

Green Purchasing Best Practices: Architectural Paints and Coatings



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Green Purchasing Best Practices: Paints and Coatings

HIGHLIGHTS

- Many categories of certified environmentally preferable low-toxicity paints and coatings are available and price competitive, including some products that contain recycled content.

WHY BUY ENVIRONMENTALLY PREFERABLE PAINTS? (page 1)

- Architectural paints and coatings are purchased by many government agencies either as a separate commodity or part of a painting or building maintenance service agreement.
- Architectural paints and coatings purchased in the highest volumes are indoor and exterior latex paints and primers, followed by floor paints, spray paints, stains, and varnishes.
- Low-toxicity paints and coatings protect the health of maintenance workers and facility users.
- Purchasing recycled-content paint creates markets for paint collected by community recycling programs.

Variety and Quality

- Market demand for certified environmentally preferable paints and coatings has created a wide availability of “green” options, particularly with respect to latex paints and primers.
- Some third-party certifications ensure product performance in addition to protecting worker and public health.
- Recycled-content paint is now available in custom colors and with low volatile organic compound (VOC) levels.

Environmental and Health Benefits

- Paints and coatings can contain chemicals known to cause cancer, birth defects, asthma, and other serious health effects. They can also emit VOCs that contribute to poor indoor and outdoor air quality.

Economic Benefits

- Some environmentally preferable paints (e.g., low-toxicity virgin or recycled latex paints) are cost competitive with conventional paints.
- **ENERGY STAR**-qualified reflective roof coatings can lower energy bills, particularly in warm climates.
- Purchasing locally sourced recycled paints can help municipalities lower their paint disposal costs and create jobs in the region.
- Purchasing some environmentally preferable paints and coatings can earn “green” building credits under LEED.

BEFORE BIDDING (page 3)

Building a Stakeholder Team

- Convene a Paint Contract Development Team including high-use agencies and environmental program staff.

Which Products Are Needed?

- Consider creating a bid list or “Green Market Basket” list comprised of the products you use the most.

What Products Are Out There?

- Ask vendors to provide a list all products they offer meeting your criteria either informally or through an RFI.

Low-Toxicity Paint

- As of March 2013, 14 brands of low-toxicity (non-recycled) paints and coatings were certified under the Master Painters Institute (MPI) Extreme Green standard, nine brands were certified by Green Seal, and four brands are certified by UL EcoLogo.
- Hundreds of other paints and coatings meet the other environmental standards referenced below.

Recycled Paint

- Green Seal has certified three brands of recycled-content paint and UL EcoLogo has certified one brand.
- Recycled paint is most readily available in states that have adopted paint product stewardship policies requiring paint stores and community recycling centers to collect leftover paint from residents and businesses.
- Recycled paint is **available** with a VOC content as low as 50 g/l, in custom colors, and in varying finishes.
- **Consolidated recycled paint** has at least 95% post-consumer content and tends to have higher VOCs.
Remanufactured recycled paint has at least 50% post-consumer content and tends to have lower VOCs.

Are There Useful Cooperative Purchasing Contracts?

- Certified low-toxicity paints are available through WSCA’s contracts with **Grainger** and **Fastenal**.

Are There Useful Model Specifications From Other States?

- Washington, California, and Connecticut have negotiated contracts for low-toxicity and/or recycled paint.

GREEN CERTIFICATIONS AND STANDARDS FOR PAINTS AND COATINGS (page 7)

- Multiple-attribute third-party certifications and recognitions that address toxic chemical content, emissions and often performance: **Green Seal**, **UL EcoLogo**, **MPI Extreme Green & GPS**, and **EPA Design for the Environment (DfE)**.
- Single-attribute certifications and standards: **ENERGY STAR**; **UL GREENGUARD**, and **USDA Biobased Certified**; **South Coast Air Quality Management District (SCAQMD) VOC Limits**; and **water-based**.

For more, see [Green Certifications Table](#)

BID SPECIFICATIONS (page 10)

Minimum Requirements (Specifications)

- **Recycled Latex Paints**
 - Consolidated: Green Seal (GS-43) or UL EcoLogo (CCD-048)
 - Remanufactured: Green Seal GS-43 or UL EcoLogo CCD-048, AND ≤150 g/l VOCs
- **Virgin Latex Paints and Primers (Interior and Exterior, Wall and Ceiling only)**
 - Green Seal (GS-11), UL EcoLogo (CCD-047) or MPI (X-Green or GPS-2 only)
- **Specialty Paints, Primers, Varnishes, Stains and Other Coatings (Non-Aerosol)**
 - Green Seal (GS-11 or GS-47), UL EcoLogo (CCD-047), MPI (X-Green, GPS-2 or GPS-1) OR
 - UL GREENGUARD-certified, DfE-Recognized OR meets SCAQMD VOC limits AND MPI-approved for performance
 - No Prop 65 chemicals OR nano-particles AND disclosure of asthmagens
- **Spray Paints (Aerosol):** Water-based AND no Prop 65 chemicals
- **Paint and Graffiti Removers:** DfE-Recognition OR USDA Certified Biobased AND no Prop 65 chemicals
- **Reflective Roof Coatings:** ENERGY STAR-qualified
- **Paint Rollers, Trays, and Other Equipment:** Minimum 10% post-consumer OR 30% total recycled content

Bid Strategies

- Require multi-attribute certification of products, whenever it is likely to yield competitive bids.
- Consider issuing a Request for Information (RFI) to gain information about the availability of environmentally preferable products from vendors in your state.
- Create an Environmentally Preferable Bid List OR a “Green” Core/Market Basket list.
- Consider a “Brown List” of products prohibited from the contract when plenty of preferable options are available.
- Ask for both consolidated and remanufactured recycled paint, as they fill different needs.
- Consider using supplied [Model Bid Sheet](#) to track vendor submissions.
- Consider issuing an RFP so you can reward vendors offering more green products and services on your contract.
For more, see [Appendix 1 Definitions and Connecticut Contract Award for Paint and Related Supplies \(pg. 35\)](#)

ONCE THE BIDS ARE IN (page 15)

- Organize product information to facilitate an apples-to-apples comparison. See tips for managing submissions.

Best Ways to Award

- Potential strategies include choosing a single vendor based on best-priced bid or core list items, multiple vendors based on best line-item prices, or multiple vendors by product category or region.
- Multiple awards (particularly for recycled paint) may increase product selection.

Verifying Compliance

- Spot-check environmental certifications/attributes of products (Green Seal, UL EcoLogo, MPI X-Green, etc.), compliance with SCAQMD VOC limits, avoidance of chemicals of concern, etc.

Evaluating Performance and Price

- Compare prices of equivalent products on bid or core/market basket list: Same MPI Category (1-301) and similar MPI Environmental Performance Rating (EPR score of 0-6) based on information supplied by bidders or MPI.

For more, see [Model Bid Sheet](#)

VENDOR EVALUATION (page 20)

- Consider giving points to bidders offering the widest variety of painting products that meet your specifications, a user-friendly labeling system, “Green Spend Reports,” full disclosure of chemicals ingredients, sustainable packaging and transportation methods, and/or paint recycling services.

For more, see [Vendor Sustainability Questionnaire](#)

MAXIMIZE GREEN IMPACT (page 21)

- Create recycled and low-toxicity paint lists and encourage end-users to choose these products first.
- Make your contract a cooperative purchasing agreement so other jurisdictions can use it.
- Publish your specifications and/or a case study on your contract to encourage other states to follow suit.
- Require the same specifications for painting contractors on state property or state-funded painting projects.
- Choose the right quality and quantity of paint for the job to save money; the PaintCare calculator can help.
- Choose light colors, whenever possible, to decrease energy costs associated with lighting.
- Prioritize use of low-VOC paints for indoor applications in occupied areas.

WHAT’S ON THE HORIZON? (page 22)

- Supplies of recycled paint are expected to increase as more states adopt paint recycling laws.
- On January 1, 2014, the SCAQMD will implement more stringent VOC limits for some paints and coatings.
- The availability of Health Product Declaration forms and Green Screen scores for paints and coatings will give consumers information to make more informed paint purchasing decisions in the future.

WHY BUY ENVIRONMENTALLY PREFERABLE PAINTS?

Most government agencies purchase paint and/or painting services for their building maintenance operations, and all painted surfaces must be painted at regular intervals either for aesthetic value or to protect the underlying substrate. Environmentally preferable paints and coatings can be used by in-house maintenance staff or by contractors working on agency-owned property or projects funded with agency dollars. States can protect maintenance workers and building occupants, support businesses that have developed environmentally preferable paint and coating products, and save money by adding certified “low-toxicity” and recycled-content products to their contracts for painting supplies and services.

Variety and Quality

Because of the high demand for “low-emitting” and other environmentally preferable paints and coatings, many large and small manufacturers offer a wide array of paints, coatings and other painting supplies with lower amounts or emissions of volatile organic compounds (VOCs), fewer toxic ingredients, recycled content, and other environmental attributes. Many of these products carry at least one third-party certification, and they are often available in a variety of colors and finishes.

Requiring products to be certified as “green” by a respected third-party organization is an easy way for states to ensure the products they procure will minimize environmental and health impacts and perform well.

Environmental and Health Benefits

Many paints, primers, stains, varnishes and other painting products contain chemicals that can cause cancer, birth defects, asthma or other harm to people and the environment. These toxic chemicals often volatilize when exposed to air, producing some of the odors commonly associated with paint. Paints and other architectural coatings are the nation’s second largest source of VOC emissions, with vehicles being the first. These VOCs pose health risks to maintenance workers applying paint and building occupants (especially children and other vulnerable populations) in facilities where painting is taking place. Even after paint has dried, it can continue to off-gas, which can further contribute to poor indoor air quality.

Paints, stains and other types of coatings may also contain other toxic chemicals such as heavy metals (e.g., lead or cadmium in pigments) or nano-particles that can be easily absorbed into the body due to their miniscule size. Spray paints are of particular concern because they typically contain hazardous solvents and the aerosol delivery system produces a fine mist that can easily penetrate the lungs.

