



**GS-35**

**GREEN SEAL™ STANDARD FOR  
FOOD SERVICE PACKAGING**

**EDITION 1.1  
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THE MARK OF ENVIRONMENTAL RESPONSIBILITY

## GREEN SEAL

Green Seal is a non-profit organization whose mission is to use science-based programs to empower consumers, purchasers, and companies to create a more sustainable world. Green Seal sets leadership standards that aim to reduce, to the extent technologically and economically feasible, the environmental, health, and social impacts throughout the life-cycle of products, services, and companies. The standards may be used for conformity assessment, purchaser specifications, and public education.

Green Seal offers certification of products, services, and companies in conformance with its standards. For additional information on Green Seal or any of its programs, contact:

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**GREEN SEAL STANDARD FOR  
FOOD SERVICE PACKAGING, GS-35**

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## FOREWORD

**Edition.** This version is Edition 1.1 from May 10, 2013 and replaces the First Edition, Part A from March 15, 2002 and Part B from March 20, 2002. This revision includes substantive changes.

**General.** The final issued standard was developed in an open and transparent process with stakeholder input that included producers, users, and general interests.

The requirements in the standard are based on an assessment of the environmental, health, or social impacts associated with the products, services, or organizations covered in the scope of the standard. These requirements are subject to revision, and generally cover aspects above and beyond regulatory compliance. This standard neither modifies nor supersedes laws and regulations. Any conformity assessment to this standard requires compliance with all applicable laws and regulations for the manufacturing and marketing of the products.

Provisions for safety have not been included in this standard, since they are supervised by regulatory agencies. Adequate safeguards for personnel and property should be employed for all stages of production, and for all tests that involve safety considerations.

Products, services, or organizations that are substantially similar to those covered by this standard in terms of function and life cycle considerations may be evaluated against the intent of the requirements of this standard, accounting for relevant differences between the intended scope of the Standard and the actual product, service, or organization to be evaluated.

This standard may not anticipate a feature of the product that may significantly, and undesirably, increase its impact on the environment, health, or society. In such a situation, Green Seal will ordinarily amend a standard to account for the unanticipated environmental, health, or societal impacts.

Normative references (e.g., other standards) in this standard intend to refer to the most recent edition of the normative reference. Test methods may be required for product evaluation. Unless explicitly stated that a specified method is the only acceptable one, the intent of the standard is that an equivalent test method may be accepted at Green Seal's sole discretion.

Certification to this standard shall be awarded only by Green Seal, or, with Green Seal's explicit written permission, by a third-party certification program conducting on-site audits.

**Disclaimer of Liability.** Green Seal, as the developer of this standard, shall not incur any obligations or liability for any loss or damages, including, without limitation, indirect, consequential, special, or incidental damages, arising out of or in connection with the interpretation or adoption of, reliance upon, or any other use of this Standard by any party. Green Seal makes no express or implied warranty of merchantability or fitness for a particular purpose, nor any other express or implied warranty with respect to this Standard.

## ACRONYMS AND ABBREVIATIONS

**ASTM.** ASTM International, a standard setting organization formerly known as the American Society for Testing and Materials

**CEN.** European Committee for Standardization

**DIN.** German Standards Institute

**ISO.** International Organization for Standardization

**GREEN SEAL STANDARD FOR  
FOOD SERVICE PACKAGING, GS-35:  
PART A: RIGID CONTAINERS**

## **1.0 SCOPE**

This standard establishes requirements for food service packaging, including single-use containers for packaging or carry-out of products from restaurants, catering services, and other food service establishments, whether the food is to be eaten in the venue or taken to a different location (take-out).

Part A of this standard is for rigid containers and includes hinged containers and two-part containers. See Appendix 1 for an example list of products included in this standard.

Words and phrases described in the standard that appear in *italics* have a corresponding definition located in the definition section of the standard, Annex A.

## **2.0 NEED FOR RIGIDITY**

The manufacturer must provide to the distributor or user the following criteria describing when such packaging should be used: A rigid package that is moisture resistant under normal use conditions is necessary for liquid or semi-solid foods because other packages would not contain food sufficiently; or rigidity is necessary to protect the structure of the food under normal handling and storage conditions, and consumer transit conditions.

## **3.0 PRODUCT-SPECIFIC PERFORMANCE REQUIREMENTS**

**3.1 Grease Resistance.** The package material must not permit grease to penetrate for a minimum of twenty minutes as tested with International Organization for Standardization (ISO) 5634 Paper and Board - Determination of Grease Resistance.

**3.2 Water and Moisture Resistance.** The package material must not permit moisture or small amounts of water to penetrate for a minimum of twenty minutes as tested with modified ISO 5634 Paper and Board - Determination of Grease Resistance. The modification is described in Annex B.

