



CALL FOR COMMENT ON THE PROPOSED REVISION OF:

Green Seal's Environmental Standards for Paint (GS-11) and Anti-Corrosive Paints (GC-3)

In order to reflect the environmental and technological improvements that have been achieved since these environmental standards were first issued in the 1990's, Green Seal is undertaking the process of revising these two environmental standards. As part of the revision, GC-3 for Anti-Corrosive Paints will be *incorporated* into the GS-11 Paints Standard. Any comments about GC-3 should be included in the GS-11 revision process.

Earlier this year, Green Seal released a Draft GS-11 Scoping Document for public comment. Comments received were reviewed and considered during the drafting of the proposed revisions. The summary of comments is published on the Green Seal website. Green Seal is proposing herein and seeks comment on the proposed revisions to GS-11 in order to reflect leadership levels in the paint and coatings industry. Green Seal especially appreciates comment on areas not addressed in this proposal such as manufacturing considerations where objective, scientifically-based criteria may be available and valuable in defining leadership in protecting human health and the environment. The proposed revisions will be open for 6 weeks of public comment. A brief summary at the end of this letter highlights the key proposed revisions.

On September 24, 2007, the public comment period for the proposed revisions will close. Green Seal will review and consider comments in the drafting in the revision of the final standard. Green Seal will respond to all comments received through a Response to Comments and will release a draft of the revised final standard to all registered stakeholders to be subject to a ballot vote. Once ballots are counted and edits made, as necessary, Green Seal anticipates issuing the revised final standard by the end of 2007. Any preliminary applications received for Green Seal certification under GS-11 or GC-3 during the revision process have been added to a waitlist and will be sent a copy of the revised final standard once it is issued. After review, applicants should resubmit a preliminary application.

Green Seal is launching an online forum system for the submission of comments to the proposed revisions and encourages all commenters to use the online system. You must register in order to post comments to the Green Seal online forum, but registration is open to any interested party. *Please note: In order to participate in the ballot vote for the Draft of the GS-11 Final Revised Standard, you must register through the online forum or notify Green Seal by the end of the public comment period.*

To access the Green Seal Standard Development Forum:

- Get on the following URL: <http://green-seal.org/standards>
- Register an account; **for the username please use first initial and full last name (e.g., G Seal)**; select “GS11 Paints”; review the disclaimer information; click *Register*.
- You should receive a welcome email from the Green Seal Development Forum within one business day.

There will be User tips and a Help section on using the online forum as well as general guidelines and rules on posting comments and attachments available once you log in. Comments posted to the online forum will be viewable by all GS-11 registered forum participants by the name of the commenter. Green Seal reserves the administrative right to ensure proper use of the online forum.

Green Seal will also accept comments by email, fax and postal mail. Any comments received by postal mail, fax and email will be posted to the online forum and will be viewable by GS-11 registered forum participants by the name of the commenter. Please refer to specific sections on which you have comments and include copies of any supporting documentation and send your comments to:

Green Seal, Inc.
Attn: GS-11 Paints Revision
1001 Connecticut Avenue, NW, Suite 827
Washington, DC 20036

Or by fax: (202) 872-4324 (please fax no more than 10 pages)
Or by e-mail: green seal@green seal.org with “GS-11/GC-3 Paints Revision” in the subject header.

***The public comment period will close September 24, 2007.
Green Seal will no longer accept any comments past this date.***

If you have any questions regarding the revision process or for online forum assistance, please contact Green Seal at (202) 872-6400 or email green seal@green seal.org with “GS-11/GC-3 Online Forum” in the subject line.

By participating in the process of setting environmental standards, you play an important role in our efforts to encourage the design, manufacture, and use of environmentally responsible products and services. Thank you in advance for your participation.

We look forward to receiving your comments.

Sincerely,

Cheryl Baldwin, Ph.D.
Director of Science and Standards

Christine Chase
Lead Environmental Scientist

BRIEF SUMMARY OF PROPOSED GS-11/GC-3 REVISIONS

This proposal incorporates a number of revisions to GS-11 and GC-3 including additional definitions, stricter performance requirements, more stringent health and environmental requirements (notably lower VOC limits) as well as more packaging requirements and an added end-of-life management section. There is also a new Addendum section that is intended to address climate change considerations and to provide for manufacturer innovation in sustainability. Green Seal's intent is to reward current excellence in leadership for paint and coating manufacturers and further promote sustainable practices in the marketplace by providing the impetus and encouragement for future improvements. The key proposed revisions to GS-11 and GC-3 are further discussed below.

“Aromatic Compound” and “Volatile Organic Compound (VOC)” definitions

It is understood that the aromatic compound limit in the original GS-11 standard was intended to limit the number of aromatic solvents used in the paint and not compounds that are totally reacted and contained within the binder; therefore, the proposed revisions clarify the intention by specifying “Volatile” in the definition. Both “Volatile Aromatic Compound” and “Volatile Organic Compound” definitions include a specification for boiling point. This approach is to further clarify the aromatic compound definition and to address issues of indoor air quality not included in the original GS-11, which cited the Environmental Protection Agency (EPA) definition that limits VOCs to those chemicals with a potential to create smog. The approach of using boiling point to define VOCs is used by the European Union in its Paints Directive 2004/42/EC and is appropriate for gas chromatographic methods, including ASTM 6886-03 and ISO 11890-2, cited in the proposed revisions under Section 4.4, *Volatile Organic Compound Content Limit*.