Traditional oil-based (i.e., alkyd) paints contain toxic solvents and emit more VOCs than their water-based (i.e., waterborne) counterparts. Waterborne paints are not only less toxic, but reduce consumption of non-renewable petroleum resources. Recycled paints have a smaller footprint because they use fewer material resources and energy to manufacture, and because they are often collected, processed, and re-sold locally, which can lower their transportation impacts.

The safe disposal of leftover paint represents a serious waste management challenge for communities across the United States. Paint often constitutes the largest volume of material collected at household hazardous waste collection facilities. While a few states have paint product stewardship programs in place,

unused paint must be managed at considerable expense by most municipalities nationwide. The procurement of recycled-content paint by states and other public agencies can help support a growing number of paint recycling initiatives by creating markets for leftover paint that is collected at paint stores and other community drop-off sites.

Economic Benefits

Some recycled and low-toxicity paint products are cost-competitive with equivalent conventional products, while others offer financial benefits over time, such as reducing electricity consumption or disposal costs. In 2012, the State of Connecticut was able to secure competitive (and in some cases lower) prices on several types of environmentally preferable painting products through a carefully crafted competitive-bidding process (see Table 1, below).

Three examples are shown below comparing the bid prices on a low-toxicity paint product and the equivalent ‘traditional’ paint product. Low-toxicity products are highlighted green for ease of viewing comparable or better pricing on environmentally preferable products.

**Table 1. Comparison of Prices for “Low-toxicity” and “Conventional” Paint Products:
State of Connecticut Paints and Coatings Contract**

Product Description	Manufacturer	Gloss Level	MPI Category	Meets Environmental Criteria?	MPI EPR Quality Score	Maximum VOCs (g/l)	Price: 1 gal	Price: 5 gal
<i>Example #1</i>								
Interior Zero-VOC Semi-Gloss Latex Paint	Sherwin-Williams	4	43	YES	3.5	Zero VOC	\$11.00	\$55.00
Interior Commercial Semi-Gloss Latex	Sherwin-Williams	4	43	NO	1.5	460	\$13.00	\$65.00
<i>Example #2</i>								
Interior/Exterior Zero-VOC Multi-Purpose Primer	Sherwin-Williams	1	137	YES	3	Zero VOC	\$19.00	\$95.00
Interior/Exterior Primer/Sealer	Sherwin-Williams	1	137	NO	3	96	\$18.99	\$94.95
<i>Example #3</i>								
Interior High-Performance Latex	Glidden	3	139	YES	6	Zero VOC	\$25.74	\$115.99
Interior Premium Line Satin Enamel Latex	Sherwin-Williams	3	139	NO	3	40	\$31.00	\$155.00

Contract pricing on recycled paints is typically comparable to or lower than equivalent virgin paint products. (See section on [Everything you Need to Know About Recycled Paint.](#)) Furthermore, by carefully selecting a range of quality paints – enabling the purchase of higher quality, more durable paint for tougher jobs – agencies can save significantly on materials and labor.

ENERGY STAR-rated reflective roof coatings with high solar reflectance can reduce the heat absorption of a building, thereby decreasing cooling costs over time in warm climates. The Reflective Roof Coatings Institute offers [two cost savings calculators](#) to help paint users determine whether reflective roof coatings make economic sense for their applications. Similarly, light-colored paint can reduce lighting needs, saving electricity.

BEFORE BIDDING

Building a Stakeholder Team

Inviting your environmental agency staff to participate on your contract development team along with agencies that are large users of painting supplies will make your job easier. Engage a committee of end-users and other stakeholders during the development of product specifications, solicitation documents, and bid evaluation and award procedures (e.g., single vendor versus multiple vendors). This multi-stakeholder team should also be engaged in reviewing proposed products to ensure the contract will meet the end-users' needs. After the contract is awarded, the team can continue to serve an outreach function by alerting end-users of the new preferred products, addressing their concerns, and helping them to transition to using new low-toxicity painting products.

Which Products Are Needed?

The most important question to ask is which types of painting supplies you want to include on your contract. These products should be highlighted in the bid solicitation (e.g., on a "green" product bid list or market basket list) to alert the vendors of your priority products for attractive pricing. By far, the paints purchased in the highest volumes tend to be indoor and exterior latex paints and primers. Floor paints, spray paints, stains and varnishes tend to be the next most common. Traffic marking paints are also very commonly used; however, they are typically purchased through different vendors that specialize in paints and coatings for departments of transportation.

Each state should assess its own purchasing patterns so procurement officers know what to highlight in their bid solicitation. Vendors will also want to know how much of each type of paint they can expect to sell on your contract; this will help them give you a discount commensurate with expected usage. It is important to note that if the state has not been purchasing environmentally preferable paints and coatings in the past, it can encourage bidders to offer it at discounted prices by adding equivalent low-toxicity products to the bid list in addition to (or instead of) conventional products in each category.

What Green Products Are Out There?

A growing variety of recycled and low-toxicity paints and coatings are available on the market. Many products carry third-party eco-labels, or meet other environmental standards such as stringent VOC limits. Of greatest importance are multi-attribute certifications offered by Green Seal, UL EcoLogo, and the Master Painters Institute (MPI), which verify that paints and coatings meet both environmental and performance criteria. These multi-attribute certifications are preferable to single-attribute certifications because they are based on a more complete assessment of a product's overall environmental and health impacts, thereby preventing environmental and health tradeoffs.

Users do not have to sacrifice quality when using recycled or low-toxicity paints since all of the multiple-attribute third-party certifications include a performance requirement. Moreover, many certified low-toxicity paints are available in both high-performance and standard-grade formulations.

In several categories of paints and coatings, there are little or no *multi-attribute* standards or certified products available. However, in some of these, there are products that have *single-attribute* certifications such as UL GREENGUARD (for low-emitting products), USDA Certified Biobased (for paints and coatings,

for example, that contain plant-based oils instead of petroleum), and ENERGY STAR (for energy-saving reflective roof coatings).

As of March 2013, 14 brands of low-toxicity (non-recycled) paints and coatings had received multi-attribute certifications under the Master Painters Institute (MPI) Extreme Green standard, nine brands were certified by Green Seal, and four brands are certified by UL EcoLogo. (Some of the UL EcoLogo products may not be offered in the United States, however, since this certification organization is based in Canada.)

Low-toxicity paints and coatings and other environmentally preferable painting supplies are available through a variety of distribution sources including paint manufacturers, as well as distributors of painting or hardware supplies.

- Look for products that meet your environmental criteria on existing cooperative purchasing agreements such as the Western States Contracting Alliance (WSCA) contracts with [Grainger](#) and [Fastenal](#).
- Solicit bids with your own specifications to secure bulk pricing. Most commercial paint suppliers offer lines of low-VOC paint products, some of which have third party certifications. See model specifications below, which are based on those included in an RFP issued by the State of Connecticut in 2012. This [Paint and Related Supplies Contract](#), which features a large number of low-toxicity and recycled-content products, was developed with technical support from RPN, which secured funding from NASPO and the US Environmental Protection Agency.
- Purchase certified low-toxicity paints and coatings at hardware stores or directly from product manufacturers utilizing individual purchase orders when only small amounts are needed.
- Incorporate environmental criteria into service agreements. Consider holding products provided via this route to the same criteria as products purchased in-house.

Are There Useful Cooperative Purchasing Contracts?

Cooperative purchasing agreements offer users the advantage of utilizing a multi-state contract that was developed by another state, including their negotiated prices, without having to go out to bid. It is important to ask the cooperative purchasing organization (or the lead state) if environmental specifications were included in the bid solicitation and whether there are a significant number of “green” products offered on the contract. If there is a core list or “market basket” of items eligible for the vendor’s deepest discounts, it should contain a significant number of “green” products in order to obtain the best prices on the most environmentally preferable products.

The [WSCA-NASPO Cooperative Purchasing Organization](#), for example, has two cooperative purchasing agreements for hardware supplies that offer low-toxicity paints and coating products that are certified by third-party organizations:

- [Grainger](#) offers Green Seal- and UL EcoLogo-certified paints and floor coating products. Grainger’s on-line catalog allows purchasers to click on seven different eco-logos to see products carrying each environmental certification or standard. In addition, individual products in Grainger’s online catalog are clearly labeled with a green leaf icon which, when scrolled over,

identifies the environmental standards met by that product. See sample product listing green attributes below.

- **Fastenal** also offers Green Seal-certified paints as well as paints and coatings that are compliant with the VOC limits established by the South Coast Air Quality Management District (SCAQMD). Some of these products are listed in Fastenal's *Sustainable Products Catalog*, although it does not list all products carrying eco-labels.



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BENJAMIN MOORE Interior Paint, Semi-Gloss, 5 gal, White

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Interior Paint, Water Base Type, Acrylic Latex Resin Type, White, Semi-Gloss Finish, Size 5 gal., VOC Content 0g/L, Coverage 1750 to 2000 sq. ft., Dry Time 1/2 to 1 hr., Viscosity 93 +/- 3 KU, Standards Green Promise Compliant: LEED, Greenguard, Greenguard Children & Schools, CHPS, GreenSeal GS 11 2010, MPI Green Performance

Grainger Item #	10T481
Price (ea.)	\$299.50
Brand	BENJAMIN MOORE
Mfr. Model #	N37601005
UNSPSC #	31211508
Ship Qty.	1
Sell Qty. (Will-Call)	1
Ship Weight (lbs.)	60.086
Availability	Item ships within 6 business days from supplier
Catalog Page No.	1851
Country of Origin	USA
<small>(Country of Origin is subject to change.)</small>	



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Qty.



