



GS-43

**GREEN SEAL™ STANDARD FOR
RECYCLED LATEX PAINT**

**EDITION 1.1
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THE MARK OF ENVIRONMENTAL RESPONSIBILITY

GREEN SEAL

Green Seal is a non-profit organization whose mission is to use science-based programs to empower consumers, purchasers, and companies to create a more sustainable world. Green Seal sets leadership standards that aim to reduce, to the extent technologically and economically feasible, the environmental, health, and social impacts throughout the life-cycle of products, services, and companies. The standards may be used for conformity assessment, purchaser specifications, and public education.

Green Seal offers certification of products, services, and companies in conformance with its standards. For additional information on Green Seal or any of its programs, contact:

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FOREWORD

Edition. This version is Edition 1.1 from May 10, 2013 and replaces the First Edition from September 1 2006 (with editorial changes made October 1, 2011). This revision includes substantive changes.

General. The final issued standard was developed in an open and transparent process with stakeholder input that included producers, users, and general interests.

The requirements in the standard are based on an assessment of the environmental, health, or social impacts associated with the products, services, or organizations covered in the scope of the standard. These requirements are subject to revision, and generally cover aspects above and beyond regulatory compliance. This standard neither modifies nor supersedes laws and regulations. This standard (and any corresponding conformity assessment) requires compliance with all applicable laws and regulations for the manufacturing and marketing of the products.

Provisions for safety have not been included in this standard, since they are supervised by regulatory agencies. Adequate safeguards for personnel and property should be employed for all stages of production, and when the standard requires tests that involve safety considerations.

Products, services, or organizations that are substantially similar to those covered by this standard in terms of function and life cycle considerations may be evaluated against the intent of the requirements of this standard, accounting for relevant differences between the intended scope of the Standard and the actual product, service, or organization to be evaluated.

This standard may not anticipate features of the product that may significantly, and undesirably, increase its impact on the environment, health, or society. In such a situation, Green Seal will ordinarily amend its standards to account for the unanticipated environmental, health, and societal impacts.

Normative references (e.g., other standards) in this standard intend to refer to the most recent edition of the normative reference. Test methods may be required for product evaluation. Unless explicitly stated that a specified method is the only acceptable one, the intent of the standard is that an equivalent method may be accepted at Green Seal's sole discretion.

Certification to this standard shall be awarded only by Green Seal, or, with Green Seal's explicit written permission, by a third-party certification program conducting on-site audits.

Disclaimer of Liability. Green Seal, as the developer of this standard, shall not incur any obligations or liability for any loss or damages, including, without limitation, indirect, consequential, special, or incidental damages arising out of or in connection with the interpretation or adoption of, reliance upon, or any other use of this Standard by any party. Green Seal makes no express or implied warranty of merchantability or fitness for a particular purpose, nor any other express or implied warranty with respect to this Standard.

ACRONYMS AND ABBREVIATIONS

EPA. United States Environmental Protection Agency

MPI. Master Painters Institute

SDS. Safety Data Sheet

VOC. Volatile Organic Compound

GREEN SEAL STANDARD FOR RECYCLED LATEX PAINT, GS-43

1.0 SCOPE

This Standard establishes requirements for *recycled latex paint* for interior and exterior use. For the purposes of this Standard, recycled-content *latex paints* are made by two distinct methods, consolidation and reprocessing (also called remanufacturing). This Standard does not apply to stains, clear finishes, *paints* sold in aerosol cans, or oil-based *paints*. See Appendix 1 for an example list of products included in this standard.

Words and phrases described in the standard that appear in *italics* have a corresponding definition located in the definition section of the standard, Annex A.

2.0 COLLECTION AND SORTING REQUIREMENTS

2.1 *Paint* shall be received in its original container with a readable label, which, at minimum indicates the product type (e.g., latex), its intended application (e.g., interior, exterior), and gloss level.

2.2 The contents of the *paint* shall visually match what is described on the label.

2.3 Solvent based *paints* or specialty *paints* (e.g., industrial, marine, automotive, traffic-marking, etc.) shall not be used for the purposes of manufacturing a *consolidated latex paint* or *reprocessed latex paint*. If there is any doubt that the *paint* is latex, then it shall be rejected.

