ANSI/ASABE S600 OCT2011 (R2020)
Manually Handled Collapsible Reusable Plastic Containers for Handling of Fruits and Vegetables

American Society of
Agricultural and Biological Engineers

STANDARD

ASABE is a professional and technical organization, of members worldwide, who are dedicated to advancement of engineering applicable to agricultural, food, and biological systems. ASABE Standards are consensus documents developed and adopted by the American Society of Agricultural and Biological Engineers to meet standardization needs within the scope of the Society; principally agricultural field equipment, farmstead equipment, structures, soil and water resource management, turf and landscape equipment, forest engineering, food and process engineering, electric power applications, plant and animal environment, and waste management.

NOTE: ASABE Standards, Engineering Practices, and Data are informational and advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. The ASABE assumes no responsibility for results attributable to the application of ASABE Standards, Engineering Practices, and Data. Conformity does not ensure compliance with applicable ordinances, laws and regulations. Prospective users are responsible for protecting themselves against liability for infringement of patents.

ASABE Standards, Engineering Practices, and Data initially approved prior to the society name change in July of 2005 are designated as “ASAE”, regardless of the revision approval date. Newly developed Standards, Engineering Practices and Data approved after July of 2005 are designated as “ASABE”.

Standards designated as “ANSI” are American National Standards as are all ISO adoptions published by ASABE. Adoption as an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by ASABE.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

CAUTION NOTICE: ASABE and ANSI standards may be revised or withdrawn at any time. Additionally, procedures of ASABE require that action be taken periodically to reaffirm, revise, or withdraw each standard.

Copyright American Society of Agricultural and Biological Engineers. All rights reserved.

ASABE, 2950 Niles Road, St. Joseph, MI 49085-9659, USA, phone 269-429-0300, fax 269-429-3852, hq@asabe.org

Documents
Document Sharing Hub

Full document details: ANSI ASABE S600-2011 (2020)

ANSI/ASABE S600 OCT2011 (R2020)

Approved November 2011; reaffirmed December 2020 as an American National Standard

Manually Handled Collapsible Reusable Plastic Containers for Handling of Fruits and Vegetables

Developed and approved by the ASABE Food and Processing Engineering Division. Approved as an ASABE standard October 2011; approved as an American Nation Standard November 2011; reaffirmed January 2016, December 2020.

Keywords: Box, Container, Design, Handling, Returnable, Reusable, RPC, Storage, Transportation

1 Purpose

This standard provides uniform design and performance specifications for a manually handled collapsible reusable plastic container for handling fresh horticultural produce during postharvest processing, storage and transportation.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies unless noted. For undated references, the latest approved edition of the referenced document (including any amendments) applies.

ASTM D880, Standard Test Method for Impact Testing for Shipping Containers and Systems

ASTM D996, Standard Terminology of Packaging and Distribution Environments

ASTM D999, Standard Test Methods for Vibration Testing of Shipping Containers

ASTM D4003, Standard Test Methods for Programmable Horizontal Impact Test for Shipping Containers and Systems

ASTM D4169, Standard Practice for Performance Testing of Shipping Containers and Systems

ASTM D4728, Standard Test Method for Random Vibration Testing of Shipping Containers

ASTM D5276, Standard Test Method for Drop Test of Loaded Containers by Free Fall

ASTM D5277, Standard Test Method for Performing Programmed Horizontal Impacts Using an Inclined Impact Tester

ASTM D5487, Test Method for Simulated Drop of Loaded Containers by Shock Machines

ASTM D6055, Standard Test Methods for Mechanical Handling of Unitized Loads and Large Shipping Cases and Crates

ASTM D6179, Standard Test Methods for Rough Handling of Unitized Loads and Large Shipping Cases and Crates

Documents Document Sharing Hub

Full document details: ANSI ASABE S600-2011 (2020)

3 Definitions

3.1 See ASTM D996, Standard Terminology of Packaging and Distribution Environments, for additional definitions.

3.2 container: a non-specific term for a receptacle capable of maintaining many horticultural products together and protecting them from external forces

3.3 dimensions: in packaging, the measurements of length, width (or diameter), and depth or height of **containers**, expressed in that order; it should be stated as “inside” or “outside”

3.4 dynamic load: an imposed force in motion; that is, one that may vary in magnitude, sense, and direction

3.5 face: in packaging, any one of the plane surfaces of a container

3.6 load: (1) the force in weight units applied to a body; (2) the weight of the contents of a **container** or transportation device; (3) a qualitative term denoting the contents of a container

3.7 loading: the act of placing a load on or in; to load a truck, a vessel, or a test specimen

3.8 pallet: horizontal platform device used as a base for assembling, storing, handling, and transporting materials and products in a unit load

3.9 palletized load: a load made up of articles, loose or in containers placed on pallets or skids

3.10 returnable container: a shipping container of any material designed to be used for more than one shipment

3.11 reusable container: a shipping container and storage container designed for reuse without impairment of its protective functions

3.12 shipping container: a container that is sufficiently strong to be used in commerce for packing, storing, and shipping commodities

3.13 reusable: intended to be used for its original purpose one or more times in an available program established by, but not limited to, manufacturers, distributors, or retailers

4 Dimensions

4.1 Outside dimensions are specified for length, width, and height. Collapsed container height is also specified. These dimensions shall not be exceeded by bulge or deflection from container loading or by overfilling.

4.2 One rectangular cross section container is specified that gives a projected area (footprint) with the outside dimensions shown. Two collapsed container heights are specified. Five overall heights are specified.

4.2.1 The rectangular container shall have outside dimensions equal to 600 × 400 mm (23.62 × 15.75 in.).

4.2.2 The collapsed container height shall be 35.6 mm (1.40 in.) or 53.1 mm (2.09 in.).

4.2.3 The outside height shall be 127 mm (5.00 in.) or 182 mm (7.17 in.) or 203 mm (7.99 in.) or 268 mm (10.55 in.) or 310 mm (12.55 in.).

5 Capacity

5.1 Since overall outside dimensions are specified, inside dimensions will vary with construction materials, container design and inside depth.

Documents
Document Sharing Hub
Full document details: ANSI ASABE S600-2011 (2020)