



May 24, 1994

TO: Air Quality Committee
Architectural Coatings Committee
Industrial Coatings Committee
Labeling and Product Safety Committee
Manufacturing Management Committee
Water Quality/Waste Management Committee

FROM: Soenie McDavid, Assistant Director
Environmental Affairs

RE: DRAFT Green Seal Standard on Anti-Corrosive Paints

Enclosed is a DRAFT Green Seal Environmental Criteria for Anti-Corrosive Paints dated May 20, 1994. Green Seal is seeking comments to this proposed standard which will be used in a product certification program. Please review and return your comments to me by June 10, 1994.

Green Seal was founded in 1990 by Earth Day founder Dennis Hayes to help identify environmentally preferable products in an effort to encourage consumers to purchase products with reduced environmental impacts/burdens. Green Seal hopes to encourage manufacturers to develop products which are significantly less damaging to the environment than their predecessors.

NPCA commented on Green Seal's Environmental Standard for Paints (primarily focused on architectural coatings), which was focused on a life-cycle analysis approach, in 1992.



May 20, 1994

Ms. Soony McDavid
Director Environmental Affairs
NPCA
1500 Rhode Island Avenue, NW
Washington, DC 20005

Dear Ms. McDavid:

Green Seal is now accepting comments on proposed environmental criteria we are developing for anti-corrosive paints. Green Seal's existing standard for paint, GS-11, covers primarily architectural coatings.

A separate standard for anti-corrosive paints allows Green Seal to establish environmental requirements more appropriate for this category and to develop performance criteria to evaluate the rust inhibiting properties of products.

While the proposed standard is still in draft form, Green Seal is soliciting comment on the appropriateness of the criteria we have chosen for evaluating environmentally preferable anti-corrosive paints. We also would appreciate suggestions regarding other performance or environmental requirements you believe Green Seal should include in this standard.

Enclosed is an outline of proposed criteria for evaluating anti-corrosive paints. In lieu of, or in addition to written comments, I hope to discuss with you directly any comments you have about the proposed standards. Thank you in advance for your time. I will call you next week to discuss the proposed environmental criteria with you. Or feel free to contact me at Green Seal at 202-331-7337.

Sincerely,

Amy L. Hitchcock
Amy L. Hitchcock
Project Manager

Green Seal • 1250 23rd Street NW, Suite 275 • Washington DC 20037-1001 • Telephone (202) 331-7337 • Fax (202) 331-7333

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CMA 118055

May 20, 1994

GC-03

**GREEN SEAL
ENVIRONMENTAL CRITERIA
FOR ANTI-CORROSIVE PAINTS**

May 20, 1994

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CMA 118056

GREEN SEAL

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

- identifies products that are designed and manufactured in an environmentally preferable manner;
- offers scientific analysis 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 ENVIRONMENTAL STANDARDS

The intent of Green Seal's standards 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 opportunities to significantly reduce a product's environmental impact. Each Green Seal Environmental Standard is first issued in proposed form. Industry, trade associations, government agencies, environmental and other public interest organizations, users, and other interested parties are encouraged to comment on the proposal. Standards are then established after careful review and consideration of the comments.

Green Seal offers the opportunity to achieve 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. Underwriters Laboratories Inc., the nation's premier product testing and inspection organization, serves as Green Seal's primary testing and factory inspection contractor.

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

Green Seal
1250 23rd Street, NW, Suite 275
Washington, DC 20037-1101
(202) 331-7337

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SUMMARY OF COMMENTS REQUESTED

When reviewing the standard please pay particular attention to the following areas:

Performance Requirements

- Has Green Seal chosen appropriate testing protocols for adhesion and hiding power?
- When developing the standard, it came to our attention that a test protocol for corrosion/weathering is currently under development by ASTM subcommittee 27. This test reportedly imitates real world corrosion characteristics better than the traditional salt fog test for measuring a paint's rust inhibiting properties. The corrosion/weathering test also reportedly produces more consistent results on a product by product basis.

What would be the advantages and disadvantages of Green Seal using the corrosion/weathering test currently under development instead of the salt fog test?

- What would constitute acceptable performance by a product when using the test protocols of the salt fog test?
- Should other performance requirements be specified?