**3.3 Compression Resistance.** The package must have a strength to volume ratio of at least 1.0 g/cm<sup>3</sup> as tested using ASTM International (ASTM) D 4577-94 Standard Test Method for Compression Resistance of a Container under Constant Load.

## 4.0 PRODUCT-SPECIFIC HEALTH AND ENVIRONMENTAL REQUIREMENTS

**4.1 Recycled Content.** The package shall have a minimum recycled content of 45%. The manufacturer must demonstrate that any pre-consumer material used to meet the recycled content requirement would otherwise have entered the solid waste stream. All recycled materials used in the package must meet U.S. Food and Drug Administration regulations and standards for use of recycled materials in food packaging.

**4.2 Wood Fiber.** Any wood fiber, including paper fiber, used in the product shall not be bleached with chlorine or chlorine compounds (such as hypochlorite and chlorine dioxide). For post-consumer recycled fiber, this requirement applies to the recycling process and not to the original process of producing the fiber prior to first use by the consumer.

**4.3 Volume-to-Weight.** The package must have a minimum volume-to-weight ratio of 30.0 cm<sup>3</sup> per gram.

**4.4 Compostability.** The material shall be compostable in accordance with ASTM D6400, Standard Specification for Compostable Plastics.

**4.5 Toxics in Packaging and Inks.** Packaging must not contain inks, dyes, stabilizers, or any other additives to which any lead, cadmium, mercury, or hexavalent chromium has been intentionally introduced. The sum of the concentration levels of lead, cadmium, mercury, and hexavalent chromium present in any package or packaging component must not exceed 100 parts per million by weight.

## 5.0 CERTIFICATION AND LABELING REQUIREMENTS

**5.1 Communication.** In each bulk package of the product there should be a flier stating the conditions under which rigid packaging is needed and should be used. The flier should also contain information on proper disposal, with an emphasis on composting where facilities are available. Alternatively or in addition, a letter to the appropriate official in the user organization could describe the appropriate conditions for use and disposal.

**5.2 Certification Mark.** The Green Seal® Certification Mark may appear on the product, packaging, secondary documents, and promotional materials, only in conjunction with the certified product. Use of the Mark must be in accordance with *Rules Governing the Use of the Green Seal Certification Mark*<sup>1</sup>.

The Green Seal Certification Mark shall not be used in conjunction with any modifying terms, phrases, or graphic images that might mislead consumers as to the extent or nature of the certification.

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<sup>1</sup> [www.greenseal.org/TrademarkGuidelines](http://www.greenseal.org/TrademarkGuidelines)

Green Seal must review all uses of the Certification Mark prior to printing or publishing.

**5.3 Use With Other Claims.** The Green Seal Certification Mark shall not appear in conjunction with any human health or environmental claims, unless verified and approved in writing by Green Seal.

**5.4 Statement of Basis for Certification.** Wherever the Green Seal Certification Mark appears, it shall be accompanied by a description of the basis for certification. The description shall be in a location, style, and typeface that are easily readable.

**For products certified to GS-35 Part A:** Unless otherwise approved in writing by Green Seal, the description shall read as follows, unless an alternate version is approved in writing by Green Seal:

This product meets Green Seal™ Standard GS-35 based on effective performance, recycled content, bleach-free or chlorine-free processing, and compostability in centralized composting facilities where they are available. GreenSeal.org.

Whenever possible, non-rigid packaging is recommended over rigid to minimize the amount of waste produced and other environmental impacts.



**GREEN SEAL STANDARD FOR  
FOOD SERVICE PACKAGING, GS-35:  
PART B: SINGLE USE PLATES AND BOWLS**

## **1.0 SCOPE**

This standard establishes requirements for food service packaging, including single-use containers for packaging or carry-out of products from restaurants, catering services, and other food service establishments, whether the food is to be eaten in the venue or taken to a different location (take-out).

Part B of this standard is for single-use plates and bowls, and includes compartmented plates. It excludes plate-type and clamshell-type containers that have attached lids (e.g., hinged take-out containers), which are covered by Part A. See Appendix 1 for an example list of products included in this standard.

Words and phrases described in the standard that appear in *italics* have a corresponding definition located in the definition section of the standard, Annex A.

## **2.0 PRODUCT-SPECIFIC PERFORMANCE REQUIREMENTS**

**2.1 Grease Resistance.** The plate or bowl material must not permit grease to penetrate for a minimum of thirty minutes, as tested with ISO 5634 Paper and Board – Determination of Grease Resistance.

