



GS-35

Green Seal Environmental Standard for Food Service Packaging

First Edition

Part A March 15, 2000

Part B March 20, 2002

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THE MARK OF ENVIRONMENTAL RESPONSIBILITY

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Green Seal is a non-profit organization devoted to environmental standard setting, product certification, and public education. Green Seal helps identify environmentally responsible products in order to encourage and enable consumers to purchase such products and reduce their impacts on the Environment. Through its standard setting, certification and education programs, Green Seal:

- identifies products that are designed and manufactured in an environmentally responsible manner;
- offers scientific analyses to help consumers make educated purchasing decisions regarding environmental impacts;
- ensures consumers that any product bearing the Green Seal Certification Mark has earned the right to use it; and
- encourages manufacturers to develop new products that are significantly less damaging to the environment than their predecessors.

The intent of Green Seal's Environmental requirements is to reduce, to the extent technologically and economically feasible, the environmental impacts associated with the manufacture, use and disposal of products. Set on a category-by-category basis, Environmental Standards focus on significant opportunities to reduce a product's environmental impact.

Green Seal offers certification to all products covered by its Standards. Manufacturers may submit their products for evaluation by Green Seal. Those which comply with Green Seal's requirements may be authorized to use the Green Seal Certification Mark on products and in product advertising. Manufacturers authorized to use the Green Seal Certification Mark on their product are subject to an ongoing program of testing, inspection, and enforcement.

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FOREWORD

A. Certification. This Environmental Standard Document contains the basic requirements for certain products (as defined in the Scope section below) to be certified by Green Seal and for their manufacturers to receive authorization to use the Green Seal Certification Mark on products and their packaging, and in product advertising. The requirements are based on an assessment of the environmental impacts of product manufacture, use, and disposal and reflect information and advice obtained from industry, trade associations, users, government officials, environmental and other public interest organizations, and others with relevant expertise. These requirements are subject to revision as further experience and investigation may show is necessary or desirable. Green Seal solicits information and advice on issues associated with this Standard.

B. Compliance with the Standard. Compliance with the Standard is one of the conditions of certification of a product or service by Green Seal.

C. Compliance with Government Rules. In order to be authorized to use the Green Seal Certification Mark, the manufacturer of the certified product must disclose all governmental allegations or determinations of violation of federal, state, or local environmental laws or regulations with respect to facilities in which the product is manufactured. Certification will be denied any product manufactured in violation of environmental laws or regulations if, in Green Seal's judgment, such violations indicate that the environmental impacts of the product significantly exceed those contemplated in the setting of the standard.

D. Limitations on Purpose of Standard. Green Seal's Standards provide basic criteria to promote environmental quality. Provisions for product safety have not been included in this Standard Document because government agencies and other national standard-setting organizations establish and enforce safety requirements.

E. Substantially Equivalent Products. Products that are substantially similar to those covered by this standard in terms of function and environmental impact may be evaluated and certified by Green Seal against the intent of the requirements of this Standard.

F. Unanticipated Environmental Impacts. A product which complies with this Standard will not necessarily be certified by Green Seal if, when examined and tested, it is found to have other features which significantly increase its impact on the environment. In such a situation, Green Seal will ordinarily amend its standards to account for the unanticipated environmental impacts.

G. Certification Agreement and Green Seal Rules. In order to be authorized to apply the Green Seal to a product or its packaging, or to use the Green Seal in product advertising, the manufacturer of the product must (1) undergo an initial product evaluation to determine that the product complies with Green Seal's requirements, (2) sign a Green Seal Certification Agreement that, among other things, defines how and

where the Green Seal may be used, (3) pay fees to cover the costs of testing and monitoring, (4) agree to an ongoing program of factory inspections and product testing, and (5) comply with the requirements found in the most recent version of "Rules Governing the Use of the Green Seal Certification Mark."

H. Disclaimer of Liability. Green Seal, in performing its functions in accordance with its objectives, does not assume or undertake to discharge any responsibility of the manufacturer or any other party. Green Seal shall not incur any obligations or liability for damages, including consequential damages, arising out of or in connection with the interpretation of, reliance upon, or any other use of this Standard.

I. Care in Testing. Many tests required by Green Seal's Standards involve safety considerations. Adequate safeguards for personnel and property should be employed in conducting such tests.

J. Referenced Standards. Standards referenced in this document may have been superseded by a later edition, and it is intended that the most recent edition of all referenced standards be used in determining compliance of a product with this Standard.

K. Labeling Requirements. This Standard neither modifies nor supersedes government labeling requirements. Labeling language which varies in form from the requirements of this section may be used with the written approval of Green Seal.

