INCH-POUND

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SUPERSEDING
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MILITARY SPECIFICATION

HARDWOOD COMPONENTS, FABRICATED: FOR MILITARY VEHICLES

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers hardwood components fabricated for military vehicles (see 6.1 and 6.4).

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

FEDERAL

TT-W-572 - Wood Preservative: Water-Repellent.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: US Army Tank-Automotive Command, ATTN: AMSTA-GDS, Warren, MI 48397-5000, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 2510

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

MILITARY

MIL-W-15154	- Wood Laminates, Oak (for Ship and Boat Use).
MIL-A-22397	- Adhesive, Phenol and Resorcinol Resin Base (for Marine Service Use).
MIL-C-46168	- Coating, Aliphatic Polyurethane Chemical Agent Resistant.
MIL-C-53039	- Coating, Aliphatic Polyurethane, Single Component Chemical Agent Resistant.

STANDARDS

MILITARY

MIL-STD-130	- Identification Marking of US Military Property.
MIL-STD-45662	- Calibration Systems Requirements.

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Naval Publications and Forms Center, (ATTN: NPODS), 5801 Tabor Avenue, Philadelphia, PA 19120-5099.)

2.2 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified the issues of documents which are DoD adopted are those listed in the issue of DODISS cited 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 (see 6.2).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D9	- Standard Definitions of Terms Relating to Wood.
ASTM D2016	- Moisture Content of Wood, Test Method for.

(Application for copies should be addressed to American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA)

C-2 - Preservative Treatment by Pressure Process.
P-8 - Standard for Oil-borne Preservatives.

(Application for copies should be addressed to the American Wood Preservers Association P.O. Box 849, Stevensville, MD 21666.)

NATIONAL HARDWOOD LUMBER ASSOCIATION (NHLA)

Rules for the Measurement and Inspection of Hardwood and Cypress.

(Application for copies should be addressed to the National Hardwood Lumber Association, P.O. Box 34518, Memphis, TN 38134.)

(Non-government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other information services.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific document exemption has been obtained.

3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.2) in accordance with 4.4.

3.2 Hardwood and treatment.

3.2.1 Hardwood. Components shall be fabricated only from maple, "Quercus" red or white oak and "Fraxinus, Americana" white ash. The use of species grown in lowlands or swamps is unacceptable. Hardwood shall conform to NHLA Rules for Measurement and Inspection of Hardwood and Cypress. Wood shall be free of characteristics and defects (see 3.2.3) that render it unsuitable for the intended use. Allowed usage and acceptable laminations are as follows (see 4.8.1):

Sills bolsters	Floor-boards platforms	Rub rails	Panels	Tailgate and Racks	Troop seats, lazy backs	Bow, stave vertical	Bow, stave horizontal	Blocks and 1/ cleats
SL	SJ	SLJ	SJ	S	S	S	S	S

1/ Covers longitudinal - sill filler blocks, floor cleats, and compartment cleats.

Where:

S-Solid stock only. (For front and side panels and tail gates, horizontal joints will be permitted.)
L-Laminated stock.
J-Jointed stock.

3.2.1.1 Hardwood moisture content. Unless otherwise specified (see 6.2), material should be air-dried or kiln-dried to a maximum moisture content of 15 percent (%) or less at the time of treatment. ASTM D2016 defines the test method (see 4.8.2).

3.2.1.2 Laminated or jointed hardwood components. Laminated or jointed construction of components, normally cut from one solid piece of lumber, will be permitted as specified in 3.2.1, or in the applicable body specification, but shall be subject to specific approval. Such glued, laminated components, whether purchased by the contractor as dimension stock unworked, already worked to pattern, or to be incorporated in completed subassemblies, shall be manufactured by a laminator whose manufacturing facilities and products have been approved by the procuring agency. Any joints permitted shall be supported by transverse members as specified in 3.3.3.1 (see 4.8.3).

3.2.1.2.1 Gluing. Gluing of hardwood components shall be in accordance with MIL-W-15154, using adhesive conforming to MIL-A-22397 (see 4.8.3.1.1).

