
- (b) Maple Flooring Manufacturers Association.

3.2 Sizes. Sizes shall be as specified (see 6.2) and shall conform to the grading rules cited.

3.2.1 Length trimming. “construction” and “Utility” boards, “Finish” and “Number 1” and “Number 2 Dimension” shall be trimmed to a length not over 3 inches in excess of nominal provided; however, such trimming shall permit trimming to nominal length.

3.3 Unless otherwise specified (see 6.2), the degree of seasoning shall conform to the following requirements. Lumber not required to be seasoned shall be designated, “Any stage of seasoning”. Moisture content of lumber shall be determined as specified in 4.3.4.

3.3.1 Type I and NHLA “A” and “B” finish grades of type II lumber. No piece of lumber 8/4 inches or less in thickness shall have a moisture content exceeding 12 percent. The moisture content of limber over 8/4 inches in thickness shall be specified (see 6.2). The lumber shall be graded and measured under NHLA “Standard Kiln Dried Rule” with inspection after surfacing when surfacing is required (see 3.5).

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3.3.2 Type II lumber, excluding “A” and “B” finish grades. Unless otherwise specified (see 6.2), lumber shall conform to the following average moisture content requirements, with no piece to exceed the average moisture content by more than 3 percent.

<u>THICKNESS</u>	<u>AVERAGE MOISTURE CONTENT</u>
4/4” and thinner	19 percent or less
5/4”	22 percent or less
6/4”	24 percent or less
7/4” and 8/4”	27 percent or less
Over 8/4”	As specified (see 6.2)

When lumber intended for use as framing members is specified (see 6.2) the moisture content shall not exceed 19 percent.

3.3.3 Type III. The moisture content of hardwood flooring shall be not more than 9 percent, except that 5 percent of any quantity submitted for delivery may have a moisture content of not more than 12 percent.

3.4 End coating. When green or unseasoned lumber is specified, lumber 4 inches and thicker shall be end coated with two coats of ready-mixed paint conforming to SSPC-Paint 25 or with any suitable commercial end coating equally effective when compared with approved coating in reducing end checking and splitting.

3.5 Surfacing. Lumber shall be rough, dressed or run to pattern, as specified (see 6.2 and 6.4).

3.6 Treatment.

3.6.1 Preservative treatment. When specified (see 6.2), lumber shall be preservative treated and the preservative to be used shall conform to the following specifications: AWP A P1/P13, AWP A P2, AWP A P3, AWP A P5, AWP A P8, or AWP A P9.

3.6.2 Fire retardant treatment. When specified (see 6.2), lumber shall be fire retardant treated in accordance with MIL-L-19140.

3.6.3 Anti-strain treatment. When specified (see 6.2), all hard-wood lumber which is subject to staining (see 6.5) shall be anti-stain treated. The treating solution shall be waterbased with the composition, concentration and application as specified by the chemical supplier.

3.7 Grade certification. Hardwood lumber of like grade, size and species shall be certified for grade by a certificate of inspection. Unless otherwise specified (see 6.2), certificates for type I and II lumber shall be issued by a National Inspector of the National Hardwood Lumber Association and certificates for type III lumber shall be issued by the supplier.

3.8 Marking. Unless otherwise specified (see 6.2), each piece of type I and II lumber, graded and certified as specified in 3.7, shall be hammer branded by a National Inspector of the National Hardwood Lumber Association.

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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 in the contract or order, the supplier 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 that supplies and services conform to prescribed requirements.

4.2 Classification of inspection. Inspection shall be classified as follows:

- (a) Quality conformance inspection (see 4.3).
- (b) Inspection of preparation for delivery (see 4.4).

4.3 Quality conformance inspection.

4.3.1 Sampling.

4.3.1.1 Unit of product. For the purpose of quality conformance inspection, each piece of lumber shall constitute a unit of product.

4.3.1.2 Lot. For the purpose of quality conformance inspection, a lot shall consist of all pieces of the same material and manufacturing classification offered for delivery at one time.