Cost of Certified Low-Toxicity Virgin Paints and Coatings

Because low-VOC paints and coatings are becoming a standard offering, it is often possible to find products that are comparable in price to equivalent conventional (non-certified) products. The State of Connecticut was able to secure comparable prices for many low-VOC and green certified paint products, particularly low-VOC latex paints and primers, which are high usage items.

Everything You Need to Know About Recycled Paint

Several manufacturers offer recycled latex paints and primers, and the number is growing as collection systems for recycled paint expand. In 2008, Washington Department of Ecology published an *Environmentally Preferable Purchasing Bulletin* informing State agencies of the State's goal of purchasing recycled paint in order to drive the market for recycled paint. It calls on State agencies to use the then new contract with Metro Paint (based in Portland, Oregon) to purchase recycled-content paint. Since then, the availability of recycled paint has blossomed, with more variety in colors and finishes than ever before, including some low-VOC formulations. Recycled paint is now available in much greater variety than ever before, including some low-VOC formulations. Recycled paints traditionally were available only in a flat finish and only in a few (arguably bland) colors. Today, they are offered in a broad range of colors, many with modern aesthetics in mind. Three of the five major recycled paint manufacturers offer custom colors, while two of them offer a variety of finishes.

Recycled Versus Low-VOC

For agencies concerned about the trade-off between recycled content and low VOC content, their worries may be over. The traditionally high VOC content of recycled paints is changing. By adding post-industrial recycled paint made with low VOCs, or by more carefully sorting the post-consumer paint received, some companies are able to offer relatively low-VOC recycled paint – with a maximum VOC content of 50 g/l, the same as the low-VOC virgin paint available on the market today.

Types of Recycled Paint

There are two types of recycled paint, each offering its own benefits:

- *Consolidated recycled paint* contains at least 95% post-consumer paint collected in paint take-back and recycling programs and adds up to 5% virgin materials to achieve desirable characteristics. These paints typically contain VOC levels between 150 and 250 g/l, but can be lower.
- *Remanufactured recycled paint* contains a minimum of 50% post-consumer recycled paint derived from paint recycling programs and up to 50% virgin materials to achieve desirable characteristics. Because of the relatively high volume of virgin materials, remanufactured paint tends to be lower in VOC content than consolidated recycled paint, and typically has a maximum VOC limit of 50-150 g/l. As such, it may be a better choice for indoor applications than consolidated paint when choosing between the two types of recycled paint.

Color Range and VOC Content of Recycled Paint



As mentioned above, recycled paint is typically available in a range of colors and gloss levels, and with VOC limits as low as 50 g/l. For example, **Visions Paint Recycling** offers both interior and exterior paints in 20 stock colors and can be tinted to make custom color. Its interior paints have a VOC content of ≤ 100 g/l and come in flat, eggshell, and semi-gloss finishes; its exterior paints have a VOC content of ≤ 100 g/l and come in flat and eggshell. Visions also offers a much less expensive but higher VOC-content exterior paint that is designed for graffiti cover-up.

Amazon Paint offers consolidated flat recycled paint for interior/exterior use in 14 standard colors, with eggshell and semi-gloss finishes available by special request, and custom color matches for quantities over 200 gallons.

Performance of Recycled Paint

Both the Green Seal and UL EcoLogo certifications require paints to meet performance standards established by the Master Painters Institute (MPI). In addition, MPI lists recycled-paint products that it has certified as meeting its performance requirements. These approved products can be found on the MPI Approved Products list with an MPI # that is followed by either RR (for Remanufactured Recycled Paints) or RC (for Consolidated Recycled Paints). Currently, two companies have recycled-content paints that are on MPI-Approved List: Visions Recycling and MetroPaint.

State Contracts Offering Recycled Paint

The **State of California** negotiated a statewide contract for *Exterior Recycled Reprocessed Latex Paint* in October 2012. It specifies that *remanufactured* paint must contain no more than 150 g/l VOC content, be on Master Painter Institute (MPI) Approved List, and be certified by Green Seal under its GS-43 standard for Recycled Latex Paint “or be certified by a test laboratory indicating that product(s) meet Green Seal Specification (#GS-43 (latest edition)...” Visions Paint Recycling, Inc. holds this contract, offering flat and eggshell exterior paints, graffiti cover-up paint, and exterior primer. (Although Visions offers recycled-content paints and primers for interior applications, they are not available on this contract.)

In July 2012, the **State of Connecticut** negotiated a statewide contract for *Paint and Related Products*, which requires recycled paint to be certified by Green Seal or UL EcoLogo and contain no more than 250 g/l VOCs. This enabled *consolidated* recycled paint, which contains at least 95% post-consumer recycled content paint, to be included on the contract since it typically has a higher VOC levels than *remanufactured* recycled paint, which must contain only 50% post-consumer recycled paint.



Connecticut’s contract for *consolidated* recycled paint was awarded to Amazon Environmental, which offers interior/exterior flat finish recycled latex paints in 14 colors. Consistent with the specification, these products contain at least 95% recycled paint and no more than 250 g/l VOCs.

Connecticut’s contract for *remanufactured* paint was awarded to Visions Paint Recycling. These products are available in 20 stock colors. Interior products are available in flat, eggshell and semi-gloss finishes with a maximum VOC content of 100 g/l. Exterior recycled paints are available in flat and eggshell finishes only, with a maximum VOC content of 150 g/l. Because there are no paint recyclers currently located in or near Connecticut, these paints are more expensive than the same products offered on the State of California’s contract. This price premium is largely due to cross-country shipping charges. (See discussion and table below for more cost information.)

The **State of Washington** has awarded a contract to Metro Paint for *consolidated* recycled paint meeting the Green Seal GS-43 standard. The paints on this contract are available in 18 colors; all have a flat finish and a maximum VOC content of 250 g/l.



Are the Cooperative Purchasing Agreements for Recycled Paint?

No. There are currently no multi-state contracts for recycled-content paints or primers. Similarly, there are no recycled-content paints or primers offered on any of the major multi-state hardware (i.e., maintenance, repair and operations) supply contracts.

Cost of Recycled Paint on State Contracts

Some states have secured competitive or preferable pricing on recycled paint. This is particularly the case for Western states because California and Oregon have adopted laws requiring paint retailers to take-back leftover paint to be recycled, and consequently where most of the paint recyclers are located. A similar paint stewardship [law](#) was adopted in Connecticut in 2011; the implementation of this law (along with the State's decision to add recycled paint to its statewide contracts) is likely to increase the availability of recycled paint on the east coast. Recycled paint may not be readily available or cost-effective in all states. States without nearby paint producer responsibility laws will likely experience higher prices for recycled paint due to shipping costs for these non-local products. States should survey vendors in their region to determine product availability and cost.

Table 2. Availability and Pricing of Recycled Latex Paint on State Contracts

Company	Recycled Paint Type	Max VOC	Contract Price/Gal	Contract Source	Notes
Amazon (CA)	Consolidated (minimum 90% recycled content)	250 g/l	\$20.49 flat	<u>CT (2012)</u>	Interior/Exterior. 14 colors. Price includes shipping
Metro Paint (OR)	Consolidated (minimum 90% recycled content)	250 g/l	\$15.75 Satin (Lower price (\$9-10) if picked up directly from Metro Paint)	<u>WA (2010)</u>	Interior/Exterior. 15 colors. Price does not include shipping.
Visions Paint Recycling (CA)	Consolidated (minimum 50% recycled/10% post-consumer)	150 g/l	\$5.50 flat	<u>CA (2012)</u>	Exterior only. For graffiti cover up only (lower quality). Available in 20 stock colors and custom colors. Price includes shipping.
Visions Paint Recycling (CA)	Remanufactured (minimum 50% recycled/10% post-consumer)	150 g/l	\$9.45 flat \$11.45 eggshell	<u>CA (2012)</u>	Exterior only (Workhorse Exterior Latex Paint). Available in 20 stock colors and custom colors. Price includes shipping.
Visions Paint Recycling (CA)	Remanufactured (minimum 50% Recycled/10% post-consumer)	150 g/l	\$17.99 flat \$17.99 eggshell	<u>CT (2012)</u>	Exterior only (Workhorse Exterior Latex Paint). Available in 20 stock colors and custom colors; 10% post-consumer
Visions Paint Recycling (CA)	Remanufactured (minimum 50% recycled/10% post-consumer)	100 g/l	\$16.99 flat \$17.99 eggshell \$19.68 semi-gloss	<u>CT (2012)</u>	Interior only (Workhorse Interior Latex Paint). Available in 20 stock colors and custom colors. Price includes shipping.

GREEN CERTIFICATIONS AND STANDARDS FOR PAINTS AND COATINGS

Many third-party organizations have developed standards for environmentally preferable (recycled and low-toxicity) paints and coatings with varying numbers of certified products available on the market. Refer to [Appendix 1](#) for a full list of definitions and links to each certification and standard. See the [Green Certifications Table](#) for a full table detailing common certifications available for paints and coatings, with general notes on the availability of products that have attained each certification and recommended criteria for each category of paint and coating listed.

Purchasing environmentally preferable paints and coatings can also help a facility earn LEED (Leadership in Energy and Environmental Design) “green” building credits. For more information, see [Appendix 2](#).

Multiple-Attribute Certifications and Recognition Programs

When possible, purchasers should specify products that are certified based on multiple attributes including toxicity, emissions, and performance. The most rigorous multi-attribute certifications for paints and coatings include Green Seal, UL EcoLogo, or the Master Painters Institute (MPI) under its Extreme Green (X-Green) and GPS-2 standards. These third-party eco-labels offer the advantage of certifying for multiple attributes, documenting that the product does not contain any of the listed prohibited ingredients (including chemicals with known toxicity such as carcinogens, reproductive toxins, and asthmagens), verifying that it complies with either SCAQMD or California Air Resources Board VOC limits, and ensuring that it meets MPI’s performance requirements.

The most common types of paints and coatings carrying at least one of these multi-attribute certifications include: recycled latex paints and primers and virgin low-toxicity latex paints and primers; for both categories “green” products are available for both interior and exterior applications.