3.2.1.2.2 Dimension lumber. Dimension lumber, used in the fabrication of any one glued piece or component, shall be of the same species of hardwood. It shall also be matched for density and for direction of grain in each piece of wood. Location of knots or holes in one ply or lamina, with respect to knots or holes in the mating plies, shall not be matched to assure maximum strength of the finished part (see 4.8.3.1.2).

3.2.2 Hardwood preservative treatment. Hardwood preservative treatment shall be treatment with a water-repellent Copper Naphthenate in solvent solution to a net minimum retention of .040 pound per cubic foot (pcf) of copper measured per AWPA standard C-2, P-8, assay method, or until refusal. Treatment shall be accomplished after all cutting, machining, or trimming has been accomplished. At the time of treatment, the moisture content shall be in accordance with requirements noted in 3.2.1.1. Refusal treatment is defined as follows:

> The pressure and treatment during the pressure period shall be maintained constant or increased within a range consistant for the material being treated until the quantity of preservative absorbed during each of two consecutive half-hour periods is not more than 2% of the amount already injected.

If further modification is required after treatment, any new exposed surfaces from machining, cutting, or trimming shall be treated with preservative. After treatment the wood shall provide a paintable surface as described by the paintability requirement of TT-W-572 and tested in accordance with the paintability and drying time test of TT-W-572. The species of wood tested shall be the same as furnished under the contract and paint shall conform to MIL-C-46168 or MIL-C-53039 (see 4.8.4).

3.2.3 Hardwood defects. Except as otherwise specified in 3.5.1, and in connection with specified items in 3.3 through 3.3.8, fabricated wood components shall conform to the requirements of 3.2.3.1 and 3.2.3.2. Technical terms used in these paragraphs are defined in ASTM D9 (see 4.8.5).

3.2.3.1 Primary hardwood defects. Fabricated wood components shall be entirely free from the following defects as noted and defined in 3.2.3 through 3.3.8 and 3.5 (see 3.5.1 and 4.8.5):

Warp (see 3.5.1).
Evidence of decay.
Shakes or checks.
Knot clusters or large open knots.
Slope of grain exceeding 1 inch in 10 inches.
Combinations of characteristics or imperfections (see 3.2.3.2) that would result in decrease in strength and serviceability or be otherwise detrimental to the required service.

3.2.3.2 Secondary hardwood defects. Fabricated wood components shall be free from the following defects (see 3.2.3 and 4.8.5):

Burls.
Small and medium season checks.
Small, sound, tight knots or small open knots.
Sound stain or discoloration.
Sound streaks.
Bark streaks and pockets.
Wormholes, except buckshot wormholes in clusters.
Bird peck.
Bird's-eye.
Slight wane on small pieces and medium wane on large pieces.
Slight variations in thickness.
Small end checks.
Short splits.
Slight honeycomb.
Occasional torn grain.
Occasional rough or hit-and-miss surfacing.
Other definitely minor imperfections.

3.2.3.3 Quality impairment. Secondary defects (see 3.2.3.2) shall not impair the quality of joints or laminations of the fitting of hardware, and when practicable, shall not be located on normally visible surfaces of the assembled body. No knot, knotholes, split, or similar defect shall be permitted at or near a bolt, nail, screw, glued joint, machined joint, mortise, or notch, where it may impair the strength and serviceability of the part.

3.3 Design and construction. Design and construction of hardwood components shall conform to applicable drawings and data supplied by the procuring activity (see 6.2). Hardwood components shall additionally meet the construction requirements specified in 3.3.1 through 3.3.8 (see 4.8.6).

