



GS-9  
Green Seal™ Environmental Standard for  
Paper Towels and Paper Napkins

**First Edition**

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THE MARK OF ENVIRONMENTAL RESPONSIBILITY

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## GREEN SEAL™

Green Seal is a non-profit organization devoted to environmental standard setting, product certification, and public education. Green Seal's mission is to work towards environmental sustainability by identifying and promoting environmentally responsible products, purchasing, and production. 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.

For additional information on Green Seal or any of its programs, contact:

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## FOREWORD

**A. Certification.** This Environmental Standard 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.

**B. Compliance with the Standard.** Compliance with this Standard is one of the conditions of certification of a product 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 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 Certification Mark to a product or its packaging, or to use the Green Seal Certification Mark 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.

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## ENVIRONMENTAL STANDARD

### 1 Scope

This Standard establishes environmental requirements for paper towels and napkins.

### 2 Definitions

This section provides definitions for terms used in this Standard.

**2.1** “Recovered material” means fiber waste generated after the completion of a manufacturing process, such as post-consumer materials, envelope cuttings, bindery trimmings, printing waste, cuttings and other converting waste, butt rolls and mill wrappers, obsolete inventories, and rejected unused stock. Recovered material, however, shall not include virgin or part virgin fibrous waste paper generated during the manufacturing process, such as fibers recovered from wastewater or trimmings of paper machine rolls (virgin mill broke), regardless of whether such materials are used by the same or another company. Recovered material shall also not include fibrous by-products of harvesting, extractive or woodcutting processes or forest residues such as cotton linters, bark or sawdust. Recovered material includes the recovered fiber component of the trimmings of paper machine rolls (recovered mill broke) used to make the certified product.

**2.2** “Post-consumer material” means those finished products, packages or materials generated by a business or consumer that have served their intended end uses, and that have been recovered from or otherwise diverted from the waste stream for the purpose of recycling.

### 3 Product Specific Performance Requirements

**3.1** The product must be made in accordance with reasonable industry practice with respect to holes, tears, wrinkles, cleanliness, foreign materials or dirt. It must have no disagreeable odor, either wet or dry, in accordance with reasonable industry practice. Edges of the product must be cleanly cut and not ragged. Product must dispense properly from the container or roll.

## 4 Product-Specific Environmental Requirements

### 4.1. Recovered Fiber Requirements

**4.1.1.** The fiber in paper towels and napkins shall contain 100% recovered materials and at least 40% post-consumer material by weight.

**4.1.2.** The percentage of recovered material and post-consumer material shall be calculated and certified based on the **fiber** weight of the paper. Calculations will also be performed based on the total weight of the paper.

**4.1.3.** The calculation of recycled content based on fiber weight shall be performed using the following formulas:

**4.1.3.1.** Post-consumer Material:

$$\frac{\text{Post-consumer Material} \times \text{Yield}}{\text{Recovered Material} \times \text{Yield}}$$

**4.1.4.** The calculation of recycled content based on total weight shall be performed using the following formulas:

**4.1.4.** Post-consumer Material:

$$\frac{\text{Post-consumer Material} \times \text{Yield}}{[(\text{Non-fibrous Material} \times \text{Yield}) + (\text{Recovered Material} \times \text{Yield})]}$$

**4.1.5** Yield will depend on the product manufactured, the raw material, the level of contaminants and the cleaning and deinking technology employed. The percentage yield shall be calculated by dividing the total material output by the total material input. <sup>1</sup>

**4.1.6** The percentage of recovered material and post-consumer material shall be calculated based on a weighted average of the materials used for a period of time not to exceed the previous three months

<sup>1</sup> If a particular manufacturer's operating procedures do not provide for accurate yield measurements, the following shall be used as default values:

Recovered/Post-consumer Material: 75%

Non fibrous material: 100%

## **4.2. Deinking of Recovered Material**

The recovered material used to manufacture the products shall not be de-inked using any solvents containing:

**4.2.1.** chlorine;

**4.2.2.** benzene, cadmium and cadmium compounds, carbon tetrachloride, chloroform, chromium and chromium compounds, cyanide compounds, dichloromethane, lead and lead compounds, mercury and mercury compounds, methyl ethyl ketone, nickel and nickel compounds, tetrachloroethylene, toluene, 1,1,1-trichloroethane, trichloroethylene, or xylene (mixed isomers)<sup>2</sup>; or

**4.2.3.** the sum concentration level of more than 1% by weight of finished product of the toxic chemicals listed by the U.S. Environmental Protection Agency pursuant to section 313 of the Emergency Planning and Community Right to Know Act, 40 CFR § 372.

## **4.3. Bleaching**

**4.3.1** The recovered material used in making a certified product shall not be bleached using chlorine or any of its derivatives (such as hypochlorite and chlorine dioxide).

## **5 Additional Ingredients**

Paper towels and napkins (not including packaging) shall not contain any added pigments, inks, dyes, or fragrances, with the exception that;

Paper towels and napkins may be printed with inks or dyes provided these inks or dyes contain a sum concentration of less than 100 parts per million, by weight, of the following toxic heavy metal ions: lead, cadmium, mercury, or hexavalent chromium.

## **6 Requirements for Paper Towel Cores**

The core of a roll of paper towels must be manufactured from 100% recovered material.

## **7 Toxics in Packaging**

The sum of the concentration levels of lead, cadmium, mercury, and hexavalent chromium present in any package or packaging components shall not exceed 100 parts per million by weight.

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<sup>2</sup> These chemicals are found on the U.S. Environmental Protection Agency's 33/50 Project List.

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## 8 Green Seal™ Labeling Requirements

**8.1.** The Green Seal Certification Mark must appear on the product's packaging. It may be embossed, or printed on the product as well as provided in Section 5.

**8.2.** 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.

**8.3.** If the product is certified to have been made without bleach, the package or the product may bear the additional endorsement: "**Unbleached**" or an equivalent description approved in writing by Green Seal.

**8.4.** If the product is certified to have been bleached without chlorine or any of its derivatives, the package, or the product, may bear the additional endorsement: "**No Chlorine Bleach,**" or "**Oxygen Bleached,**" as appropriate, or an equivalent description approved in writing by Green Seal.

**8.5.** Whenever the Green Seal Certification Mark appears on a package of paper towels or napkins the package must contain a description of the basis for the certification. The description shall be in a location, style, and typeface that are easily readable by the consumer. Unless otherwise approved in writing by Green Seal, the description shall read as follows:

**This recycled product contains 100% recovered paper fiber and XX% post-consumer materials by fiber weight, and meets Green Seal's environmental standard for bleaching, deinking and packaging. It contains no added fragrances.** [where XX is the certified level of post-consumer material].

**8.6.** Manufacturers, at their discretion, may also add to the package of a certified product the description "XX% recovered material including YY% post-consumer material by total weight" in addition to the fiber weight description. [where XX is the level of recovered material by total weight and YY is the level of post-consumer material by total weight, or as calculated pursuant to Section 4.1.2].