If the paint or coating product category is not covered by any multi-attribute certifications (or if a lack of certified products is available), purchasers should next consider a single-attribute certification or recognition such as UL GREENGUARD (low-emitting), USDA Biobased (bio-based materials) or ENERGY STAR (light reflectivity to reduce cooling costs). The most common types of paints and coatings carrying at least one of these single-attribute certifications include: floor coatings, reflective roof coatings, rust-inhibitive coatings, sealers, stains, and varnishes.

If few or no single-attribute certifications or recognitions are available, purchasers can consider allowing products to be included on the contract’s “green” products list if they comply with SCAQMD VOC limits (to minimize air pollutant emissions) or be water-based (to eliminate petroleum-based ingredients).

Below is a more detailed description of the available certifications and standards for environmentally preferable paints and coatings.

Green Seal (multi-attribute certification)

Green Seal includes emissions, toxicity and performance criteria.



- [GS-11 for Paints and Coatings](#) (virgin coatings: wall, anti-corrosive, reflective, floor paints, primers, undercoats)
- [GS-43 for Recycled Content Latex Paint](#) (recycled coatings: interior and exterior paints and primers)
- [GS-47 for Stains and Finishes](#) (finishes, stains, sealers, low solids coatings)

UL EcoLogo (multi-attribute certification)

UL EcoLogo's standards address toxic chemical content and emissions as well as performance.



- [CCD-047 for Architectural Surface Coatings](#) (virgin coatings: interior and exterior coatings, stains and varnishes)
- [CCD-048 for Surface Coatings - Recycled Water-Borne](#) (recycled coatings: interior and exterior paints and primers)
- [CCD-045 for Sealants and Caulking Compounds](#) (sealants and caulking compounds)

Master Painters Institute (multi-attribute certifications)

- [MPI Green Performance Standard 2-2012 \(GPS-2-12\)](#) includes a maximum VOC content of 50 g/l, toxicity restrictions (see list of prohibited chemicals below) and performance criteria.



[The MPI Green Performance[®] Standard requires that the manufacturer shall demonstrate that the following chemical compounds are not used as ingredients in the manufacture of the product: [Trace elements (max. 5 ppm) as a by-product are excluded.]

Acrolein	Diethyl phthalate	Formaldehyde	Methylene Chloride
Acrylonitrile	Dimethyl phthalate	Hexavalent Chromium	Naphthalene
Antimony	Di-n-butyl phthalate	Isophorone	Toluene (Methylbenzene)
Asbestos	Di-n-octyl phthalate	Lead	1,1,1 –trichloroethane
Benzene	1,2 –dichlorobenzene	Mercury	Vinyl Chloride
Butyl benzyl phthalate	Di (2-ethylhexyl) phthalate	Methyl ethyl ketone	
Cadmium	Ethylbenzene	Methyl isobutyl ketone	

IARC – Group 1 Carcinogenic to humans [excluding crystalline silica, not in the form of quartz or cristobalite dust].

- [MPI's Green Performance Standard 1-2012 \(GPS-1-12\)](#) includes the same toxicity restrictions and performance criteria as its GPS-2-12; however, it references less stringent VOC limits (which vary by category).
- Note: MPI's GPS-1 "standard for specialty paints and coatings includes VOC limits that are less stringent than those adopted by the South Coast Air Quality Management District, SCAQMD. However, the GPS-1 standard includes additional toxic chemical restrictions and performance requirements. In addition, MPI certifies that products meet its standards.
- *Products covered by the MPI GPS-1 and GPS-2 certifications include, but are not limited to the following:* Latex paints (including virgin interior and exterior, architectural and high-performance

and industrial paints and primers, block fillers, and epoxy-modified latex coatings. MPI X-Green and GPS-2 do not cover recycled paints or primers. For more information on MPI's standards and approved products, go to <http://www.specifygreen.com>

- **MPI Extreme-Green (X-Green)** products must meet GPS-2 requirements plus pass the emissions testing required by CHPS (the [Collaborative for High Performance Schools](#)). The types of products covered by MPI's most stringent X-Green standard are more limited than those listed above for MPI's GPS-approved products and mostly consist of latex paints and primers.



Environmental Protection Agency's Design for the Environment (DfE) Product Label

- **EPA's DfE Product Label** includes a broad range of toxicity criteria and may reference performance criteria that have been established for that product category. The DfE's standard references the California Air Resources Board's (CARB's) VOC limits, which are less stringent than SCAQMD VOC limits. This standard can apply to any product, but the paints and coatings "recognized" by DfE as of March 2013 narrowly include athletic field marking paints and paint removers.



Single-Attribute Certifications for Paints and Coatings

If the paint or coating product category is *not* covered by any multi-attribute certifications (or if a lack of certified products is available), purchasers should consider a single-attribute certification or recognition such as UL GREENGUARD Certified (low-emitting), USDA Certified Biobased Product (typically containing a minimum amount of plant-based oils) or ENERGY STAR (which reduce cooling costs by increasing light reflectivity). If no single-attribute certifications or recognitions are available, consider requiring products to comply with SCAQMD VOC limits to minimize air pollutant emissions or be water-based to eliminate petroleum-based ingredients.

The most common types of paints and coatings carrying at least one of these single-attribute certifications are specialty coatings such as floor coatings, reflective roof coatings, rust-inhibitive coatings, sealers, stains, and varnishes.

UL GREENGUARD (a standard under the Underwriters Laboratory umbrella of Certifications)

- **UL GREENGUARD Indoor Air Quality (IAQ) Standard for Building Materials, Finishes, and Furnishings** includes chemical emissions criteria only. UL GREENGUARD limits emissions of total VOCs, formaldehyde, total aldehydes, all individual chemicals with currently published Threshold Limit Values, respirable particles, and certain odorants and irritants. In addition, all UL GREENGUARD-certified products require disclosure of carcinogens and reproductive toxins as identified by California Proposition 65, the U.S. National Toxicology Program (NTP), and the International Agency on Research and Cancer (IARC). These substances of concern are not specifically prohibited, except if they fall under the criteria above such as restrictions on formaldehyde, which is a carcinogen that is included on all three of these lists. UL GREENGUARD-certified



products are not required to meet MPI performance criteria.

- **UL GREENGUARD Gold (formerly GREENGUARD For Children and Schools)** includes more stringent emissions criteria than UL GREENGUARD IAQ. UL GREENGUARD Gold's limits are typically two to 10 times more stringent. For example, it also limits emissions of phthalates and toluene, two reproductive toxins. Products certified under this standard include paints and finishes that are intended for use in schools, day care centers or other environments where children spend significant periods of time.

UL GREENGUARD-certified products include a broad range of paints and coatings. Note: some of these products are latex paints and primers, for which there are more stringent multi-attribute standards that address toxic chemical content, emissions, and performance.

ENERGY STAR

ENERGY STAR addresses energy efficiency, performance, and 'reasonable' payback period for any premiums paid on an energy-saving device over its conventional counterpart. Reflective roof coatings are the only paint product covered by the ENERGY STAR label.



The program maintains a **[list of ENERGY STAR-Qualified Products](#)**. These products are not required to meet other criteria for VOC content or chemical emissions.

USDA Biobased Certified

USDA Biobased Certified products are composed in whole or in significant part of agricultural, forestry, or marine materials. The USDA Certified Biobased Product label assures the consumer that a product contains at least a minimum amount of plant-based ingredients. The USDA's BioPreferred Program maintains a **[List of Certified Biobased Products that meet the following standards:](#)**



- Wood and Concrete Sealers (79% minimum biobased content)
- Oil-based/Solventborne Alkyd Paints and Coatings (67% minimum biobased content)
- Water Tank Coatings (59% minimum biobased content)
- Corrosion Preventative Coatings (53% minimum biobased content)
- Oil-based/Solventborne Alkyd Paints and Coatings (67% minimum biobased content)
- Wastewater Systems Coatings (47% minimum biobased content)
- Wood and Concrete Stains (39% minimum biobased content)
- Graffiti removers (minimum 34% biobased)
- Roof coatings (20% minimum biobased content)
- Waterborne Alkyd Paints and Coatings (20% minimum biobased content)

For a list of USDA Biobased Certified product category standards, click **[here](#)**.

Other Single-Attribute Standards

If little or no multiple or single-attribute certifications or recognitions are available for products in a specific paint or coating category, consider requiring products to comply with stringent VOC limits to

minimize air pollutant emissions or be water-based to eliminate petroleum-based ingredients.

South Coast Air Quality Management District (SCAQMD) Rule 1113 VOC Standard

The SCAQMD sets VOC limits for paints and coatings used in its region (near Los Angeles, CA) pursuant to SCAQMD Rule 1113: Architectural Coatings. Paint manufacturers across the country often offer paints and coatings meeting these standards since they are considered the most stringent in the country. For paints and coatings not covered by third-party certifications, or where a reasonable selection of certified products is not available, consider requiring products to comply with SCAQMD's VOC limits. Refer to **Appendix 3** for a current list of product categories covered under **SCAQMD's Rule 1113**.



The SCAQMD maintains a Super-Compliant List of Coatings with <10 g/l VOCs, which can be accessed at **<http://www.aqmd.gov/prdas/coatings/super-compliantlist.htm>**.

Water-based Paints and Coatings



When very few or no environmental certifications or standards (e.g., VOC limits) have been established for a paint or coating category, water-based formulations may be available for some products. Waterborne paints and coatings are considered environmentally preferable because they replace petroleum-based solvents and oils with water-based compounds, and typically can be thinned and cleaned up with water.

“Water-based” may be considered as either the only environmental attribute (or one of several options) that a product can have in order to qualify for being included on a contract’s environmentally preferable paint products list. For example, spray paints could be allowed on a “low-toxicity” painting supplies contract if it is either water-based or USDA biobased certified. Sometimes, the water-based criteria is paired up with other environmental or performance criteria such as chemicals of concern (e.g., carcinogens and reproductive toxins).

