

METRIC

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MILITARY SPECIFICATION

TREAD RUBBER: FOR RECAPPING PNEUMATIC TIRES AND SOLID RUBBER TIRES, FOR INDUSTRIAL AND TRACK LAYING VEHICLES; PACKAGING AND PACKING OF

This specification is approved for use within the US Army Tank-Automotive Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the packaging and packing of tread rubber, supplied in rolls or strips, used for recapping or retreading pneumatic tires and solid rubber tires, for industrial and track laying vehicles.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards 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.

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.

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SPECIFICATIONS

FEDERAL

- L-P-378 - Plastic Sheet and Strip, Thin Gauge, Polyolefin.
- PPP-B-585 - Boxes, Wood, Wirebound.
- PPP-B-601 - Boxes, Wood, Cleated-Plywood.
- PPP-B-621 - Boxes, Wood, Nailed and Lock-Corner.
- PPP-B-636 - Boxes, Shipping, Fiberboard.

MILITARY

- MIL-P-116 - Preservation, Methods of.

STANDARDS

MILITARY

- MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.
- MIL-STD-129 - Marking for Shipment and Storage.
- MIL-STD-1190 - Minimum Guidelines for Level C Preservation, Packing and Marking.

(Copies of specifications and standards required by the contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

* 2.2 Other publications. The following document forms a part of this specification to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted shall be those listed in the issue of the DODISS specified in the solicitation. Unless otherwise specified, the issue of the documents not listed in the DODISS shall be the issue of the non-government documents which is current on the date of the solicitation.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

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

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

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* 2.3 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 shall take precedence. Nothing in this specification, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Pilot pack. A pilot pack, packed as for shipment in accordance with levels A and B of this specification, shall be submitted by the contractor for testing as specified in 4.3.

* 3.2 Materials. Materials shall be as specified herein and in referenced specifications (see 4.6.1).

* 3.2.1 Recycled, virgin and reclaimed materials. There are no requirements for the exclusive use of virgin materials. The use of recycled or reclaimed (recovered) materials is acceptable provided that all other requirements of this specification are met (see 6.3.1).

3.3 Preservation. Preservation shall be level A or C as specified (see 6.2).

3.3.1 Level A.

* 3.3.1.1 Rolls. Each roll of tread rubber shall be wound on a core or shell, fabricated of fiberboard, paperboard, or jute. Cores or shells shall be of a strength to resist internal roll pressure. Inside diameter of the core or shell shall be not less than 95.3 millimeters (mm). The core or shell length shall be not less than 12.7 mm greater than the overall width of the tread rubber. The core or shell shall be covered or coated with material that will not flake, powder, or dust, which provides protection against adhesion of the tread rubber thereto. Tread rubber for track laying vehicle wheels and industrial solid rubber tires shall be rolled with the backing outward. Tread rubber for solid tires shall be rolled with backing inward. Each roll of tread rubber shall be placed in a fiberboard container conforming to type CF or SF, class weather-resistant, style FOL of PPP-B-636, meeting the requirements for method III of MIL-P-116 (see 4.6.3). The axis of the core or shell shall be horizontal when the container is in normal storage position. Interior faces of the container which would contact the edges or unbacked faces of the tread rubber shall be covered or coated with protective material to prevent adhesion of the tread rubber thereto. Closure and strapping shall be in accordance with appendix I to PPP-B-636.

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* 3.3.1.2 Strips. Each strip of tread rubber shall be individually protected with polyethylene conforming to type I of L-P-378 of not less than 0.0381-mm thickness and in a manner that will prevent adhesion of the strips to each other or to the container, or coated with material which will provide equivalent protection. Polyethylene, when used, shall be of any color except waxy-white, translucent, or transparent.

3.3.2 Level C. Rolls or strips shall be preserved in accordance with MIL-STD-1190.

3.4 Packing. Packing shall be level A, level B or level C as specified (see 6.2).

* 3.4.1 Level A. Exterior containers shall contain only like items of the same size and type. The gross weight shall not exceed 90.7 kilograms, except when the gross weight of a box containing the material necessary to complete a single tire exceeds this value. Closure and strapping shall be in accordance with the appendix to the applicable box specification. When tested as specified in 4.6.4, the pack shall meet the requirements for the rough handling tests of MIL-P-116.

3.4.1.1 Rolls. The packaged rolls of tread rubber shall be packed in boxes conforming to PPP-B-621, class 2, class 3 of PPP-B-585, or PPP-B-601 (overseas type) and arranged in a manner so that the axis of the rolled core or shell is horizontal when the box is in normal position.

3.4.1.2 Strips. The packaged strips of tread rubber shall be packed in a wood box conforming to PPP-B-621, class 2 and in a manner so that the axis of the strip is horizontal when the box is in normal storage position. Each box shall contain the tread rubber necessary for one or more complete tires.

3.4.2 Level B. Tread rubber shall be packed in accordance with 3.4.1 through 3.4.1.2, except that packaged rolls of tread rubber (see 3.4.1.1) shall be packed in a wood box conforming to class 1 of PPP-B-585.

3.4.3 Level C. Packing shall be in accordance with MIL-STD-1190.

3.5 Marking. Marking interior packages and exterior containers shall conform to MIL-STD-129 including all shelf life markings, and be as specified herein.

* 3.5.1 Special marking. Interior packages and shipping containers shall be marked with a label 76 by 76 mm, with adhesive back, bearing the following legend in white letters not less than 6.35 mm high on a red background with a white border not less than 3.18 mm wide: STORE IN COOL DRY PLACE.

