[METRIC]
A-A-52520
September 26, 1995
SUPERSEDING
MIL-H-3912G
11 March 1991

COMMERCIAL ITEM DESCRIPTION

HARDWOOD; FLOORBOARDS AND PLATFORMS: FOR MILITARY VEHICLES (METRIC)

The General Services Administration has authorized the use of this commercial item description (CID) for all federal agencies.

1. SCOPE. This CID covers hardwood floorboards and platforms fabricated for military vehicles.

2. SALIENT CHARACTERISTICS

2.1 Materials. Unless otherwise specified herein, the materials used shall be in accordance with the manufacturer's materials specification for hardwood. The use of recovered materials made in compliance with regulatory requirements is acceptable providing all requirements of this CID are met (see 5.5).

2.1.1 Hardwood. Floorboards and Platforms shall be fabricated from species of domestic hardwoods, unless otherwise specified (see 6.2). Domestic hardwoods include species of maple, red or white oak, and American white ash (see table I). The use of species grown in lowlands or swamps is unacceptable. Hardwoods shall conform to NHLA Rules for the Measurement and inspection of hardwood and cypress lumber. Wood shall be free of defects that render it unsuitable for the intended use.

Beneficial comments, recommendations, additions, deletions clarifications, etc. and any other data which may improve this document should be sent by letter to: U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-TR-E, Warren, MI 48397-5000.

FSC 2510

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

TABLE I. Domestic hardwoods.

Common Name	Species	Genus
Maple	Red Maple Sugar or Hard Maple Black Maple Silver Maple	Acer, Rubrem Acer, Saccharum Acer, Nigrum Acer, Saccharinum
Red Oak	Northern Red Oak Black Oak	Quercus, Rubba Quercus, Velutina
White Oak	White Oak Bur Oak Chestnut Oak	Quercus, Alba Quercus, Macrocarpa Quercus, Prinus
Ash	White Ash	Fraxinus, Americana

2.2 Moisture content. Unless otherwise specified (see 6.2) material used shall be air dried or kiln dried to a maximum moisture content of 15 percent or less at time of treatment. This shall be verified when tested to ASTM D4444.

2.3 Preservative treatment. 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 the requirements noted in 2.2. Hardwood preservative treatment shall be a pressure treatment of light solvent solution of copper naphthenate, to a net minimum retention of .64 kilograms per cubic meter (Kg/m3) [0.040 pound per cubic foot (pcf)] of copper as measured by gauge or assay method for the zone of 0 to 15 millimeters (mm) (0 to 0.6 inch). The copper naphthenate used in the treating solution shall comply with AWPA P8. The solution shall contain 1 percent copper but not less than 34 grams of copper per gallon at 16 degrees Celsius (°C) [60 degrees Fahrenheit (°F)]. Hardwood preservative treatment shall be monitored, tested, and checked using the appropriate procedures of AWPA C2.

a. For white oak hardwood, treatment to refusal is allowable (see 6.3). The pressure and treatment during the pressure period shall be maintained constant or increased within a range consistence for the material being treated until the quantity of preservative during each of two consecutive half-hour periods is more than 2 percent of the amount already injected.

b. For domestic hardwood species an alternate non-pressure treatment is acceptable, if a high solvent solution of copper naphthenate is used, with a minimum net retention of .64 Kg/m3 (0.040 pcf) of copper as measured by the assay method for the zone of 0 to 15 mm (0 to 0.6 inches). The copper naphthenate used in the treating solution shall comply with AWPA P8. The solution shall contain 2 percent copper but not less than 68 grams of copper per gallon at 16°C (60°F).

c. If further modification is required after treatment, any new exposed surfaces from machining, cutting or trimming shall be treated with preservative.

d. After treatment, the wood shall be free of tack and shall provide a paintable surface following 72 hours of drying. The surface of the treated dried wood shall be free from waxy, greasy, or oily deposit removable by rubbing with the finger and free from any glossy film resembling that of varnish. The paintable surface shall be compatible with Chemical Agent Resistant coatings used by the military.

2.4 Hardwood defects. Material used in the fabrication of floorboard components shall conform to the requirements of 2.4.1 through 2.4.6.

2.4.1 Knots. No unsound knot or hole shall be permitted. Sound knots will be permitted, up to and including 25.4 mm (1.0 inch) in diameter. The sum of the diameters of all sound knots in any one-fourth length of a piece shall not exceed the width of the piece, nor shall any two knots of 25.4 mm (1.0 inch) or more in diameter be closer to each other than 20 centimeters (cm) (8 inches).

2.4.2 End splits. End splits, exceeding the width of the piece in length, shall not be permitted. End splits shall only be allowed in one end of board.

2.4.3 Warping. Maximum warping shall not exceed 12.7 mm (0.5 inch) per 30.5 cm (12 inches) length as defined in NHLA Rules for the Measurement of Hardwood and Cypress.

2.4.4 Hit-or-miss surfacing. Hit-or-miss surfacing, with skips not over 1.6 mm (0.06 inch) deep between them, shall be permitted on the underside of the floorboards, but all floorboards shall be full thickness at the ends and over the cross bolsters.

