



Designation: E 1925 – 99

Specification for Engineering and Design Criteria for Rigid Wall Relocatable Structures¹

This standard is issued under the fixed designation E 1925; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers engineering and design criteria required for the development of rigid wall relocatable structures (RWRS) and shall be applied to the design of expandable and nonexpandable RWRSs. This specification applies to present engineering and design requirements for effective RWRSs that are operable in a variety of environments without degradation and are capable of all specified transport modes. This specification shall be applied to the design of expandable and nonexpandable RWRSs. This specification is a conversion of a military standard that was approved by all departments and agencies of the Department of Defense.

1.2 The values stated in inch-pound units are to be regarded as the standard. The values given in parenthesis are for information only.

1.3 The following safety hazards caveat pertains only to the test required portion, Section 10, of this specification. *This specification does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this specification to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:

E 1851 Test Method for Electromagnetic Shielding Effectiveness of Durable Rigid Wall Relocatable Structures²

G 21 Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi³

2.2 ISO Standards:

ISO 668-1995, Series 1 Freight Containers - Classification, Dimensions and Ratings, 5th Edition⁴

ISO 1161-1990, Series 1 Freight Containers - Corner Fittings⁴

ISO 1496-1, Series 1 Freight Containers Specification and Testing Document - Part 1, 1993⁴

¹ This specification is under the jurisdiction of ASTM Committee E-6 on Performance of Buildings and is under the direct responsibility of Subcommittee E06.53 on Materials and Processes for Durable Rigid Wall Relocatable Structures.

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² Annual Book of ASTM Standards, Vol 04.11.

³ Annual Book of ASTM Standards, Vol 14.02.

⁴ Available from American National Standards Institute, W 42nd St., 13th Floor, New York, NY 10036.

ISO 1496-2, Series 1 Freight Containers Specification and Testing Document - Part 2, 1993⁴

2.3 Military Standards:

MIL-STD-1472D, Notice 3, Human Engineering Design Criteria for Military Systems, Equipment and Facilities⁵

MIL-M-8090F, General Requirements for Towed Aerospace Ground Equipment Mobility⁵

MIL-F-14072D, Finishes for Ground Electronic Equipment⁵

MIL-C-22992E, Amend 5, Connector, Plugs and Receptacles, Electrical, Waterproof, Quick Disconnect, Heavy Duty Type General Specification for ⁵

MIL-STD-810E, Notice 3, Environmental Test Methods and Engineering Guidelines⁵

MIL-STD-1791, Notice 1, Designing for Internal Aerial Delivery in Fixed Wing Aircraft⁵

3. Terminology

3.1 Definitions:

3.1.1 *degradation*—damage by the weakening or loss of some property, quality, or capability.

3.1.2 *delamination*—separation into constituent layers.

3.1.3 *galvanic corrosion*—the corrosion of metallic objects in the presence of moisture, caused by electrolytic action.

3.1.4 *special tools*—tools other than common hand tools or those designed specifically for use with a delivered product.

4. Materials and Manufacture

4.1 *Materials and Workmanship*—All materials and workmanship shall be in accordance with good commercial practice. All materials shall be recovered materials to the maximum extent possible consistent with quality and performance. All materials shall be free of defects that would affect the performance or maintainability of individual components or the overall assembly adversely.

4.2 *Dissimilar Materials*—The intimate contact of dissimilar materials, which can be expected to cause galvanic corrosion, shall be prevented. When such contact cannot be prevented, an insulating material shall be provided to minimize the corrosive effect.

4.3 *Corrosion*—All RWRS components shall be adequately

⁵ Available from Standardization Documents Order Desk, Bldg. 4, Section D, 700 Robbins Ave., Philadelphia, PA 19111-5094, Attn: NPODS.