BID SPECIFICATIONS

When considering issuing a bid solicitation for environmentally preferable paints and coatings, identify all the information you might want to know about each product as well as each vendor and include it in the solicitation's bid sheet.

Are There Useful Model Specifications from Other States?

If you choose to go out to bid, some other states' contracts and experiences may serve as models:

- **State of Connecticut, Contract Award for Paint and Related Products** (2012); see "Specifications for Environmentally Preferable Painting Supplies" starting on page 41.
 - Environmental criteria vary by category of paints and coatings
 - *Multi-attribute Certifications:* Green Seal, UL EcoLogo, EPA DfE, and MPI X-Green or MPI GPS-2
 - *Single-attribute Certifications:* UL GREENGUARD, ENERGY STAR, USDA Biobased Certified,
 - Compliant with South Coast Air Quality Management District, water-based, devoid of carcinogens and reproductive toxins, and devoid of "asthmagens"
 - Awarded contract to multiple vendors of low-toxicity virgin paints and coatings.
 - Awarded contract to two vendors of recycled paint.
 - At least one vendor offers recycled-content painting equipment (rollers).
-
- **State of Washington Contract Award #00207c** for *Recycled Latex Paint (Interior and Exterior)*
 - Basic criteria: GS-43 certified
 - Awarded to one vendor (Metro Paint), available in 18 colors, satin finish only, VOC ≤250 grams/liter
 - Expires March 2014, leaving enough time to recommend specifications to DES, form a paint end-users
 - The State of Washington elected not to have a contract for virgin paint in order to encourage the use of recycled paint. This does not appear to have worked based on the size and use of the recycled paint contract and according to the Washington Department of Enterprise Services.
-
- **State of California Contract award #1-12-80-10** for *Exterior Recycled Latex Flat Paint*
 - Basic criteria for Exterior Recycled Paint: GS-43 certified, MPI approved, or equivalent, and ≤150 g/l.

- Awarded to one vendor (Visions Paint Recycling) available in custom colors, three finishes (flat, eggshell, and semi-gloss). Flat and eggshell contain ≤ 100 g/l VOCs; semi-gloss contains ≤ 150 g/l VOCs.
- California's recycled paint contract for exterior paint only is consistent with the state's [**Green Building Action Plan**](#), which requires state agencies to use recycled paint for exterior applications and low-VOC paints for interior applications. Only one recycled paint manufacturer supplies low-VOC recycled paint (i.e., meeting a 50 g/l definition of "low-VOC" based on a commonly used standard: the stringent VOC limit established by SCAQMD). Consequently, the state concluded that a request for bids on low-VOC interior recycled paint would not yield competition, and was therefore not conducted.

Additional paint procurement resources

- [**CalRecycle webpage**](#) on *Recycled Latex Paint*
- [**King County, WA Fact Sheet**](#) on *Environmentally Preferable Paint* (January 2012)
- San Mateo County, CA, Department of Environmental Health, [**Sustainable Purchasing Fact Sheet: Paint**](#) (March 2012) Developed by RPN
- [**Portland, OR case study**](#) on the benefits of recycled paint

Minimum Requirements (Specifications)

A summary of recommended criteria is listed below; they are expected to allow a moderate to high number of available products to be bid and generate sufficient cost competition.

Category #1a: Consolidated Recycled Latex Paints and Primers

- All products must:
 - Be currently certified by Green Seal (under its GS-43 standard) or UL EcoLogo (under its CCD-048 standard)
 - Contain a minimum of 95% post-consumer recycled content
 - Have a maximum VOC content of 250 g/l

Category #1b: Remanufactured Recycled Latex Paints and Primers

- All products must:
 - Be currently certified by Green Seal (under its GS-43 standard) or UL EcoLogo (under its CCD-048 standard)
 - Contain a minimum of 50% post-consumer recycled content
 - Have a maximum VOC content of 150 g/l

Category #2: Virgin (Non-recycled) Latex Paints and Primers (Interior and Exterior, Wall and Ceiling Only)

- All products must be currently certified by at least one of the following entities:
 - Green Seal (under its GS-11 standard)
 - UL EcoLogo (under its CCD-047 standard)
 - Master Painters Institute under its Extreme Green (X-Green) standard or its Green Performance Standard #2 (GPS-2)
- All products must contain <0.1% of the following substances:
 - Prop 65 chemicals (i.e., chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm). See list of Prop 65 chemicals found in some paints and coatings in the [Definitions](#) section of this guide.
 - Asthmagens (i.e., chemicals listed in the National Institute of Health (NIH) report, [Healthy Environments: A Compilation of Substances Linked to Asthma](#). See list of asthmagens found in some paints and coatings in the [Definitions](#) section of this guide.)
- Vendor shall acknowledge that no nano-particles were intentionally added and the product may not be marketed as containing nano-particles.

Category #3: Specialty Paints, Primers, and Other Coatings (Non-aerosol)

This category includes, but is not limited to: athletic field marking paints, alkyd paints, anti-graffiti paints and coatings, caulks, dry-fog/fall, faux finishes, fireproof paints and coatings, floor paints and coatings, graphic art coatings, metallic and industrial maintenance coatings, multi-color paints and primers, roof

primers and non-reflective coatings, rust-inhibitive coatings, sealants, shellacs, stains, tree marking paints, varnishes, and wood preservative coatings. (NOTE: Traffic marking paint is covered under a separate RPN opportunities and best practices guide).

All products in this category must meet at least one of the following standards:

- Certified by Green Seal (under its GS-11 or GS-47 standards)
- Approved by MPI (under its X-Green, GPS-2 or GPS-1 standards)
- Certified by UL EcoLogo (under its CCD-047 standard)
- Certified by UL GREENGUARD and MPI-approved for performance)
- Recognized by EPA's Design for the Environment (DfE) Program and MPI-approved for performance)
- Meet the South Coast Air Quality Management District VOC limits (e.g., on the SCAQMD Super-compliant List) and MPI Approved for Performance

No products may contain ingredients that are on the [California Proposition 65](#) List of “Chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.”

- No nano-particles may be intentionally added and no products may be marketed as containing “nano-technology.”
- Bidders must disclose all asthmagens as listed in the National Institutes of Health (NIH) report, [Healthy Environments: A Compilation of Substances Linked to Asthma](#). (See Definitions section of this guide for a list of asthmagens likely to be found in architectural paints and coatings.)

Category #4: Spray Paints (Aerosol)

All products in this category must meet at least one of the following standards:

- Recognized by the US EPA Design for the Environment Program
- Certified by UL GREENGUARD
- USDA Certified Biobased Product
- Water-based

No products may contain ingredients that are on the [California Proposition 65](#) List of “Chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.”

- No nano-particles may be intentionally added and no products may be marketed as containing “nano-technology.”
- Bidders must disclose all asthmagens as listed in the National Institutes of Health (NIH) report, [Healthy Environments: A Compilation of Substances Linked to Asthma](#). (See Definitions section of this guide for a list of asthmagens likely to be found in architectural paints and coatings.)

Category #5: Paint Strippers, Paint and Graffiti Removers

All products in this category must meet at least one of the following standards:

- UL EcoLogo (under CCD-051: Paint and Varnish Remover)
- Recognized by the US EPA Design for the Environment Program
- USDA Certified Biobased Product OR
- Water-based

No products may contain ingredients that are on the [California Proposition 65](#) List of “Chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.”

- No nano-particles may be intentionally added and no products may be marketed as containing “nano-technology.”
- Bidders must disclose all asthmagens as listed in the National Institutes of Health (NIH) report, [Healthy Environments: A Compilation of Substances Linked to Asthma](#). (See Definitions section of this guide for a list of asthmagens likely to be found in architectural paints and coatings.)

Category #6: Paint Rollers, Trays, and Other Equipment (e.g., drop cloths, rollers, etc.)

- Minimum 10% post-consumer or 30% total recycled content
- Disclose amount of post-consumer and total recycled content

Bid Strategies

Below is a list of strategies that purchasing agents can use to make your bid solicitation process relatively easy and effective at attracting a wide range of environmentally preferable painting supplies.

1. **Determine your environmental criteria.** The most rigorous standards are third party, multiple-attribute certifications such as those that are offered by Green Seal, the Master Painters Institute, and UL EcoLogo. For categories of paints and coatings that have a large number of products certified under standards that address a broad range of environmental, health and performance criteria, these multi-attribute certifications should be included in the solicitation's mandatory requirements. This is often the case for high-volume products such as low-toxicity virgin and recycled latex paints and primers for both indoor and outdoor applications.

For specialty paints and primers, the availability of products that are certified under multi-attribute standards is likely to be more limited. Consequently, these can be included on a "green products list" if they meet at least one multi-attribute or single-attribute certification or standard for their category. Applicable single-attribute certifications and recognitions include UL GREENGUARD-certified, USDA Biobased Certified, Design for the Environment-Recognized and ENERGY STAR-Qualified. Other single-attribute standards include VOC limits established by a government body (such as the South Coast Air Quality Management Board (SCAQMD) and "water-based" – although neither of these claims is typically verified by an independent body.

2. **Consider issuing a Request for Information (RFI)** as part of your bid solicitation process. This can be an effective strategy for collecting information about the availability of painting supplies with specific environmental certifications and attributes that are offered by vendors in your state.
3. **Green your bid list or core/market basket list.** Whether you use a bid list, which includes all items on your contract, or a core/market basket list, which includes only selected high-volume items, you can add green products along with (or instead of) conventional bid list or market basket list items. When doing this, make sure each environmentally preferable product included on your bid list or market basket list meets your specifications. You can develop a corresponding bid sheet that includes a column for a generic description of each "green" item on your list; in addition, you may want to identify a corresponding sample green product. During the bid evaluation process, prices would be compared only between similar "green" bid list or "market basket" items that meet your minimum requirements. See [Once the Bids are In](#) section of this report for more details.
4. **Consider creating a "Brown List"** of prohibited products for which there is a plentiful supply of cost-effective environmentally preferable alternatives that meet the State's needs in terms of form, function and performance. A "brown list" of products can be included in the bid solicitation document notifying bidders that specific types of products may not be supplied on your contract. For example, the "brown list" for a painting supplies contract could aerosol spray paints, solvent-based paints, or any products containing chemicals that are known to cause cancer or reproductive toxicity.