3.3.1 Sills. No solid piece, or ply of laminated piece, shall have a knot-hole larger than one-fourth of the width of the face on which it appears. In any event, knots shall be not larger than 1 1/2 inches in diameter for sound knots, and 5/8 inch in diameter for unsound knots or holes, and shall not extend through the thickness of the piece. The sum of the diameters of all sound knots, unsound knots, and holes in each half length of each sill shall not exceed the width of the face. The total of the diameters of unsound knots and holes in each half length shall not exceed 50% of the width of the face. Large season checks will be permitted in solid sills, when they do not exceed 12 inches in length and 1/2 inch in depth, and when the aggregate of all such checks does not exceed one-half of the total length of the piece. No such season checks shall be directly opposite each other. Large season checks shall not be permitted in laminated sills (see 4.8.6).

3.3.2 Bolsters. Construction requirements for sills specified in 3.3.1 shall apply to bolsters, except that no sound knot larger than 1/2 inch in diameter shall be nearer the tension edge of the piece than its own diameter. Also, no unsound knot or hole larger than 1/4 inch in diameter shall be nearer either edge than its own diameter and shall not extend through the piece (see 4.8.6).

3.3.3 Floorboards/platforms. No unsound knot or hole shall be permitted. Sound knots will be permitted, up to and including 1 1/4 inches in diameter. The sum of the diameters of all sound knots in any one-fourth length of the piece shall not exceed the width of the piece, nor shall any two knots of 1 inch or more in diameter be closer to each other than 8 inches. End splits, not exceeding the width of the piece in length, will be permitted. Hit-or-miss surfacing, with skips not over 1/16 inch deep between them, will be permitted on the underside of floorboards, but all floorboards shall be full thickness at the ends and over cross bolsters (see 4.8.6).

3.3.3.1 Joints. Joints approved for use (see 3.2.1.2) shall be of approved scarf or finger type, shall be located only where adequately supported by cross-members (bolsters), and shall be so staggered as to assure maximum floor strength (see 4.8.6).

3.3.3.2 Wood destroying organism defects. In hardwood floorboards only, open channels not more than 1/8 inch deep and 5 inches long will be permitted on the face of the board. On the underside of the board, channels shall be not greater than 1/4 inch wide and 8 inches long. No defects shall extend through the thickness of the piece.

3.3.4 Rub rails. No solid piece, or ply of laminated piece, shall have a sound knot over 1 inch in diameter, or an unsound knot or hole over 1/2 inch in diameter. The outer edge of the rub rail shall be free of knots and holes. The sum of the diameters of all sound knots, unsound knots, and holes in any half length shall not exceed 3 inches. The sum of the diameters of all unsound knots, and holes shall not exceed 2 1/2 inches. Each end may have one split not exceeding 2 inches in length, or two such split ends averaging not more than 1 1/2 inches in length. No split is permitted within 2 inches of the outside edge, with reference to the body of the piece (see 4.8.6).

3.3.5 Panels. No piece shall contain a hole or unsound knot. No sound knot or rough defect shall be permitted on upper edges of front and side panels. Hit-or-miss surfacing, with skips 1/32 inch deep between them, shall be permitted only on the inside surface of the tailgate (see 4.8.6).

3.3.6 Tailgate. No piece shall contain any open knot, unsound knot, or hole. Hit-or-miss surfacing, with skips not over 1/32 inch deep between them shall be permitted only on the inside surface of the tailgate (see 4.8.6).

3.3.7 Troop seats and lazy backs. Troop seats and lazy backs shall be made of solid stock, without joints. Each piece shall be free of splinters and other characteristics which may injure personnel, unsound knots, holes, sound knots over 3/4 inch in diameter, and splits. Slight wane shall be permitted on underside of piece only. Hit-or-miss surfacing, with skips not over 1/32 inch deep between them, will be permitted on troop seat slats opposite the counterbored side (see 4.8.6).

3.3.8 Racks. Racks shall be made of solid stock, without joints. No unsound knots or holes shall be permitted. Sound knots will be permitted up to and including 3/4 inch in diameter. The sum of the diameters of all sound knots, in any one-fourth length of the piece, shall not exceed the width of the piece. Any two knots of 5/8 inch or more in diameter, shall not be closer to each other than 5 1/2 inches. Hit-or-miss surfacing, with skips not over 1/32 inch deep between them, will be permitted on the surface of the piece opposite to counterbored sides (see 4.8.6).