**2.2 Water and Moisture Resistance.** The plate or bowl material must not permit moisture or small amounts of water to penetrate for a minimum of thirty minutes, as tested with modified ISO 5634 Paper and Board – Determination of Grease Resistance. The modification is described in Annex B.

## **3.0 PRODUCT-SPECIFIC HEALTH AND ENVIRONMENTAL REQUIREMENTS**

**3.1 Recycled Content.** The package shall have a minimum *recycled content* of 45%. The manufacturer must demonstrate that any pre-consumer material used to meet the *recycled content* requirement would otherwise have entered the solid waste stream. All recycled materials used in the package must meet U.S. Food and Drug Administration regulations and standards for use of recycled materials in food packaging.

**3.2 Fiber Bleaching.** Any fiber used in the product, including but not limited to wood, paper, bamboo, sugarcane, kenaf, and reed fiber, shall not be bleached with chlorine or chlorine compounds (such as hypochlorite and chlorine dioxide). For post-consumer recycled fiber, this requirement applies to the recycling process and not to the original process of producing the fiber prior to first use by the consumer.

**3.3 Compostability.** The material shall be compostable in accordance with ASTM D6400, Standard Specification for Compostable Plastics; European Committee for Standardization (CEN) 13432 – Packaging – Requirements for Packaging Recoverable through Composting and Biodegradation – Test scheme and evaluation criteria for the final acceptance of packaging; or German Standards Institute (DIN) V 54900 – Prüfung der Kompostierbarkeit von polymeren Werkstoffen (Testing and Compostability of Plastics).

**3.4 Toxics in Packaging and Inks.** Plates and bowls must not contain inks, dyes, stabilizers, or any other additives to which any lead, cadmium, mercury, or hexavalent chromium has been intentionally introduced. The sum of the concentration levels of lead, cadmium, mercury, and hexavalent chromium present in any plate and bowl must not exceed 100 parts per million by weight.

#### 4.0 CERTIFICATION AND LABELING REQUIREMENTS

**4.1 Certification Mark.** The Green Seal® Certification Mark may appear on the product, packaging, secondary documents, and promotional materials, only in conjunction with the certified product. Use of the Mark must be in accordance with *Rules Governing the Use of the Green Seal Certification Mark*<sup>2</sup>.

The Green Seal Certification Mark shall not be used in conjunction with any modifying terms, phrases, or graphic images that might mislead consumers as to the extent or nature of the certification.

Green Seal must review all uses of the Certification Mark prior to printing or publishing.

**4.2 Use With Other Claims.** The Green Seal Certification Mark shall not appear in conjunction with any human health or environmental claims, unless verified and approved in writing by Green Seal.

**4.3 Statement of Basis for Certification.** Wherever the Green Seal Certification Mark appears, it shall be accompanied by a description of the basis for certification. The description shall be in a location, style, and typeface that are easily readable.

**For products certified to GS-35 Part B:** Unless otherwise approved in writing by Green Seal, the description shall read as follows, unless an alternate version is approved in writing by Green Seal:

This product meets Green Seal™ Standard GS-35 based on effective performance, recycled content, bleach-free or chlorine-free processing, and compostability in centralized composting facilities where they are available. GreenSeal.org.

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<sup>2</sup> [www.greenseal.org/TrademarkGuidelines](http://www.greenseal.org/TrademarkGuidelines)

**ANNEX A – DEFINITIONS (Normative)**

Note that the defined terms are italicized throughout the standard.

**Compostable.** Capable of undergoing biological decomposition in a compost site as part of an available program, such that the material (that is, feedstock) is not visually distinguishable and breaks down to carbon dioxide, water, inorganic compounds, and biomass, at a rate consistent with known compostable materials.

**Recycled Content.** A material that has been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (preconsumer), or after consumer use (post-consumer).

**ANNEX B – MODIFICATION OF ISO 5634 (Normative)****Modification of ISO 5634: Paper and Board Grease Resistance:**

The test method presented in ISO 5634 should be followed to test for moisture resistance with the following modifications:

1. Replace standard grease with distilled/deionized water.
2. Replace the fat-soluble red dye with a water-soluble red dye.

**APPENDIX 1 – SCOPE (Informative)**

Examples of products included in or excluded from the scope of GS-35:

**Products Included in GS-35**

- Single-use rigid containers for packaging or carry-out (e.g. hinged take-out containers, clam-shell containers w/attached lids)
- Single-use plates for packaging or carry-out
- Single-use bowls for packaging or carry-out

**Products Excluded from GS-35**

- Paper towels (included in GS-1)
- Napkins (included in GS-1)
- Nonwoven sanitary products
- General purpose disposable and flushable wipes
- Placemats or tray liners (included in GS-1)
- Table coverings (included in GS-1)
- Paper products used in the preparation of food (covered in GS-18)