2.4.5 Wood destroying organism defects. Open channels not more than 3 mm (0.13 inch) deep and 12.7 cm (5 inches) long will be permitted on the face of the board. On the underside of the board, channels shall be not greater than 6 mm (0.25 inch) wide and 20 cm (8 inches) long. No defects shall extend through the thickness of the piece.

2.4.6 Secondary hardwood. Fabricated wood components shall be free from the following characteristics or imperfections to the extent that they shall not decrease the strength or serviceability or be otherwise detrimental to the required service of the component.

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

2.5 Design and construction. Design and construction of floorboards and platforms shall conform to the applicable drawings and data supplied by the procuring activity (see 6.2).

2.5.1 Joints. Joints shall be of approved scarf or finger type, and shall be located only where adequately supported by cross-member (bolsters), and shall be so staggered as to assure maximum floor strength. Jointed construction of floorboard components, normally cut from one solid piece of lumber, shall be subjected to specific approval.

2.5.2 Gluing. Gluing of floorboards shall be conducted using a phenol and resorcinal base adhesive of long time durability and suitable for marine use. The adhesive bond shall be of high strength and resistant to salt water, extreme shrinking and swelling. The adhesive shall be applied uniformly to both contact faces. The amount of adhesive spread shall be sufficient to ensure a permanent bonding. At time of gluing, the temperature of lumber materials and ambient air temperatures shall be 24 ± 8°C (75 ± 15°F). The surfaces to be bonded shall be free of oil, dirt, crayon marks, and other foreign material which may interfere with bonding of the adhesive. Application of pressure to the glue lines shall be adequate so as to uniformly apply and hold a glue line pressure of 1207 ± 172 kilopascals (kPa) [175 ± 25 pounds per square inch (psi)] throughout the cure.

2.5.3 Dimensional lumber. Dimensional lumber, used in the fabrication of any one glued piece or component, shall be of the same species of hardwood. It shall be matched for density and for direction of grain in each piece of wood.

2.5.4 Quality impairment. Defects in wood components see (2.4) shall not impair the quality of the joint or the fitting of hardware, and when practicable shall not be located on the normally visible surface of the assembled body. No knot 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.

2.6 Identification and marking. Unless otherwise specified in applicable engineering drawings (AEDs), identification and marking of the lumber shall be permanent and legible and shall include, as a minimum, the AED part number, the manufacturer's CAGE code and date of manufacture (month and year) so that after assembly their identification marks shall be located on the top surface and 15.2 cm (6 inches) from the front end of the component.

3. REGULATORY REQUIREMENTS. The offeror/contractor is encouraged to use recovered materials in accordance with Public Law 94-580 to the maximum extent practicable.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. The contractor is responsible for the performance of all inspections (examinations and tests).

4.2 Contractor certification. The contractor shall certify and maintain substantiating evidence that the product offered meets the salient characteristics of this commercial item description and that the product conforms to the producer's own drawings, specifications, workmanship standards, and quality assurance practices. Items with known defects shall not be submitted for Government acceptance. The Government reserves the right to perform or witness any of the inspections it deems necessary to insure supplies and services conform to prescribed requirements.

5. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or order (see 6.2).

6. NOTES

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

6.1 Addresses for obtaining copies of referenced documents.

6.1.1 Industry documents. Copies of ASTM D4444 "Standard Test Methods for Use and Calibration of Hand-Held Moisture Meters" can be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103. Copies of AWPA C2 "Lumber, Timbers, Bridge Ties and Mine Ties, Pressure Treatment" and AWPA P8 "Standards for Oil-Borne Preservatives" can be obtained from the American Wood Preserves Association, P.O. Box 286 Woodstock, MD 21163-0286. Copies of "NHLA Rules for the Measurement and Inspections of Hardwood and Cypress Lumber" can be obtained from the National Lumber Association, P.O. Box 34518, Memphis, TN 38134.

6.2 Ordering data. Acquisition document must specify the following:

a. Title, Number and date of this CID.
b. Issue of DODISS to be cited in the solicitation and, if required, the specific issue of the individual document referenced.
c. Selection of applicable levels of packaging requirements.
d. If moisture content is other than as specified.
e. Applicable drawings and data.
f. If wood species are other than as specified.

6.3 Definitions.

a. Refusal treatment. Treatment of wood under specified conditions until the quantity of preservatives absorbed in a given time is not more than a prescribed percentage of the amount already injected.
b. Sound knot. A knot that is solid across its face, at least as hard as the surrounding wood and shows no indication of decay.

6.4 Cross reference data. Hardwood; floorboards and platforms conforming to this CID are interchangeable/substitutable with hardwood; floorboards and platforms conforming to MIL-H-3912G.

MILITARY INTERESTS:

Custodians:
Army - AT
Air Force - 99

Review Activities:
Army - MD, MI
Navy - MC
Air Force - 85
DLA - CS

CIVIL AGENCY COORDINATING ACTIVITY:
GSA-FSS

Preparing Activity:
Army - AT

(Project 2510-0127)