

## Paints (GS-11)

First Edition May 20, 1993

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### 1. Scope

This Standard establishes environmental requirements for paints. The standard does not include stains, clear finishes, or paints sold in aerosol cans.

### 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, decorative, or functional adherent film after application as a thin layer. These coatings are intended for on-site application to interior or exterior surfaces of residential, commercial, institutional or industrial buildings.<sup>1</sup>

**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 Interior Topcoats.** Products intended for interior opaque topcoat use shall meet the following requirements.

**3.1.1 Scrubbability (Abrasion Resistance).** The product shall demonstrate at least 100 cycles (200 separate strokes) before failure, as determined by American Society for Testing and Materials (ASTM) D2486-89, *Standard Test Method for Scrub Resistance of Interior Latex Flat Wall Paints*.

**3.1.2 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*. Compliance will be determined by testing a white paint having a minimum 80% reflectance.

**3.1.3 Washability (Stain Removal).** The product shall demonstrate the following minimum requirements for stain removal as determined by ASTM 4828-91 Mechanical Method, *Standard Test Method for Practical Washability of Organic Coatings*.

Flat <sup>2</sup>	5 minimum rating
Non-Flat	7 minimum rating

**3.2 Exterior Topcoats.** Products intended for exterior opaque topcoat use shall meet the following requirements.

**3.2.1 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*. Compliance will be determined by testing a white paint having a minimum 80% reflectance.

**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 VOC shall exclude water and tinting color added at the point of sale.

**Interior Coatings:**

<u>Coating Type</u>	<u>VOC weight in grams/liter of product minus water</u>
Non-flat <sup>3</sup>	150
Flat	50

**Exterior Coatings:**

<u>Coating Type</u>	<u>VOC weight in grams/liter of product minus water</u>
Non-flat <sup>4</sup>	200
Flat	100

**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 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 meets Green Seal environmental standards for volatile organic compounds (VOCs) and other ingredients.*

3. The packaging shall be accompanied by a brief statement discouraging disposal into drains and encouraging consultation with local authorities for disposal requirements or recycling opportunities.
4. Paints which have been formulated without VOCs shall be designated Class A and may contain a special designation to that effect on the label.

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1. ASTM D16-91, *Standard Terminology Relating to Paint, Varnish, Lacquer, and Related Products*. Stains and clear finishes, which are included in the ASTM definition, are not covered by this standard.

2. 2 If the manufacturer has not characterized the paint as to gloss, the specular gloss level at 60° will be determined. Flat paints are those which register less than 5 and non-flat paints are those which register a 5 or greater. The gloss reading will be determined by ASTM D523-89, Standard Test Method for Specular Gloss.
3. See note # 2.
4. See note #2.