4.3.2 Samples for examination and tests. Samples for examination and tests shall be selected in accordance with ASQ Z1.4. The Acceptable Quality limits (AQLs) shall be 4.0 percent defective. Unless otherwise specified, AQLs listed in this section shall be used to establish the sample size, however, the acceptance number shall be zero.

4.3.3 Examination. Samples selected in accordance with 4.3.2 shall be examined for the following defects:

- 101. Species not as specified.
- 102. Size (thickness, width and length) not as specified.
- 103. Grade not as specified.
- 104. No certificate of inspection or label of certification.
- 105. Seasoning not as specified.
- 106. Surfacing or pattern not as specified.
- 107. Preservative treatment not as specified (when required).
- 108. Fire retardant treatment not as specified (when required).
- 109. Anti-stain treatment not as specified (when required).
- 110. Pieces not hammer branded as specified.

4.3.4 Tests. Samples selected in accordance with 4.3.2, from lots of seasoned lumber only, shall be tested for moisture content in accordance with ASTM D4444.

4.4 Inspection of preparation for delivery. Inspection of unitizing, marking and loading shall be in

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accordance with MIL-L-14362.

5. PREPARATION FOR DELIVERY

5.1 Unitizing, marking and loading. Unitizing, marking and loading shall be in accordance with MIL-L-14362, as specified (see 6.2).

6. NOTES

6.1 Intended use.

6.1.1 Type I. Type I hardwood lumber is intended for recutting to smaller sizes for the manufacture of furniture and other fabricated products where a high quality appearance is essential.

6.1.2 Type II. Type II hardwood lumber is intended for use in construction work and related applications where the material will be used essentially in the size as procured.

6.1.3 Type III. Type III hardwood lumber is intended to be used specifically for flooring.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents:

- (a) Title, number, and date of this specification.
- (b) Type of hardwood lumber required (see 1.2).
- (c) Species and grade required (see 3.1.1 and 3.1.2).
- (d) Size, including thickness, width and length, required (see 3.2 and 6.3).
- (e) Degree of seasoning required (see 3.3).
- (f) Moisture content required for lumber 8/4 inches in thickness (see 3.3.2.1 and 3.3.2.2).
- (g) When moisture content of type II lumber excluding A and B finish grades other than as specified is required (see 3.3.2.2).
- (h) When lumber is to be used for framing (see 3.3.2.2).
- (i) Surfacing required (see 3.5).
- (j) When preservative treatment is required and service conditions (see 3.6.1).
- (k) When fire retardant treatment is required (see 3.6.2).
- (l) When anti-stain treatment is required (see 3.6.3).
- (m) Certification if other than as specified (see 3.7).
- (n) Marking if other than as specified (see 3.8)
- (o) Unitization level and methods (see 5.1).

6.3 Thickness, width and length. In the case of type I hardwood lumber, thickness are normally in accordance with NHLA Rules (see MIL-HDBK-7 and U.S. Department of Agriculture Wood Handbook No. 72). Minimum and percentages of widths and lengths of standard cutting grades may be specified. If assorted widths or assorted lengths are ordered in the case of type II hardwood lumber, percentages of each width or length may be specified. See the introduction to the C5500-IL Federal Supply Catalog, Lumber, Millwork, Plywood and Veneer, for further information.

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6.4 Surfacing. Type I hardwood lumber is produced either rough or surfaced-two-sides (S2S); type I lumber therefore should not be ordered S4S.

6.5 Anti-stain treatment applicability. Under certain circumstances, such as overseas shipments or extended periods of storage, an anti-stain treatment may be necessary for unseasoned lumber to inhibit the penetration of undesirable stains. The need for such treatment (see 3.6.3), shall be specified on the order [see 6.2(1)].

6.6 Subject term (key word) listing.

Grades
Plywood
Species
Stain
Treatment

6.7 Changes from previous issue. Asterisks (or vertical lines) are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Custodians:

Army – CR4
Navy – YD
Air Force – 99

Preparing activity:
DLA-IS

(Project 5510-2008-001)

Review activities:

Army – CE
Navy – MC, OS, SH

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <http://assist.daps.dla.mil> .