



Designation: **F2825 – 10 (Reapproved 2015) F2825 – 18**

Standard Practice for Climatic Stressing of Packaging Systems for Single Parcel Delivery¹

This standard is issued under the fixed designation F2825; 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 practice provides a uniform basis for evaluating, in a laboratory, the ability of a packaging system to withstand a range of climatic stresses that a packaging system may be exposed to during distribution throughout the world and still provide the product protection from damage or alteration.

1.2 This practice is designed as conditioning prior to testing for overnight or two-day delivery systems of a single parcel packaging system or as a standalone test for climatic stressing of packaging systems.

NOTE 1—Practice F2825 climatic stressing or conditioning is short term in duration. Fiberboard containers are not expected to approach equilibrium moisture content at the climatic conditions used in Practice F2825. Therefore, Practice F2825 conditioning should not be used for distribution environments other than one- to two-day single parcel delivery as it may provide inaccurate or misleading test results for the fiberboard containers.

1.3 This practice does not cover refrigerated, frozen food storage, or cryogenic storage conditions. Only the climatic environments encountered in various regions of the world are covered by this practice.

1.4 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

~~1.5 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard. This standard 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 standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.~~

1.6 This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

2. Referenced Documents

2.1 *ASTM Standards:*²

[D996 Terminology of Packaging and Distribution Environments](#)

[D4332 Practice for Conditioning Containers, Packages, or Packaging Components for Testing](#)

[E337 Test Method for Measuring Humidity with a Psychrometer \(the Measurement of Wet- and Dry-Bulb Temperatures\)](#)

[F17 Terminology Relating to Primary Barrier Packaging](#)

2.2 *ISO Standard:*³

[ISO 2233 Packaging—Complete, Filled Transport Packages: Conditioning for Testing](#)

3. Terminology

3.1 *Definitions:*

3.1.1 For definitions used in this practice, see Terminologies [D996](#) and [F17](#).

3.1.2 *climatic stressing*—exposing packaging system test samples to conditions of temperature and humidity for a specified period of time which would simulate expected conditions seen in the defined storage and distribution system.

¹ This practice is under the jurisdiction of ASTM Committee [D10](#) on Packaging and is the direct responsibility of Subcommittee [D10.21](#) on Shipping Containers and Systems - Application of Performance Test Methods.

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² For referenced ASTM standards, visit the ASTM website, [www.astm.org](#), or contact ASTM Customer Service at [service@astm.org](#). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, [http://www.ansi.org](#).