2.4 To be determined *usable* for consolidation or reprocessing, each container of *paint* shall be free of the following as determined by a physical inspection that includes stirring of the contents to achieve uniform consistency:

- Biological growth
- Putrefaction
- *Skimming*
- *Livering*
- *Hard settling of pigment*
- Significant interior and/or exterior corrosion of the container
- Excessive debris, such as dirt, sand, gravel, sawdust, or similar foreign material
- *Curdling* or other evidence of being frozen
- As indicated by the label, any heavy metals or substances prohibited in this Standard, their common names, Chemical Abstract Service numbers and/or other common terminology.

2.5 Prior to canning, *paints* shall be filtered through a 300-micron or finer filter.

3.0 PRODUCT-SPECIFIC PERFORMANCE REQUIREMENTS

3.1 Documentation shall be provided demonstrating that the product meets the applicable Master Painters Institute (MPI) detailed performance standard for the appropriate MPI category.¹

3.2 Every batch shall be tested by the manufacturer, at a minimum, for pH, viscosity, fineness of grind, and gloss.

4.0 PRODUCT-SPECIFIC HEALTH AND ENVIRONMENTAL REQUIREMENTS

4.1 Recycled Content Volume. The manufacturer shall demonstrate that the recycled latex paint meets one of the following requirements:

- Consolidated paints must contain a minimum of 95% by volume post-consumer paint, with a maximum of 5% by volume secondary industrial materials or virgin materials.
- Reprocessed paints must contain a minimum of 50% by volume post-consumer paint, with a maximum of 50% by volume secondary industrial materials or virgin materials.

4.2 Chemical Components Limitations: Volatile Organic Compounds. The manufacturer shall demonstrate that the finished products contain a maximum volatile organic compound (VOC) level of 250g/l as determined by the U.S. Environmental Protection Agency (EPA) Reference Test Method 24.

The calculation of *VOC* level shall not include water but shall include tinting color previously added.

Information shall be provided to justify the basis used to select the batch samples for *VOC* level testing. The selection of test samples shall reflect typical batch sizes, variation in *recycled paint* input, and total number of batches produced.

4.3 Chemical Component Limitations: Aromatic Compounds. The sum total of aromatic compounds in the virgin and secondary industrial materials of the product shall contain no more than 1.0% by weight. Testing for the concentration of these compounds shall be performed if they are determined to be present in the product during a materials audit.

4.4 Chemical Component Restrictions. The manufacturer shall demonstrate that the following chemical compounds are not used as ingredients in any virgin or secondary

¹ MPI detailed performance standards, which outline the applicable performance requirements and testing frequencies, may be obtained from the Master Painters Institute at <http://www.paintinfo.com/>

industrial materials added to recyclable latex paint in the consolidation or reprocessing of the product:

- Halomethanes:
 - Methylene chloride
 - Chlorinated ethanes:
 - 1,1,1, -trichloroethane
- Aromatic Compounds:
 - benzene
 - toluene (methylbenzene)
 - ethylbenzene
- Chlorinated ethylenes:
 - vinyl chloride
- Polynuclear aromatics:
 - naphthalene
- Chlorobenzenes:
 - 1,2-dichlorobenzene
- Phthalate esters:
 - di (2-ethylhexyl) phthalate
 - butyl benzyl phthalate
 - di-n-butyl phthalate
 - di-n-octyl phthalate
 - diethyl phthalate
 - dimethyl phthalate
- Miscellaneous semi-volatile organics:
 - isophorone
- Metals and their compounds:
 - antimony
 - cadmium
 - hexavalent chromium
 - lead
 - mercury
- Preservatives (antifouling agents):
 - formaldehyde
- Ketones:

- methyl ethyl ketone
- methyl isobutyl ketone

- Miscellaneous volatile organics:
 - acrolein
 - acrylonitrile

4.5 Product Packaging.

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

4.5.2 *Recyclable* product containers shall be used where local recycling opportunities exist.

5.0 LABEL AND MATERIAL SAFETY DATA SHEETS

5.1 The packaging shall be accompanied by a brief statement discouraging improper disposal and encouraging consultation with local authorities for disposal requirements or recycling opportunities.

5.2 Unless otherwise approved in writing by Green Seal, the Safety Data Sheet (SDS) shall include the following statement:

“This product consists primarily of post-consumer recyclable latex paints. Feedstock may vary.”

5.3 Unless otherwise approved in writing by Green Seal, the label shall include the following statement:

“This product consists primarily of post-consumer recyclable latex paints.”

5.4 The manufacturer shall provide copies of relevant labels and SDSs, which shall be prepared properly according to all applicable federal, state, and local regulations.