Environmental Standard for Food-Service Packaging (GS-35)

Part A: Rigid Containers

First Edition, March 15, 2000

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1.0 Scope

This recommended standard establishes environmental requirements for Food-service Food Packaging. The scope of this standard is for food-service food packaging, which includes single-use containers for packaging or carry-out of products from restaurants and other retail food service establishments. Part A of this standard is for rigid containers and includes hinged containers and two-part containers. Part B of this standard is for single-use plates and bowls and includes soup-type bowls.

2.0 Definitions

2.1 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.

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

3.0 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.

4.0 Product-Specific Performance Requirements

4.1 Grease Resistance: The package material must not permit grease to penetrate for a minimum of twenty minutes as tested with ISO 5634 Paper and Board - Determination of Grease Resistance.

4.2 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 Attachment A.

4.3 **Compression Resistance:** The package must have a strength to volume ratio of at least 1.0 g/cm³ as tested using ASTM D 4577-94 Standard Test Method for Compression Resistance of a Container under Constant Load.

5.0 Product-Specific Health and Environmental Requirements

5.1 **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.

5.2 **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.

5.3 **Volume-to-Weight:** The package must have a minimum volume-to-weight ratio of 30.0 cm³ per gram.

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

5.5 **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.

Appendix A: Labeling Requirements for Certification by Green Seal

Unless otherwise approved in writing by Green Seal, the following requirements shall apply:

1. The Green Seal Certification Mark may appear on the product.
2. Whenever the Green Seal Certification Mark appears, it shall be accompanied by a description of the basis of certification. This description shall be in a location, style, and typeface that are easily readable by the consumer. The description shall read as follows:

"This product meets Green Seal's standards for rigid food-service food packaging based on its recycled content, use of unbleached or non-chlorine bleached fiber (where wood or paper fiber is used), and

compostability in centralized composting facilities where they are available. Whenever possible non-rigid packaging is recommended over rigid to minimize the amount of waste produced and other environmental impacts."

3. 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.

ATTACHMENT A

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.

Environmental Standard for Food-Service Packaging (GS-35)

Part B: Single-Use Plates and Bowls

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1.0 Scope

This proposed environmental standard establishes environmental requirements for *Single-Use Plates and Bowls*.

The scope of this proposed standard is for single-use plates and bowls used by quick-serve restaurants (QSRs), catering services, and other food service venues whether the food is to be eaten in the venue or taken to a different location (take-out). This standard includes typical single-use plates that are characterized by lips to prevent spillage and also includes compartmented plates, but excludes plate-type containers that have attached lids (e.g., hinged take-out containers). This standard includes soup-type bowls, but excludes clamshell-type containers that have attached lids.

2.0 Definitions

- 2.1 Compostable: A characteristic of a product, packaging, or associated component that allows it to biodegrade, generating a relatively homogeneous and stable humus-like substance.
- 2.2 Recycled Content: A material that has been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer).

3.0 Product-Specific Performance Requirements

- 3.1 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.
- 3.2 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 Attachment A.

4.0 Product-Specific Health and Environmental Requirements

- 4.1 Recycled Content: The plate or bowl shall have a minimum recycled content of 45% by weight. 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 plate or bowl

- must meet U.S. Food and Drug Administration regulations and standards for use of recycled materials in food service.
- 4.2 **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.
- 4.3 **Compostability:** The material shall be compostable in accordance with ASTM D6400-99, Standard Specification for Compostable Plastics; CEN 13432 - Packaging - Requirements for Packaging Recoverable through Composting and Biodegradation - Test scheme and evaluation criteria for the final acceptance of packaging; or DIN V 54900 - Prüfung der Kompostierbarkeit von polymeren Werkstoffen (Testing of the Compostability of Plastics).
- 4.4 **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 or bowl must not exceed 100 parts per million by weight.

5.0 Labeling Requirements for Certification by Green Seal

Unless otherwise approved in writing by Green Seal, the following requirements shall apply:

1. The Green Seal Certification Mark may appear on the product.
2. Whenever the Green Seal Certification Mark appears, it shall be accompanied by a description of the basis of certification. This description shall be in a location, style, and typeface that are easily readable by the consumer. The description shall read as follows:

“This product meets Green Seal's standards for single-use plates and bowls based on its recycled content, use of unbleached or non-chlorine bleached fiber (where wood, paper or other plant fiber is used), and compostability in centralized composting facilities where they are available.”

Attachment A**Modifications to ISO 5634: Paper and Board – Determination of Water 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.