3.4 Marking. Unless otherwise specified on the wood component drawing, physical and identification markings of wood components shall be in accordance with MIL-STD-130. Fabricators of dimensional lumber for cargo bodies shall stamp their identification and date of manufacture (month and year) so that after assembly their identification marks shall be located approximately as listed below (see 4.8.7):

Front panel	- Outside: 6 inches from left-hand end and 6 inches from bottom.
Side panel	- Outside: 6 inches from front end and 7 inches from bottom.

Rub rails	- Top: 6 inches from front end.
Tailgate	- Outside: center, 4 inches below top.
Floorboards/ platforms	- Top: 6 inches from front end.
Front bolsters	- Side: facing rear, 6 inches from both ends.
Intermediate bolsters	- Side: 6 inches from left-hand end.
Rear bolsters	- Front side: 6 inches from left-hand end.
Sills	- Both sides: 6 inches in front of shear clearance cut.
Seat slats	- Bottom: 6 inches from rear end.
Roof side bows	- Center: two places, opposite sides.

3.5 Workmanship. Workmanship shall be of the quality necessary to produce fabricated hardwood components free of defects which affect serviceability and appearance (see 4.8.8).

3.5.1 Quality impairment. Defects in wood components (see 3.2.3) shall not impair the quality of joints or laminations, or the fitting of hardware, and when practicable shall not be located on normally visible surfaces of the assembled body. No knot, knothole, split, or similar defect shall be permitted at a bolt, nail, screw, glued joint, machined joint, mortise, or notch, where it may impair the strength and serviceability of the component (see 4.8.9). Maximum warping shall not exceed 1/2 inch per 12 foot length as defined in NHLA Rules for the Measurement of Hardwood and Cypress (see 4.8.9).

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order (see 6.2), the contractor is responsible for the performance of all inspection requirements specified. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified, unless disapproved by the Government. The Government reserves the right to perform or witness any of the inspections set forth in the specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of this specification and the contract. Sampling in quality conformance does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

4.1.2 Inspection equipment. Unless otherwise specified in the contract, the supplier is responsible for the provision and maintenance of all inspection equipment necessary to assure that suppliers and services conform to contract requirements. Commercial, modified commercial, or supplier designed inspection equipment or measuring set-ups must be capable of repetitive measurements to an accuracy of ten percent of the component tolerance. Calibration of inspection equipment shall be in accordance with MIL-STD-45662.

4.1.3 Certification. Where certification is required by the specification or production contract or purchase order to verify material, processes, or component conformance to the specification, the contractor shall furnish or make available such certification with documented test results and performance and analytical data.

4.1.4 Contractor's Quality Assurance System. Unless otherwise specified by the procuring activity, the production contractor shall have and maintain an effective inspection and quality assurance system, acceptable to the Government for the production items. A current written description of the processes shall be submitted or made available to the contracting officer prior to initiation of production in accordance with the requirements contained or referenced in the production contract or purchase order. The production contractor will not be restricted to the inspection station or the method of inspection listed, provided that an equivalent control is included in the approved quality assurance procedure. The production contractor shall notify the Government of, and obtain approval for, any change to the written procedure that might affect the degree of control required by this documentation or other applicable documents referenced herein.

4.1.5 Government verification. All quality assurance operations performed by the contractor will be subject to Government verifications at unscheduled intervals. Verification will consist of (a) surveillance of the operation to determine that practices, methods, and procedures of the written quality assurance system plan are being properly applied and (b) Government product inspection to measure the quality of the product offered for acceptance. Deviation from the prescribed or agreed upon procedures, or

instances of poor practices which might have an adverse effect upon the quality of the product, will immediately be called to the attention of the contractor. Failure of the contractor to promptly correct deficiencies shall be cause for suspension of acceptance until corrective action has been made, or until the conformance of the product to prescribed criteria has been demonstrated.