Environmental Requirements

- Has Green Seal chosen appropriate VOC limits to recognize environmentally preferable anti-corrosive paints? If not, what levels should be specified?
- How widespread is the use of heavy metals in anti-corrosive paints? Are there any differences in the use and concentrations of heavy metals in industrial anti-corrosive paints versus consumer anti-corrosive paints?
- Are the chemical component restrictions appropriate? Should additional compounds be added or should any listed components be deleted?

ENVIRONMENTAL STANDARD

1 Scope.

This Standard establishes environmental requirements for anti-corrosive paints.

2 Definitions.

For the purpose of this Standard, the following definitions apply.

2.1 Paints: Liquid, liquefiable or mastic composition that is converted to a solid protective or functional adherent film after application as a thin layer. These coatings are intended for application to metal surfaces to provide protection from rusting.

2.2 Volatile Organic Compounds (VOCs): Compounds as defined by U. S. Environmental Protection Agency (EPA) in 40 CFR § 51.100 (s), (s) (1).

2.3 Aromatic Compounds: Hydrocarbon compounds containing one or more 6-carbon benzene rings in the molecular structure.

3 Product-Specific Performance Requirements.

3.1 Adhesion. The product shall demonstrate a minimum of Classification 4B according to ASTM D3359-90 Method B, *Standard Test Methods for Measuring Adhesion by Tape Test*.

3.2 Corrosion/Weathering (Prohesion QUV) Test. (protocols to be determined.)

OR

Salt Spray (fog) Testing according to ASTM designation B117-90. (parameters to be determined)

3.3 Hiding Power (Opacity). The product shall demonstrate a minimum 0.95 contrast ratio at 400 square feet per gallon as determined by ASTM D2805-88, *Standard Test Method for Hiding Power of Paints by Reflectometry*.

4 Product-Specific Environmental Requirements.

4.1 Chemical Component Limitations.

4.1.1 VOCs. The VOC concentrations of the product shall not exceed those listed below as determined by U. S. Environmental Protection Agency (EPA) Reference Test Method 24 (Determination of Volatile Matter Content, Water Content, Density Volume Solids, and Weight Solids of Surface Coatings), Code of Federal Regulations Title 40, Part 60, Appendix A.

The calculation of VOCs shall exclude water and tinting color added at the point of sale.

<u>Coating Type</u>	<u>VOC weight in grams/liter of product minus water</u>
Gloss	250
Semi-Gloss	225
Satin and Flat	200

4.1.2 Aromatic Compounds. The product must contain no more than 1.0% by weight of the sum total of aromatic compounds. Testing for the concentration of these compounds will be performed if they are determined to be present in the product during a materials audit.

4.2 Chemical Component Restrictions. The manufacturer shall demonstrate that the following chemical compounds are not used as ingredients in the manufacture of the final product.

4.2.1 Halomethanes

methylene chloride

4.2.2 Chlorinated ethanes

1,1,1-trichloroethane

4.2.3 Aromatic solvents

benzene
toluene (methylbenzene)
ethylbenzene

4.2.4 Chlorinated ethylenes

vinyl chloride

4.2.5 Polynuclear aromatics

naphthalene

4.2.6 Chlorobenzenes

1,2-dichlorobenzene

4.2.7 Phthalate esters

di (2-ethylhexyl) phthalate
butyl benzyl phthalate
di-n-butyl phthalate
di-n-octyl phthalate

diethyl phthalate
dimethyl phthalate

4.2.8 Miscellaneous semi-volatile organics

isophorone

4.2.9 Metals and their compounds

antimony
cadmium
hexavalent chromium
lead
mercury

4.2.10 Preservatives (antifouling agents)

formaldehyde

4.2.11 Ketones

methyl ethyl ketone
methyl isobutyl ketone

4.2.12 Miscellaneous volatile organics

acrolein
acrylonitrile

5 Packaging Requirements.

5.1 Toxics in Packaging.

5.1.1 The manufacturer shall demonstrate that paint cans and their components are not fabricated with lead.

Appendix: Labeling Requirements for Certification by Green Seal

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

- 1 The Green Seal Certification Mark must appear on the packaging.
- 2 Whenever the certification mark appears on a package or product, the product or 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. The description shall read as follows:

This product has reduced volatile organic compound (VOC) levels; does not contain specified toxic chemicals.

- 3 Paints which have been formulated without VOCs shall be designated Class A and may contain a special designation to that effect on the label.