5. **Identify all the information you will need** to evaluate the environmental attributes, performance and price of products offered by various vendors, and include space for all information on an electronic bid sheet that can later be evaluated. Below is a snapshot of information requested on an excel-based [Model Bid Sheet](#), which is available and can be modified for your bid solicitation. Instructions to bidders on how to use this bid sheet are included in separate tab in the file. This information can help bid evaluators determine whether products meet minimum environmental requirements, compare equivalent products offered by competing vendors, and choose products with the strongest environmental attributes and that offer the best overall value.

6. **Ask vendors for prices on all environmentally preferable products that meet your specifications** to get the largest quantity of “green” products available on your contract(s). Allow vendors to offer low-toxicity and recycled-content products beyond what is on your bid or core/market list. Separating the environmentally preferable painting supplies from the conventional products on your bid sheet will later facilitate the creation of a “Recycled Paints List” and a “Low-Toxicity Virgin Paints and Coatings List” that contract users can consult first when making purchasing decisions.

7. **Consider asking for both consolidated and remanufactured paint on your contract** as two separate categories so end-users can choose between the two types of recycled paints, which each offer benefits and drawbacks. And because recycled paint is often available from companies that specialize in only this product, states may be able to secure more competitive bids by negotiating separate contracts for recycled paint.

Helps identify equivalent products among bidders	Helps identify product offered if different than sample on bid sheet	Helps identify product offered by bidder	Helps identify product offered by bidder	Helps identify equivalent product price comparison	Helps identify equivalent product price comparison	Measures paint quality. Helps identify equivalent product price comparison	Environmental certifications and standards may vary by category in specifications	Helps verify compliance with VOC limit; gives users information to	This defines low-VOC by category based on stringent limits set by the South Coast Air Quality Management District	These are chemicals can cause cancer, birth defects or other reproductive harm	Purchasers can use this information to avoid products with chemicals that can cause or trigger asthma	These products are often safer than solvent-based products	Nano-particles can cause health damage by easily penetrating skin
Generic Product Description	Manufacturer Name	Product Name	SKU #	MPI #	Gloss Level	MPI/EPR Quality Rating	Environmental Certifications or Standards	Max VOCs	SCAQMD-Compliant? (Low-VOC)	Prop 65 Chemicals Added?	Disclose Asthmagens	Water-based?	Nano-particles
				1-301	1-6	0-6	Select from List	g/l	Yes or No	Yes or No	See List	Yes/No	Yes/No
Indoor Latex	ABC Paint Company	Clean Air Paint	0123	44	4	3	Green Seal, MPI X-Green	50	Yes	No	Methyl Methacrylate	Yes	

8. **Consider designing your solicitation as a multi-state cooperative purchasing agreement** that is available to other nearby states; aggregating demand can secure lower prices for environmentally preferable products and increase environmental benefits.

ONCE THE BIDS ARE IN

Once vendors have submitted bids, products can be chosen using a variety of methods. Below are some options for evaluating the products that are bid, and the vendors that offer them, with benefits and challenges of each. We also suggest ways to assess quality so prices are compared between equivalent products. Below are steps a procurement officer can take to evaluate the bid offerings and choose products to include on a contract. This method is for use with the provided [Model Bid Sheet](#), and following the model offered in the [Bid Specifications and Strategies](#) section of this report.

Before You Evaluate the Bids

Label the Information Provided by Each Bidder

For each vendor submission, add a column on the far left and assign each row a number. This will enable you to sort the data now, yet revert to the original order by sorting on the new first column.

Sort Paints Based on Type and Quality

First, set aside all recycled paints into a separate list. Sort the remaining low-toxicity paint products only by two fields: first by *product type* (identified by MPI category number), and then by product (MPI EPR score). This will enable you to compare prices of equivalent products. For example, a product in MPI category 44 (latex, interior, gloss level 2) with a quality rating of 3 will be the closest equivalent to another brand's product carrying the same MPI category number and quality rating, allowing a true price comparison.

Best Ways to Award

Choosing Recycled Paint Vendor(s) Separately

Companies often specialize in remanufactured or consolidated recycled paint and do not sell other types of paints and coatings. Therefore, regardless of how other paints on a contract are chosen, it is advisable to allow for awarding the recycled paint separately.

Choosing a Single Vendor for All Paint Products

Strategy: Develop a bid list (which includes all items on your contract) or “market basket” list (which includes the most common high-volume products you will be buying). Add environmentally preferable products to the bid list or “market basket” list in your bid solicitation. Your list may include all “green” items or add equivalent “green” items to your list of conventional painting products. Compare vendor prices on these items and select the bidder offering the best combination of price and selection (including a wide offering of environmentally preferable products).

Benefits: Only one vendor to manage. End-users have a “one stop” supplier for all items offered on the contract.

Challenges: No single vendor is likely to have all the products needed by all contract users. Specialty products may need to be purchased off contract, possibly at significantly higher prices.

Choosing Multiple Vendors Based on Best Price on Bid-List or Market-Basket Items

The most important products to choose carefully are those used in high volumes. To determine the highest-volume paints and coatings, states can review their historic purchasing records. Latex indoor and outdoor paints and primers are, by far, purchased in the largest quantities. Floor paints, spray paints, and stains and varnishes tend to be the next most commonly purchased products. Traffic marking products may also be used in high quantity, but are often purchased by different contract users (e.g., transportation departments) and are typically offered by different suppliers than those offering architectural painting supplies. (For more information on environmentally preferable traffic marking paints, see separate RPN Green Purchasing Opportunities and Best Practices Guide for Traffic Paint).

Strategy: Choose core or market basket items. Compare bidders' prices on these items and select multiple vendors offering the best price package.

Benefits: Offers a wider product and vendor selection. Reduces the need to purchase specialty items off contract because with multiple vendors more specialty items will be available for contracted prices. This strategy may also make available additional retail locations where state agencies and other contract users can pick-up painting supplies in person.

Challenges: Procurement office will need to manage more than one contact and vendors may be reluctant to use multiple contracts.

Choosing Multiple Vendors Based on Best Price on Each Line Item

Strategy: Determine equivalent products for price comparison, having the same MPI number, the same gloss number (where applicable), and a similar MPI EPR quality rating (not more than one or two points different). For product categories with a range of offerings, products can be grouped into quality rating groups: low (0 or 1), medium (2, 3 or 4) and high (5 or 6).

Benefits: Absolute lowest price is ensured. Multiple vendors increase product availability.

Challenges: Not all products are equivalent, making it difficult to determine which products to fairly compare for pricing. Often prices will be extremely close, within a few cents of each other, sometimes for products that are slightly different. In which case, a single lowest price approach may be limiting product selection from the perspective of the technical needs of the contract users.

Choosing a Set of Lowest Prices on Each Line Item

Strategy: Develop an equation that will eliminate the price outliers and keep all the lowest price options within a range. For example, the State of Connecticut received bid responses from 5 vendors of virgin paint. A typical product – interior latex paint MPI category #44 with an EPR quality rating 3 – was offered at 5 different prices, three of which were very competitive and two of which were significantly more expensive. Connecticut used the following equation: *Price Cutoff = average of lowest two prices plus 50%*. This generally kept all the lowest priced paints on the contract and eliminated the outliers, which were more than 50% more expensive than the average of the two lowest-priced products.

Benefits: Offers a wider variety of products to contract users, which is especially important when products offered by different vendors are not exactly equivalent. It also allows for multiple vendors, which may satisfy end-user preferences for particular manufacturers or retail locations.

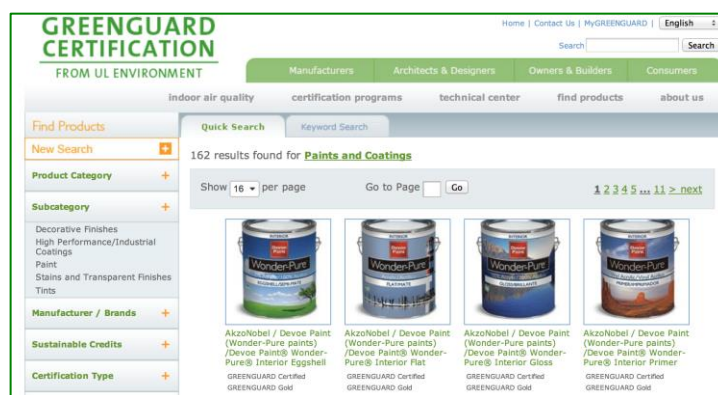
Challenges: Procurement office must manage multiple vendors. Initially requires more time to evaluate bids.

Verifying Compliance

Purchasing agents can verify the accuracy of the following information submitted by bidders by checking all products offered or by conducting spot-checks:

Third-Party Certifications or Other Eco-labels. Search for the product name on the website maintained by the certification or recognition program to verify that it currently carries the stated eco-label. Useful sites include:

- [Green Seal](#). Click on the Paints & Coatings icon (see image to the right).
- [UL GREENGUARD](#). Search for these “low-emitting” products by category (e.g., Paints and Coatings)
- [MPI Green Performance Standard \(GPS-1 or GPS-2\)](#). Click on any link to find products certified as meeting MPI GPS-1 or GPS-2.
- [MPI X-Green](#). Click on links for products with an X-Green MPI #.
- [UL EcoLogo](#). Click link for Building and Construction Products to find low-toxicity and recycled content paints and coatings with this certification.