4.2 Classification of inspection. The inspection requirements specified herein are classified as follows:

a. First article inspection (see 4.4).
b. Quality conformance inspection (QCI) (see 4.6).
c. Control tests (see 4.7).

4.3 Inspection conditions. Unless otherwise specified herein, all inspections shall be performed under the following standard (room) ambient conditions:

a. Temperature: 73 ± 18°F (23 + 10°C).
b. Relative humidity: 50 ± 30%.
c. Barometric pressure: 28.5 + 2 inHg (725 + 50 mmHg).
- 3 - 75

4.4 First article inspection. When first article inspection is required (see 3.1), the Government shall select 3 parts produced under the production contract for first article inspection. First article inspection shall be conducted by the contractor under the surveillance of the Government. The place designated for the first article shall be approved by the procuring activity. The inspections and tests to be performed shall be as specified in table I. Approval of the first article sample by the Government shall not relieve the contractor of his obligation to supply parts that are fully representative of those inspected as a first article sample. Any changes or deviation of the production units from the first article sample shall be subject to the approval of the contracting officer.

4.4.1 First article inspection failure. Examination and test item deficiencies found during, or as a result of, the first article test shall be cause for rejection of the items until evidence has been provided to the contracting officer, by the contractor, that corrective action has been taken to eliminate the deficiencies. Any deficiency found during, or as a result of, the first article test shall be evidence that all items already produced prior to completion of the first article test are similarly deficient unless evidence satisfactory to the contracting officer is furnished by the contractor. Such deficiencies on all items shall be corrected by the contractor. The Government will not accept products until first article inspection is completed to the satisfaction of the Government.

TABLE I. Classification of inspections.

Title	Requirement	Inspection	First Article	Quality conformance Examination	Quality conformance Control Tests
Hardwood Check	3.2.1	4.8.1	X	X	
Hardwood moisture content	3.2.1.1	4.8.2	X		X
Hardwood moisture content check	3.2.1.1	4.8.2.1		X	
Laminated or jointed hardwood components	3.2.1.2	4.8.3	X		X
Laminated or joint hardwood component check	3.2.1.2	4.8.3.1		X	
Gluing check	3.2.1.2.1	4.8.3.1.1	X	X	
Dimension lumber check	3.2.1.2.2	4.8.3.1.2	X	X	
Hardware preservation treatment	3.2.2	4.8.4	X		X
Hardwood preservation treatment check	3.2.2	4.8.4.1		X	
Defects	3.2.3, 3.2.3.1, 3.2.3.2	4.8.5	X	X	
Design and construction	3.3 thru 3.3.8	4.8.6	X	X	
Marking	3.4	4.8.7	X	X	
Workmanship	3.5	4.8.8	X	X	
Quality Impairment	3.5.1	4.8.9	X	X	
Packaging	5.1	4.9	X	X	

4.5 Inspection Provision.

4.5.1 Examination. Visual, dimensional, and testing shall consist of examination of the inspection sample for conformance to the applicable drawings, processes, and the requirements of this specification. Examinations shall be performed utilizing the classification of defects in table II.

4.5.2 Recurring deficiencies. A deficiency is recurring when the same defect occurs more than once in the same sample, or when the defect occurs in two successive samples. A defect may be considered recurring when the historical inspection records ("P" chart or approved equivalent) reflect such a condition. Recurring deficiencies shall be cause for the entire lot or lots to be inspected for the recurring deficiencies. The deficiencies shall be corrected by the contractor when found. Samples shall be subjected to the inspections and tests specified in table I.

4.5.3 Unclassified characteristics. All unclassified defects having no bearing on function, safety, interchangeability, or life, but which are considered departures from good workmanship, shall be noted in writing. Workmanship deficiencies falling within this category and recurring in five consecutive lots, or in ten lots or more within a 30-day period, shall be added to the defect characteristics. This deficiency may be deleted from the classification of characteristics when five consecutive lots are found free of the deficiency.

