

December 21, 2012

**COMMENTING PERIOD RESULTS:** Green Seal Standard for Sanitary Paper Products, GS-1: Papermaking Additives Definition Revision, Updates to Section 2.1.2 (Toilet Seat Covers), Clarification to Section 2.3 Product Specifications, Clarifying Processed Chlorine Free Definition, Addition of Section 3.6 Added Lotions, Revision to Disposal Section 6.1 and Statement of Basis of Certification Section 6.2

Green Seal is in the process of revising the papermaking additive definition and other modifications to the Green Seal Standard for Sanitary Paper Products, GS-1. Comments from the public were solicited through an online forum from November 14, 2012 until December 14, 2012.

Included in this document is the comment received on the revisions along with the Green Seal response. The comment was supportive and did not require any changes to the proposed revisions. This document is being provided for informational purposes only.

**Response to Comments:**

The language of the criterion revision is included, followed by comments, and Green Seal's response to the comments in red.

**Papermaking additive definition and criterion changes**

Functional Papermaking Additives. Functional papermaking additives are those that are added to the paper machine furnish primarily for retention within or on the product, such as fillers, sizing agents, retention aids, wet- and dry-strength resins, colorants/dyes, and optical brighteners. Other materials added to the process through the water to facilitate the papermaking process, during drying, or in wastewater treatment, are not considered functional paper making additives, such as, but not limited to, cooling tower or boiler chemicals, paper machine cleaners, surfactants, detergents, defoamers, dispersants, foaming agents, collectors, dryer coating or release aids, and flocculants.

3.5.3 Carcinogens, Mutagens, and Reproductive Toxins. The product shall not contain any functional papermaking additives or contaminants that are carcinogens, mutagens, or reproductive toxins or that are known to produce or release carcinogens. An exception shall be made for titanium dioxide and carbon black used in colorants.

3.5.4 Optical Brighteners. Optical brighteners may be used as a functional papermaking additive not to exceed 200 parts per million (0.02%) by weight in the finished product. This level does not include any optical brighteners that may be present in the furnish through the use of recovered materials.

3.5.5 Colorants. The product shall not contain any colorants as functional papermaking additives; an exception shall be made for products that would not contain colorants but from the addition of recovered materials.

Further, paper towels and general-purpose wipes, paper napkins, and placemats and other table coverings may be printed with colorants provided that these colorants contain a sum concentration of less than 100 parts per million, by weight (0.01%), of heavy metals including lead, mercury, cadmium, and hexavalent chromium.

3.5.6 Biodegradability. Any functional papermaking additives or contaminants, except for inorganic compounds, polymers, optical brighteners, and biocides, shall exhibit ready biodegradability in accordance with the Organization for Economic Co operation and Development (OECD) definition, as follows. Biodegradability shall be measured according to any of the following methods: ISO 7827, 9439, 10707, 10708, 9408, 14593; OECD Methods 301A – F; or OECD 310. Specifically, within a 28-day test, the ingredient shall meet one of the following criteria:

- Removal of Dissolved Organic Carbon (DOC) > 70%
- Biochemical Oxygen Demand (BOD) >60%
- % of BOD of Theoretical Oxygen Demand > 60%
- % Carbon Dioxide evolution of theoretical > 60%

For functional papermaking additives or contaminants that do not exhibit ready biodegradability in these tests the manufacturer may demonstrate biodegradability in sewage treatment plants using the Coupled Units Test found in OECD 303A by demonstrating DOC removal > 90%.

An exception shall be made for functional papermaking additives or contaminants that do not exhibit ready biodegradability, if the additive has low aquatic toxicity (acute LC50 ? 100 mg/L for algae, daphnia, or fish) and exhibits inherent biodegradability per ISO test methods 9887 or 9888 or OECD 302A-C.

Testing is not required for any functional papermaking additives or contaminants for which sufficient information exists concerning its biodegradability, either in peer-reviewed literature or databases. In the absence of experimental data, quantitative structure-activity relationship data from EPA's BioWin (EPISuite) models may be considered.

3.5.7 Additional Prohibited Substances. The product shall not contain the following substances as functional papermaking additives or contaminants:

- Fragrances
- Heavy metals, including but not limited to lead chromium, or selenium, both in the elemental form or in compounds

The papermaking process shall not use the following substances:

- Chlorophenolic biocides
- ozone-depleting compounds

**Comment:**

The addition of “functional” on papermaking additives is good clarification and eliminates many of the grey areas questioned previously.

Thanks.

**Response:**

Green Seal acknowledges your comment.