

Approval Standard

Classification of Pallets
and Other Material Handling
Products as Equivalent to
Wood Pallets

Class Number 4996
February 2012



Member of the FM Global Group

Approval Standard for Classification of Pallets and Other Material Handling Products as Equivalent to Wood Pallets

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Foreword

The FM Approvals certification mark is intended to verify that the products and services described will meet stated conditions of performance, safety and quality useful to the ends of property conservation. The purpose of Approval Standards is to present the criteria for FM Approval of various types of products and services, as guidance for FM Approvals personnel, manufacturers, users and authorities having jurisdiction.

Products submitted for certification by FM Approvals shall demonstrate that they meet the intent of the Approval Standard, and that quality control in manufacturing shall ensure a consistently uniform and reliable product. Approval Standards strive to be performance-oriented. They are intended to facilitate technological development.

For examining equipment, materials and services, Approval Standards:

- a) must be useful to the ends of property conservation by preventing, limiting or not causing damage under the conditions stated by the Approval listing; and
- b) must be readily identifiable.

Continuance of Approval and listing depends on compliance with the Approval Agreement, satisfactory performance in the field, on successful re-examinations of equipment, materials, and services as appropriate, and on periodic follow-up audits of the manufacturing facility.

FM Approvals LLC reserves the right in its sole judgment to change or revise its standards, criteria, methods, or procedures.

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1 INTRODUCTION

1.1 Purpose

- 1.1.1 This standard states Approval requirements for the classification of pallets and other material handling products as equivalent to wood pallets.
- 1.1.2 Approval criteria includes, but are not limited to, performance requirements, marking requirements, examination of manufacturing facility(ies), audit of quality assurance procedures, and a follow-up program.

1.2 Scope

- 1.2.1 This standard sets fire performance requirements for pallets and other material handling products so that they can be classified as equivalent to wood pallets. This standard is also intended to determine the suitability for certain end use conditions of the product. Conditions such as strength, durability or deflection resistance etc. are evaluated as part of the Approval examination. However, it is the responsibility of the manufacturer to determine the suitability of the product for its specific end use and for the end user to confirm the product meets their needs.
- 1.2.2 This standard specifically addresses pallets and other material handling products.
- 1.2.3 Sprinkler protection requirements for pallets and other material handling products that are classified as equivalent to wood are not included or determined in this standard. See FM Global Data Sheets for guidelines.

1.3 Basis for Requirements

- 1.3.1 The requirements of this standard are based on experience, research and testing, and/or the standards of other organizations. The advice of manufacturers, users, trade associations and loss control specialists was also considered.
- 1.3.2 The requirements of this Standard reflect tests and practices used to examine characteristics of pallets and other material handling components for the purpose of obtaining FM Approval. These requirements are intended primarily as guides, and strict conformity is not always mandatory. Material handling components having characteristics not anticipated by this Standard may be FM Approved if performance equal, or superior, to that required by this Standard is demonstrated, or if the intent of the Standard is met. Alternatively, material handling components which meet all of the requirements identified in this Standard may not be FM Approved if other conditions that adversely affect performance exist or if the intent of this Standard is not met.
- 1.3.3 Meeting these requirements qualifies a product as an FM Approved pallet or other material handling products. Requirements prohibit component substitution or modification without prior authorization by FM Approvals.

1.4 Basis for Approval

Approval is based upon satisfactory evaluation of the product and the manufacturer in the following major areas:

- 1.4.1 Examination and tests on production samples shall be performed to evaluate the potential fire hazards of these pallets and other material handling products by assigning a fire classification to the submitted sample.
- 1.4.2 Examination and tests on production samples shall be performed to evaluate the physical performance of these pallets and other material handling products by confirming strength, durability and deflection resistance.
- 1.4.3 An examination of the manufacturing facilities and audit of quality control procedures is made to evaluate the manufacturer's ability to consistently produce the product which is examined and tested and the marking procedures used to identify the product. These examinations are repeated as part of FM Approvals' product surveillance program.

1.5 Basis for Continued Approval

Continued Approval is based upon:

- production or availability of the product as currently FM Approved;
- the continued use of acceptable quality assurance procedures;
- satisfactory field experience;
- compliance with the terms stipulated in the Approval report;
- satisfactory re-examination of production samples for continued conformity to requirements; and
- satisfactory surveillance audits conducted as part of FM Approvals' product follow-up program.

Also, as a condition of retaining Approval, manufacturers may not change a product or service without prior authorization by FM Approvals.

1.6 Effective Date

The effective date of an Approval standard mandates that all products tested for Approval after the effective date shall satisfy the requirements of that standard. Products FM Approved under a previous edition shall comply with the new version by the effective date or else forfeit Approval.

The effective date of this Standard is January, 1 2013 for compliance with all requirements.

1.7 System of Units

Units of measurement used in this Standard are United States (U.S.) customary units. These are followed by their arithmetic equivalents in International System (SI) units, enclosed in parentheses. The first value stated shall be regarded as the requirement. The converted equivalent value may be approximate. Appendix A lists the selected units and conversions to SI units for measures appearing in this standard. Conversion of U.S. customary units is in accordance with the American National Standards Institute (ANSI)/Institute of Electrical and Electronics Engineers (IEEE)/American Society for Testing Materials (ASTM) SI 10-97, "Standard for Use of the International System of Units (SI): The Modern Metric System."

1.8 Applicable Documents

The following standards, test methods, and practices are referenced in this standard:

ASTM D 1929 *Standard Test Method for Ignition Properties of Plastics*

ASTM E 2058 *Standard Test Method for Measurement of Synthetic Polymer Material Flammability Using Fire Propagation Apparatus (FPA)*

Test Procedure, *Test Method for Full Scale Fire Testing of Pallets and Other Material Handling Products*, FM Approvals, LLC.