4.5.4 Failure. Failure of the sample shall be cause for rejection of the lot. The Government inspector shall reject the entire lot and shall stop acceptance of subsequent lots until evidence has been provided by the contractor that corrective action has been taken to validate the corrections to insure an acceptable lot.

TABLE II. Classification of defects.

Category	Characteristics	Defects	Method of examination
101	Dimensions	Affects interchangeability or assembly.	Visual and Standard measuring equipment (SME)
102	Preservative	Insufficient amount, improper application, process, or type.	Visual, SME and operational
103	Joints	Improper location, number, or type.	Visual and SME
104	Material	Improper type species, defects described in 3.2.3, defects greater than allowable deficiencies described in 3.3 thru 3.3.8	Visual and SME
105	Moisture content	Improper amount.	Visual and SME

TABLE II. Classification of defects - Continued.

Category	Characteristics	Defects	Method of examination
106	Laminations	Density improper, grain improper, knots or holes aligned.	Visual and SME
107	Gluing	Improper type, insufficient amount, improper application.	Visual
108	Marking	Improper position, missing.	Visual
109	Workmanship	Improper workmanship as defined by 3.5.	Visual

4.6 Quality conformance inspection (QCI).

4.6.1 QCI and acceptance. To determine conformance to section 3 in its entirety, each completed lot shall be examined and inspected as specified in tables I and II by the contractor. Each lot shall be fully inspected for compliance and correction of defects shall be made as required. The lot shall be reinspected as necessary to validate corrections and to assure an acceptable lot.

4.6.3 Failure. If a lot fails to pass any acceptance test or inspection specified in table I, the Government inspector shall reject the entire lot and shall stop acceptance of subsequent lots until evidence has been provided by the contractor that corrective action has been taken to validate the corrections to insure an acceptable lot.

4.7 Control test.

4.7.1 Frequency. The Government shall select at random, one lot out of each ten lots produced or one lot for each month of production for the control tests and inspections specified in tables I and II. These tests and inspections shall be performed by the contractor and witnessed by the Government inspector.

4.7.2 Failure. If the lot selected fails to pass any of the control tests and inspections, the Government inspector shall stop acceptance, examination, and testing on subsequent lots until such time as conditions causing the failure have been remedied. Any defect found during or as a result of the test and inspection shall be prima facie evidence the lot(s) accepted subsequent to the previous acceptable control test lot(s) are

similarly defective unless evidence satisfactory to the contracting officer is furnished by the contractor that there are not similar defects. Such defects on all lot(s) shall be corrected by the contractor at no cost to the Government. The contractor shall correct defects on all lot(s) represented by the failed control test lot(s). Another lot(s) with corrective action implemented shall be subjected to the control test.

4.8 Examinations, inspections, and tests.

4.8.1 Hardwood check. The wood shall be checked to assure the proper species are supplied to determine conformance to the requirements of 3.2.1.

4.8.2 Hardwood moisture content. The wood shall be tested per ASTM D2016 and meet the requirements specified by 3.2.1.1.

4.8.2.1 Hardwood moisture content check. The moisture content certification shall be checked to determine conformance to the requirements specified by 3.2.1.1.

4.8.3 Laminated or jointed hardwood components. Laminated or jointed construction shall be checked and tested to determine conformance to the requirements specified by 3.2.1.2 through 3.2.1.2.2.

4.8.3.1 Laminated or jointed hardwood components check. Any authorized laminated or jointed components shall be checked for adequacy of joints and laminations, to determine conformance to the requirements specified by 3.2.1.2.

4.8.3.1.1 Gluing check. The certification for the gluing of hardwood and gluing shall be checked to determine conformance to the requirements of 3.2.1.2.1.

4.8.3.1.2 Dimension lumber check. The dimension lumber shall be checked for conformance to the requirements specified by 3.2.1.2.2.

4.8.4 Hardwood preservative treatment. The hardwood preservative treatment shall be monitored, tested, and checked for conformance to the requirements specified by 3.2.2.

4.8.4.1 Hardwood preservative treatment check. The hardwood preservative treatment certification shall be checked for conformance to the requirements specified by 3.2.1.3. The items of the lot shall be checked for preservative coverage as specified by 3.2.2.