6.0 END-OF-LIFE MATERIAL MANAGEMENT

6.1 Unused and unusable latex and non-latex *paint* shall be removed, utilized, and/or disposed of properly according to all applicable state, federal, and local regulations.

6.2 Leftover *paint* from the consolidation or remanufacturing process shall be utilized locally and/or domestically where there are existing markets.

Metal and plastic *paint* containers, pallets, and packaging shall be recycled where there are existing markets.

7.0 CERTIFICATION AND LABELING REQUIREMENTS

7.1 Certification Mark. The Green Seal® Certification Mark may appear on the product, packaging, secondary documents, and promotional materials, only in conjunction with the certified product. Use of the Mark must be in accordance with *Rules Governing the Use of the Green Seal Certification Mark*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.

Green Seal must review all uses of the Certification Mark prior to printing or publishing.

7.2 Use With Other Claims. The Green Seal Certification Mark shall not appear in conjunction with any human health or environmental claims, unless verified and approved in writing by Green Seal.

7.3 Statement of Basis for Certification. Wherever the Green Seal Certification Mark appears, it shall be accompanied by a description of the basis for certification. The description shall be in a location, style, and typeface that are easily readable.

Unless otherwise approved in writing by Green Seal, the description shall read as follows, unless an alternate version is approved in writing by Green Seal:

For *consolidated paints*:

This product meets Green Seal™ Standard GS-43 based on effective performance and at least 95% post-consumer material. GreenSeal.org.

For *reprocessed paints*:

This product meets Green Seal™ Standard GS-43 based on effective performance and at least 50% post-consumer material. GreenSeal.org.

² www.greenseal.org/TrademarkGuidelines

ANNEX A – DEFINITIONS (Normative)

Note that the defined terms are italicized throughout the standard.

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

Consolidated Paints. *Paints* that contain a minimum of 95% by volume post-consumer paint with a maximum of 5% by volume *secondary industrial materials* or *virgin materials*.

Curdling. The process of forming semisolid lumps in a liquid.

Hard Settling of Pigment. A settling of pigments that cannot be easily dispersed by simple mixing.

Ingredient. Any constituent of a product that is intentionally added or is known to be a contaminant that comprises at least 0.01% by weight of the product.

Latex Paints. Water-based *paint* containing latex binders.

Livering. Coagulation of *paints* into a viscous liver-like mass.

Paints. Liquid, liquefiable composition that is converted to a solid protective, decorative, or functional adherent film after application as a thin layer. These coatings are intended for, but not restricted to, on-site application to interior or exterior surfaces of residential, commercial, institutional or industrial buildings.

Post-Consumer Material. Finished products, packages or materials generated by a business or consumer that have served their intended end uses, and have been recovered from or otherwise diverted from the waste stream for the purpose of recycling.

Putrefaction. A state of decay usually accompanied by an offensive odor.

Recyclable. Characteristic of material that still has useful physical or chemical properties after serving its original purpose and can, therefore, be reused or remanufactured into additional products.

Recycled Paints. *Consolidated* or *reprocessed paints* containing post-consumer material, *secondary industrial materials*, and/or *virgin materials*.

Reprocessed Paints. *Paints* that contain a minimum of 50% by volume post-consumer *paint*, with a maximum of 50% by volume *secondary industrial materials* or *virgin materials*.

Secondary Industrial Materials. Products or by-products of the *paint* manufacturing process that are of known composition and have economic value but can no longer be used for their intended purpose.

Skimming. The formation of a dried layer on the surface of a fluid such as an ink or coating (like a *paint*), after a period of standing.

Usable. That which can be used for its intended purpose.

Virgin Materials. Materials that contain no post-consumer waste or *secondary industrial materials*.

Volatile Organic Compounds. Compounds as defined by the EPA 40 Code of Federal Regulations § 51.100 (s), (s) (1).

APPENDIX 1 – SCOPE (Informative)

Examples of products included in or excluded from the scope of GS-43:

Products Included in GS-43

- *Recycled latex paints (consolidated and reprocessed paints)* for interior and exterior use

Products Excluded from GS-43

- *Paints and coatings* (non-recycled), including wall paints (interior and exterior), anti-corrosive coatings, floor paints, primers and undercoats, reflective roof coatings, and reflective wall coatings (covered in GS-11)
- Stains (covered in GS-47)
- Clear finishes (covered in GS-47)
- *Paints* sold in aerosol cans
- Oil-based *paints*
Floor care products for industrial and institutional use (floor finishes and strippers) (covered in GS-41)