Additional Performance Requirements

Several performance requirements have been added to recognize higher industry requirements in the current marketplace and to address issues of product durability, a crucial aspect when considering environmental impacts of paints and coatings. Performance requirements are specified by product type, including Primers and Undercoats, Rust Preventative Coatings, Floor Coatings, Reflective Coatings and Interior and Exterior Topcoats. Green Seal recognizes that incorporating the GC-3 standard and GS-11 standard into one unified standard and including additional product categories in the Scope would require separate performance requirements based on the intended purpose of the product. In addition, Green Seal has added Reflective Coatings based on comments received from the Scoping Document and the importance of this product category for its ability to combat the “Urban Heat Island” effect¹.

¹ Environmental Protection Agency, Heat Island Effect: Cool Roofs.
<http://www.epa.gov/heatisld/strategies/coolroofs.html> Last Updated January 16th, 2007
Accessed August 9, 2007

Compound Prohibitions

The proposed revisions cite established lists of harmful chemicals including carcinogens, mutagens, reproductive toxins, hazardous air pollutants and ozone-depleting chemicals. In order to protect human health and the environment, Green Seal believes it is important to prohibit chemicals in paint formulations that have been identified by recognized organizations for having deleterious effects. The utilization of established lists is a more comprehensive approach and avoids the “laundry-list” of chemicals that is both cumbersome and allows formulations to contain other potentially more harmful chemicals. Chemicals not included in the established lists but that may still present a danger to human health and the environment have been prohibited separately, including endocrine disruptors, phthalates and alkyphenol ethoxylates (APEs), and compounds whose intention is to release formaldehyde over time (formaldehyde-donors).

An exception has been made for titanium dioxide in the compound prohibitions. Titanium dioxide has been classified by the International Agency for Research on Cancer (IARC) as Group 2B or “possible carcinogen”². However, the classification discusses the danger of exposure to the respirable dust during the manufacture of titanium dioxide and states that no significant exposure is expected where titanium dioxide is bound to materials, such as paints³. While Green Seal acknowledges the potential issues surrounding the manufacturing process, titanium dioxide is widely used in the paint industry due to its superior brightness and reflective ability with few safer alternatives that offer the same functionality⁴. Due to these considerations, Green Seal has made an exception for titanium dioxide.

Volatile Organic Compound (VOC) Content Limit

VOCs are one of the most important considerations for the paint and coating industry. Green Seal has recognized that the levels set in the original GS-11 standard should be readjusted to reflect the current technology and formulation advancements. VOC levels are categorized by product type, either flat or non-flat topcoats, primers and undercoats, floor and reflective coatings and rust preventative coatings. The VOC limits in the proposed revisions are similar to the proposed limits by the California Air Resources Board (CARB)⁵, with the exception of primers and undercoats, which are lower than the levels set by CARB. This level is set lower due to the fact that primers and undercoats certified under the original GS-11 were evaluated by the interior topcoat limits according to sheen. As most primers and undercoats fall under the flat category, they were required to meet the 50 g/L limit.

² IARC Monograph No 2 Vol 93: Titanium Dioxide. <http://monographs.iarc.fr/ENG/Meetings/93-titaniumdioxide.pdf> Accessed August 9, 2007.

³ Ibid.

⁴ Mineral Information Institute: Titanium. <http://www.mii.org/Minerals/phototitan.html> Accessed August 9, 2007.

⁵ California Air Resources Board, Suggested Control Measure for Architectural Coatings, 2007 Draft Proposed SCM Language. http://www.arb.ca.gov/coatings/arch/Draft_Proposed_SCM_Language.pdf Accessed August 9, 2007.

Volatile Organic Compound (VOC) Emission Limit

Green Seal is proposing a limit on VOC emissions to address the issues of indoor air quality, since EPA studies have demonstrated that VOC content does not necessarily correlate to emissions⁶. Green Seal invites comments regarding the inclusion of environmental chamber emission testing as described in the standard.

End-of-Life Management

The end-of-life management section has been added due to importance of reducing the environmental impacts of the paints and coatings. Green Seal wants to encourage both the proper purchasing of paint as well as promote the recycling and reuse and/or proper disposal of leftover paint by the manufacturer and the end consumer. Given the initiatives of the Product Stewardship Institute Paint Project, Green Seal invites comments regarding how to establish a more effective and substantial connection between the Green Seal Environmental Standard for Recycled Latex Paint (GS-43) and the revised GS-11.

Issue of Colorants

The original GS-11 exempted colorants added at the point-of-sale for the VOC determination. Since colorants can add significant amounts of VOCs as well as contain chemicals that may be harmful to human health and the environment, Green Seal acknowledges the need to address the issue of colorants, particularly given consumers' color trend demands⁷. Green Seal invites comments regarding the treatment of colorants within the standard, namely requiring that performance requirements, compound prohibitions and VOC levels include the maximum amount of recommended colorant added.

Addendum

This added section is intended to address climate change considerations and provide for manufacturer innovation in sustainability. Five specific measurable parameters are selected to recognize excellence in leadership in the industry as well as provide a stimulus for innovation and improvements in reducing the carbon impact of paint manufacturers. Green Seal invites comments regarding the proposed Addendum and additional ideas on how to practically incorporate climate change and sustainability considerations in this standard and other future endeavors.

⁶ EPA. Inside IAQ, EPA's Indoor Air Quality Research Update, EPA/600/N-98/003 Fall/Winter 1998. <http://www.epa.gov/appcdwww/iemb/insideiaq/fw98.pdf> Accessed August 9, 2007.

⁷ The Rohm and Haas, Paint Quality Institute, Color Trends 2006. http://www.paintquality.com/article/color_winter05.html Accessed August 9, 2007.