The label shall be applied to two exterior sides of the container. The following information shall be stencilled or printed beneath each label: DURING STORAGE THE AVERAGE AMBIENT AIR TEMPERATURE SHOULD NOT EXCEED 32°C.

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3.5.2 Handling marking. The top of two front sides of each shipping container shall be marked "THIS SIDE UP" with an arrow pointing to the top of the container.

3.5.3 Identification marking. Interior packages and exterior containers shall have the following identification marking on the front side of the container:

- a. Date of manufacture.
- b. Net weight (including cushion, tread rubber, and film backing).
- c. Die size.
- d. Perishable item.

3.5.4 Level A. Oversea exterior container markings shall be protected with a coating of transparent waterproof material as specified in MIL-STD-129.

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 as specified herein. 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 herein, 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 assure supplies and services conform to prescribed requirements.

* 4.2 Responsibility for compliance. All items must meet all requirements of sections 3. 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 assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of 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.

4.3 Pilot pack. The pilot pack (see 3.1) shall be inspected for the defects specified in 4.4.2, and subjected to the tests specified in 4.6.3 and 4.6.4.

4.3.1 Failure. Failure of the pilot pack to pass any inspection or test may be cause for the Government to refuse to allow production in quantity until it has been proved by retesting that the faults revealed by the tests have been corrected.

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4.4 Quality conformance inspection.4.4.1 Sampling.

4.4.1.1 Lot formation. An inspection lot shall consist of all camelback of one type and size, from one manufacturer, from an identifiable production period, submitted at one time for acceptance. When not specified by the acquisition activity (see 6.2), the minimum and maximum lot size shall be determined by the Government.

4.4.1.2 Sampling for examination. Samples for examination shall be selected at random from each lot in accordance with MIL-STD-105.

4.4.2 Examination.

4.4.2.1 Acceptable quality level. Each sample selected in accordance with 4.4.1.2 shall be examined to determine conformance to the following acceptable quality levels (AQL) on the basis of percent (%) defective:

| <u>Classification</u> | <u>AQL</u> |
|-----------------------|------------|
| Major | 1.0 |
| Minor | 2.5 |

4.4.2.2 Classification of defects. For examination purposes, defects shall be classified as listed in table I.

TABLE I. Classification of defects.

| Category | Defect | Method of examination |
|----------|---|-----------------------|
| Critical | None | |
| Major | <u>AQL 1.0% Defective</u> | |
| 101 | Improper preservation and packaging (see 3.3). | Visual |
| 102 | Illegible marking (see 3.5). | Visual |
| 103 | Incorrect marking (see 3.5). | Visual |
| Minor | <u>AQL 2.5% Defective</u> | |
| 201 | Inadequate strapping of exterior container (see 3.4.1). | Visual |
| 202 | Improper placement of tread rubber (see 3.4.1.1 and 3.4.1.2). | Visual |

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4.5 Control tests. Samples, prepared in accordance with levels A and B, shall be selected at a rate of 2 per month or 4 from each 400 produced, except that not more than 4 shall be selected in any given 30-day period. Samples shall be inspected for the defects specified in 4.4.2, and subjected to the tests specified in 4.6.3 and 4.6.4.

4.5.1 Failure. If a sample fails to pass a test specified herein, the Government inspector may stop acceptance of subsequent lots until objective evidence has been provided that corrective action has been taken to eliminate the condition which caused rejection.

4.6 Methods of inspection.

* 4.6.1 Materials. Conformance to 3.2 shall be determined by inspection of contractor records providing proof or certification that materials conform to requirements. Applicable records shall include drawings, specifications, design data, receiving inspection records, processing and quality control standards, vendor catalogs and certifications, industry standards, test reports, and rating data.

* 4.6.2 Defects. Conformance to 3.3, 3.4.1, 3.4.1.1, 3.4.1.2, and 3.5 shall be determined by visual examination for the defects listed in table I.

4.6.3 Packaging test. To determine conformance to 3.3.1.1, the package shall be subjected to the tests specified for method III of MIL-P-116.

4.6.4 Packing tests. To determine conformance to 3.4.1, the pack shall be subjected to the rough handling tests of MIL-P-116.

5. PACKAGING

This section is not applicable to this specification.

6. NOTES

* 6.1 Intended use. The use of this specification is for the packaging and packing of tread rubber for both domestic and overseas shipment. Tread rubber should not be placed in extended storage for any period exceeding 1 year from date of manufacture. Storage temperature should at no time exceed 43°C and should average no more than 32°C.

6.2 Ordering data. Acquisition documents should specify the following:

- a. Title, number, and date of this specification.
- b. Selection of the applicable level of preservation and packaging (see 3.3), packing (see 3.4), and commercial packaging, packing, and marking (see 3.6).
- c. If responsibility for inspection shall be other than as specified (see 4.1).
- d. Minimum and maximum lot size (see 4.4.1.1).

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* 6.3 Definitions.

* 6.3.1 Recovered materials. "Recovered materials" means materials that have been collected or recovered from solid waste (see 6.3.2).

* 6.3.2 Solid waste. "Solid waste" means (a) any garbage, refuse, or sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility; and (b) other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities. It does not include solid or dissolved material in domestic sewage, or solid or dissolved material in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Clean Water Act, (33 U.S.C. 1342 et seq.), or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.) (Source: Federal Acquisition Regulations, section 23.402).

* 6.4 Subject term (key word) listing.

Packaging
 Packing
 Pneumatic tires
 Recapping
 Retreading
 Rubber
 Solid rubber tires
 Tires
 Tread rubber.

* 6.5 Changes from previous issue. The margins of this specification are marked with asterisks to indicate where changes (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

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