- [USDA Biobased Certified](#). Search for paints, sealant, and coatings as well as paint and graffiti removers under the Grounds Maintenance, Minor Construction, and Operations and Maintenance categories.
- [US EPA DfE](#). Search for Industrial/Institutional Products by category.
- [US EPA/DOE ENERGY STAR](#). Search here for ENERGY STAR-qualified reflective coatings by clicking on the Roof Products link.
- **Other Resources.** Below are some additional resources to help purchasers verify information submitted by bidders.
 - [MPI Category Number](#). Look up the product number on the MPI website to verify the reported MPI category number, which indicates the type of paint product offered, is correct and that the product is indeed MPI-approved for performance.
 - [MPI Environmental Performance Rating \(EPR\)](#). Look up the product’s MPI EPR score on the MPI website to verify the quality of the paint or coating product offered. This will enable you to compare equivalent products.
 - [Maximum VOC Content](#). Look on the manufacturer’s website to verify a product’s volatile organic compound (VOC) content, which is an important indicator of its potential to contribute to indoor air pollution or outdoor smog.

- South Coast Air Quality Management District (SCAQMD). Verify that the maximum VOC content falls within the SCAQMD's [Rule 1113](#) limits. Note: SCAQMD also maintains a specific list of Super-Compliant Coatings with a VOC content of <10 g/l.

Evaluating Performance and Price

It is essential to compare paints and coatings of a similar quality when choosing products based on price. Low-quality paints are less durable and may require additional coats, more maintenance, and re-painting sooner than high-quality paints. For ceiling applications not regularly touched or cleaned, receiving minimal direct sunlight, and experiencing minimal overall wear and tear, lower quality paint for a lower price may suffice. In contrast, walls in an office space or public facility receiving more contact, cleaning, direct sunlight, and overall wear and tear, using a less-expensive, lower quality paint may require re-painting up to four times more often than a higher quality paint, according to maintenance staff with the State of Connecticut. Therefore, it can be cost-beneficial to spend more money on higher quality paint to minimize maintenance costs (including labor) in the long run. To enable this, procurement officers must require paint vendors to indicate the relative quality of each product offered (best done by disclosing the MPI EPR score) and allow both high-quality and low-quality products to be offered on the contract(s).

Identify products to include in your price comparison. Only compare products with the same MPI Category Number and a similar EPR quality rating. Because EPR ratings range from 0 to 6, one way to group them is to compare products that are not more than one point different. Alternatively, consider anything with an EPR score of 0 or 1 to be “low grade”, products with a 2 or 3 or 4 to be “medium grade”, and those with a 5 or 6 to be “high grade”. Then, price-compare only products within the same grade.

Environmentally preferable paints and coatings need not be more expensive. Because they are widely available, agencies can secure competitive pricing through a traditional competitive bidding process with some trademark elements, as outlined in the [Bid Strategies](#) and [Minimum Requirements](#) in this report.

The [State of Connecticut](#) was able to secure competitive or better pricing on environmentally preferable products on their contract for Paint and Related Supplies by:

- Prioritizing preferable paints and listing them first on the bid sheet in order to generate a “Recycled Paints” list and a “Low Toxicity Paints” list.
- Asking vendors to identify third-party certifications carried by their products.
- Allowing for line-item bids.
- Making the contract a cooperative purchasing agreement open to use by other agencies.

Three examples are shown below comparing the bid prices on a low-toxicity paint product and the equivalent ‘traditional’ paint product. Low-toxicity products are highlighted green for ease of viewing comparable or better pricing on environmentally preferable products.

**Table 1. Comparison of Prices for “Low-toxicity” and “Conventional” Paint Products:
State of Connecticut Paints and Coatings Contract**

Product Description	Manufacturer	Gloss Level	MPI Category	Meets Environmental Criteria?	MPI EPR Quality Score	Maximum VOCs (g/l)	Price: 1 gal	Price: 5 gal
<i>Example #1</i>								
Interior Zero-VOC Semi-Gloss Latex Paint	Sherwin-Williams	4	43	YES	3.5	Zero VOC	\$11.00	\$55.00
Interior Commercial Semi-Gloss Latex	Sherwin-Williams	4	43	NO	1.5	460	\$13.00	\$65.00
<i>Example #2</i>								
Interior/Exterior Zero-VOC Multi-Purpose Primer	Sherwin-Williams	1	137	YES	3	Zero VOC	\$19.00	\$95.00
Interior/Exterior Primer/Sealer	Sherwin-Williams	1	137	NO	3	96	\$18.99	\$94.95
<i>Example #3</i>								
Interior High-Performance Latex	Glidden	3	139	YES	6	Zero VOC	\$25.74	\$115.99
Interior Premium Line Satin Enamel Latex	Sherwin-Williams	3	139	NO	3	40	\$31.00	\$155.00

VENDOR EVALUATION

Because vendors often offer different types and brands of paints and coatings, the number of vendors on contract may determine the variety of paint and coating products available. Below are several strategies for evaluating paint vendors. When multiple vendors offer similar products at competitive prices, consider allotting additional points to vendors offering the widest array of certified low-toxicity and recycled-content painting supplies, chemical component disclosure, product take-back and recycling, delivery in low-emitting vehicles, a user-friendly green product labeling systems, a “green” spend tracking and reporting system, or other services that add value to the contract. See [Paint Vendor Sustainability Questionnaire](#) for a *Paint Vendor Questionnaire* you may require bidders to answer to assist you in gathering this type of information.

Consider awarding additional points to bidders supplying full disclosure of ingredients and health/environmental impacts in a publicly accessible format for at least three high-volume market basket items. Existing disclosure frameworks include [Health Product Declaration](#) (HPD) forms or the [Green Screen](#), which determines a hazard score for each product. Asking for full disclosure on high volume products puts the onus of information collection on the manufacturer, who can supply the data most efficiently. Having access to this toxics exposure information can help purchasers answer questions about offered products in the short term, and can assist in making more informed decisions in the future. For example, knowing the presence or absence of asthmagens in the products typically purchased can inform whether it is reasonable to prohibit asthmagens in future solicitations. Some suggested language to include in a contract may be:

“The bidder is strongly encouraged to make publicly accessible a Health Product Declaration Form (HPDs) or Green Screen score for at least three paint and coating products offered on the contract. HPDs, Green Screen Score, or other disclosure mechanism will need to be completed by the product manufacturer. It is expected that the vendor work with the product manufacturer to ensure disclosure is adequately complete prior to posting HPDs, Green Screen Scores, or other disclosure mechanisms in a publicly accessible format. If any of the posted information raises a concern in terms chemical content or potential environmental or human health impacts, the bidder, should they be awarded the contract, will work with the purchasing agent assigned to the contract to find product alternatives that reduce or eliminate such concerns while meeting performance specifications.”

MAXIMIZE GREEN IMPACT

Whether states are developing a “green-only” contract or adding environmentally preferable painting products to a conventional painting supplies contract, some best practices should be considered.

- Contracts can be strategically designed to generate three separate product lists: recycled paints, low-toxicity virgin paints and coatings, and traditional paints and coatings. Once these products are separated, end-users can easily employ a decision-making hierarchy whereby recycled and/or low-toxicity paints and coatings are chosen first, and traditional products are used only as a last resort. If the VOC content of a recycled paint product offered is the same or lower than other low-VOC products on the contract, then it should be considered first since it offers both recycled-content and low-VOC benefits.
- Ask vendors to help you track green purchases by submitting periodic “green spend” reports.
- States that secure attractive pricing for environmentally preferable painting supplies should make it easy for municipalities, school districts and other public agencies to utilize their price agreements through their cooperative purchasing.
- Requiring paints to be MPI-approved for performance will ensure high-quality products.
- Because environmentally preferable paints and coatings are often offered by small companies that may not have experience bidding on State contracts, States may get more offers if they proactively publicize the bid to paint suppliers in the state and to environmental certification bodies.
- Issuing a request for information (RFI) can help assess the availability of low-toxicity and recycled-content painting supplies from vendors in their state in advance of developing a bid solicitation.
- Holding a pre-bid meeting can help bidders understand the new green specifications in your bid solicitation and avoid submitting non-responsive bids. Giving bidders extra time to review the bid specifications and ask questions can also help increase the number of responsive bids.
- Contracts can also include recycled-content rollers, brushes, tarps and trays, low-toxicity paint removers, and other environmentally preferable products.
- Awarding contracts for high-performance paints and coatings will reduce the need for frequent repainting, particularly in high-traffic areas.
- Painting service agreements should specify low-toxicity paints and coatings as well as other environmentally preferable painting supplies using similar criteria
- Choosing light-colored paint, which reflects light better than dark-colored paint, can help users save money on electricity needed to light indoor spaces.
- Prioritizing the use of low-VOC paints for indoor applications in occupied areas can protect workers and facility users, particularly vulnerable populations such as children and the elderly.
- Recycling unused paint can prevent environmental contamination associated with its disposal.
- Using the [PaintCare calculator](#) can help facilities control costs by reducing the amount of paint that is ordered as well as the amount of leftover paint that needs to be properly disposed.

WHAT'S ON THE HORIZON?

Using low-toxicity paints and coatings presents a range of opportunities to reduce exposure to toxic chemicals, decrease the use of non-renewable fossil fuels, and drive the market toward more responsible products. If the recent trend continues, more certified options are likely to become available in the future.

While recycled-content paint may not be readily available in every state, as more states (in addition to California, Oregon and Connecticut) adopt legislation requiring paint retailers to serve as drop-off locations for leftover paint, the availability of recycled-content paint is likely to increase while its cost declines. For example, local governments are working with paint manufacturers and distributors to bring an effective paint waste management program to Washington State through extended producer responsibility (EPR) legislation; consequently, Washington can expect the availability, variety, and price of recycled paint to decline in the future when this legislation takes effect.