4.8.5 Defects. Each lot shall be checked for conformance to the requirements specified by 3.2.3, 3.2.3.1, and 3.2.3.2.

4.8.6 Design and construction. Each lot shall be checked for conformance to the requirements specified by 3.3 through 3.3.8.

4.8.7 Marking. Each lot shall be checked for conformance to the requirements specified by 3.4.

4.8.8 Workmanship. Each lot shall be checked for conformance to the requirements specified by 3.5.

4.8.9 Quality impairment. Each lot shall be checked for conformance to the requirements specified by 3.5.1.

4.9 Packaging. Preservation, packaging, packing and marking shall be checked for conformance to 5.1 of this specification and the contract or purchase order.

5. PACKAGING

5.1 Preservation, packaging, packing, and marking. Preservation, packaging, packing, and marking for the desired level of protection shall be in accordance with the applicable packaging requirements specified by the contracting authority (see 4.9 and 6.2).

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The fabricated wood components covered by this specification are intended for use in military vehicle bodies.

6.2 Acquisition requirements. Acquisition documents should specify the following:

a. Title, number, and date of this specification.
b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.2).
c. If first article is required (see 3.1).
d. If responsibility for inspection and the place of inspection is other than the contractor's (see 4.1).
e. First article inspection categories (see 6.3), sample size for each category, and specific tests for each sample.
f. If responsibility for inspection and the place of inspection is other than the contractor's (see 4.1).
g. If responsibility for inspection equipment shall be other than specified (see 4.1.2).
h. First article inspection, if other than as specified (see 4.4).

i. Arrangements for first article inspection, approval of test results, and disposition of first article (see 6.3).
j. Government's rights and conditions for waiving first article inspection (see 6.3).
k. Sample size for QCI examination and tests (see 4.6).
l. QCI acceptance criteria (see 4.6).
m. Control test sample size, frequency of tests, and disposition of lots covered by the sample size and of defective items (see 4.7).
n. Selection of applicable level and packaging requirements (see 5.1).
o. Categories of inspection of packaging, sample size for each category, approval of test results, and disposition of defective items (see 4.9).
p. If inspection conditions shall be other than as specified (see 4.3).
q. If moisture content is other then specified (see 3.2.1.1).
r. Applicable drawings and data (see 3.3).

6.3 First article. When first article inspection is required, the contracting officer should provide specific guidance to offerors whether the first article samples should be preproduction samples, initial production samples, or first production items and for each inspection category, specify the number of samples to be inspected and the specific tests to be performed on each sample. The contracting officer should also include specific instructions in acquisition documents regarding arrangements for examination, approval of first article test results, and disposition of first articles. Invitations for bids should provide that the Government reserves the right to waive the requirement for samples for first article inspection 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. Bidders should not submit alternate bids unless specifically requested to do so in the solicitation.

6.3.1 Guidance on applying first article. When a first article sample is required, at least three parts produced under the production contract should be subjected to first article inspection.

6.4 Definition. Terms relating to wood as used in this specification are defined in ASTM D9 and the NHLA Rules for the Measurement and Inspection of Hardwood and Cypress.

6.5 Cross-reference. Class 1, hardwood, has been replaced by hardwood and is limited in this specification to the species listed in 3.2.1. Class 2, wood substitute and the use of imported lumber species have been deleted from this specification and are controlled under separate specifications.

6.6 Subject term (key word) listing.

CARC
Dimension lumber
Fabricated wood vehicle components
Gluing of vehicle components, wood
Preservative treatment, wood
Transport vehicle components, wood
Wood defects

6.7 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes. Also see paragraph 6.5.

6.8 AMC policy on AQLs/LTPDs. This specification is certified to be in compliance with current Army Materiel Command (AMC) policy for the elimination of AQLs/LTPDs (Acceptable Quality Levels/Lot Tolerance Percent Defectives) from military specifications.

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(Project 2510-A113)

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