Finally, a growing number of manufacturers are producing high-quality paint that meets stringent VOC limits established by the South Coast Air Quality Management District (SCAQMD). Tighter SCAQMD VOC standards go into effect on January 14, 2014, by which time paint manufacturers will likely offer a variety of paint and coating products that meet this new limit. Purchasers should assess the availability of SCAQMD-compliant products at that time.

In response to consumer pressure, it is likely that more manufacturers will be offering additional information about the toxic chemical ingredients of their products. This will provide the necessary information to institutional purchasing agents to make more informed decisions in the future. Currently available disclosure formats are Health Product Declaration forms or the Green Screen product scoring system, both of which are in the process of being incorporated into the US Green Building Council's LEED rating system.

Credits

Green Purchasing Best Practices: Paints and Coatings was written by Deanna Simon and Alicia Culver, March 2013.

Layout and Design: Kelly Panciera

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Because Every Purchase Matters.

APPENDIX 1: DEFINITIONS



Asthmagens

Asthmagens are substances that can induce an asthma attack among people who already have asthma and/or cause a previously healthy individual to develop asthma. Of particular concern are substances that are listed as respiratory sensitizers or are generally known to cause asthma by the Association of Occupational and Environmental Clinics (AOEC) or other reputable organizations. A complete list of respiratory sensitizers and generally recognized asthmagens have been incorporated into a report by the National Institutes of Health (NIH), [*Healthy Environments: A Compilation of Substances Linked to Asthma*](#) (2012).

Asthmagens found in some paints and coatings include, but are not limited to:

- Acrylates (e.g., Methyl methacrylate)
- Aluminum and Aluminum compounds
- Cobalt and Chromium Compounds (hexavalent and non-hexavalent chromium)
- Diisocyanates
- Epoxy resins (see note below)
- Ethylene diamine (CAS #107-15-3)
- Formaldehyde (CAS #500-00-0)
- Latex (see note below)
- Malic anhydride
- Monoethanolamine (CAS #141-43-5) and Triethanolamine (102-71-6)
- Nickel and Nickel compounds
- Phthalates (e.g., Dibutyl phthalate and di(2-ethyl hexyl) phthalate (DEHP))
- Styrene

Note 1: Epoxy resins are asthmagens. Therefore, paints or coatings containing epoxy resin may not be eligible for a state's "Low-toxicity Paints List". However, water-based epoxy-based paints and coatings are preferable to conventional petroleum-based epoxy-based products, so states may want to identify them for contract users.

Note 2: Although rubber-derived natural latex is an allergen, the American Latex Allergy Association (NLAA) states: "[The] type of latex found in latex paints is not the same type of latex found in products that trigger latex allergies. The key distinction for latex in paint it is generally synthetic (polymerized from various monomeric materials, principally vinyl acetate and various acrylates) and dispersed in water. In contrast, the latex used in other products is usually naturally derived from rubber tree sap and contains, among others, hydrocarbon polymers and proteins. In particular, the protein component in natural latex is regarded as the likely cause of allergic reactions. Because of these and other differences, consumers need not be concerned about using latex paint and developing the allergic reactions that have been associated with natural latex." [More info](#)

 <p>Part of the UL Global Network</p> <p>New logo</p>  <p>Old logo</p>	<p>UL EcoLogo-Certified</p> <p>Based in Canada, UL EcoLogo, which falls under the Underwriters Laboratory (UL) suite of environmental certifications, has developed two standards for paints and coatings: CCD-047: Architectural Surface Coatings, which includes low-toxicity (non-recycled) paints, stains and varnishes; and CCD-048: Recycled, Water-borne Surface Coatings. UL EcoLogo-certified products are verified to meet all environmental and performance criteria included in their standards.</p> <p>Note: UL EcoLogo also has two related standards (including certified products): CCD-051: Paint and Varnish Remover and CCD-060: Corrosion Control Products.</p>
	<p>ENERGY STAR-Qualified</p> <p>The US federal government’s ENERGY STAR Program identifies products that contribute to energy conservation. A list of reflective roof coatings carrying the ENERGY STAR label can be found here.</p>
	<p>EPA DfE-Recognized</p> <p>The US Environmental Protection Agency’s Design for the Environment (DfE) Program awards its label to products for which “the DfE scientific review team has screened each ingredient for potential human health and environmental effects...[to ensure that] the product contains only those ingredients that pose the least concern among chemicals in their class.” More information on the DfE labeling process can be found here. A list of institutional products (e.g., athletic field paints and paint removers) carrying the DfE label can be found here.</p>
	<p>Green Seal-Certified</p> <p>Green Seal is an independent non-profit organization that develops standards for a wide range of environmentally preferable products including low-toxicity paints and coatings as well as recycled latex paints and primers.</p> <p>Green Seal’s environmental standards can be accessed here. A current list of Green Seal-certified paints and coatings can be found here.</p> <p>Note: Green Seal certification for recycled paints requires MPI certification for performance. Green Seal certification for low-toxicity virgin paints and coatings includes performance criteria.</p>
	<p>Master Painters Institute (MPI) Approved for Performance</p> <p>The Master Painters Institute (MPI) is a trade association that establishes performance standards and quality assurance programs for paints and coatings in North America. A current list of MPI-approved products can be found here. This list includes products that meet its environmental standards as well as those that do not.</p>



MPI Green Performance Standard (GPS) Labels

The Master Painters Institute (MPI) has developed two Green Performance Standard (GPS) labels for certified environmentally preferable paints and coatings:

GPS-1, which is less stringent than GPS-2, requires paints and coatings to meet category-specific VOC limits based on the US Environmental Protection Agency’s Test Method 24. Because MPI’s VOC limits are less stringent than those of the South Coast Air Quality Management District (SCAQMD), only SCAQMD limits are referenced in the recommended specifications. Certified products must also comply with MPI’s chemical component restrictions and performance criteria.

GPS-2, which is more stringent than GPS-1, requires certified paints and coatings to meet a 50 g/l VOC limit as well as MPI’s chemical component restrictions and performance requirements.

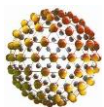
A summary of MPI’s GPS-1 and GPS-1 criteria as of October 2012 can be found [here](#). A list of products certified by MPI to meet its GPS criteria can be found [here](#).



MPI Extreme Green-Certified or MPI X-Green-Certified






The Master Painters Institute (MPI) has developed an Extreme Green (X-Green) label, based on its strongest environmental criteria. X-Green-certified products must meet MPI’s GPS-2 standard (described above) and be “low-emitting” (i.e., pass the emissions testing required by CHPS, the [Collaborative for High Performance Schools](#)). A summary of the MPI X-Green standard can be found [here](#).

A list of MPI X-Green-certified products can be found [here](#). They are listed under categories with “X-Green” after their MPI Number (e.g., 10 X-Green).



Nanoparticles

A particle with any **one** of its structural features measuring on a scale of less than 100 nm. More information on nanoparticles [here](#). Nanoparticles can be harmful because they can easily penetrate the skin, where they can harm internal organs.

	<p>Prop 65 Chemicals</p> <p>Proposition 65 chemicals are known to the State of California to cause cancer, birth defects or other reproductive harm. A current list of “Prop 65” chemicals developed by the CA Office of Environmental Health Hazard Assessment pursuant to the California Safe Drinking Water and Toxic Enforcement Act of 1986 is available here.</p> <p>The following Prop 65 chemicals are found in some paints and/or coatings:</p> <table border="0" data-bbox="418 516 1448 793"> <tr> <td>Benzene</td> <td>Lead and lead compounds</td> </tr> <tr> <td>Cadmium and cadmium compounds</td> <td>Mercury and mercury compounds</td> </tr> <tr> <td>Carbon black (respirable particles and extracts)</td> <td>Methylene chloride</td> </tr> <tr> <td>Chromium (hexavalent only)</td> <td>N-Methylpyrrolidone</td> </tr> <tr> <td>Creosotes</td> <td>Silica (crystalline)</td> </tr> <tr> <td>Dibutyl phthalate</td> <td>Titanium dioxide (respirable particles)</td> </tr> <tr> <td>Di(2-ethyl hexyl) phthalate (DEHP)</td> <td>1,1,1-Trichloroethane</td> </tr> <tr> <td>Ethyl benzene (a contaminant of xylene)</td> <td>Toluene</td> </tr> <tr> <td>Formaldehyde (gas)</td> <td></td> </tr> </table>	Benzene	Lead and lead compounds	Cadmium and cadmium compounds	Mercury and mercury compounds	Carbon black (respirable particles and extracts)	Methylene chloride	Chromium (hexavalent only)	N-Methylpyrrolidone	Creosotes	Silica (crystalline)	Dibutyl phthalate	Titanium dioxide (respirable particles)	Di(2-ethyl hexyl) phthalate (DEHP)	1,1,1-Trichloroethane	Ethyl benzene (a contaminant of xylene)	Toluene	Formaldehyde (gas)	
Benzene	Lead and lead compounds																		
Cadmium and cadmium compounds	Mercury and mercury compounds																		
Carbon black (respirable particles and extracts)	Methylene chloride																		
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Dibutyl phthalate	Titanium dioxide (respirable particles)																		
Di(2-ethyl hexyl) phthalate (DEHP)	1,1,1-Trichloroethane																		
Ethyl benzene (a contaminant of xylene)	Toluene																		
Formaldehyde (gas)																			
	<p>SCAQMD VOC Limits</p> <p>The South Coast Air Quality Management District (SCAQMD) has set limits on volatile organic compounds (VOCs) in architectural coatings that can be sold in and around the City of Los Angeles, CA, pursuant to Rule 1113. These VOC limits are listed in Appendix 3 and can also be found here.</p> <p>The VOC content of MPI-certified products can be found on the MPI Approved Products List. Also, SCAQMD maintains a list of “Super-Compliant” coatings that have a VOC content of <10 g/l. The SCAQMD Super-Compliant List can be found here.</p>																		
<p>New logo</p>  <p>Old logo</p> 	<p>UL EcoLogo-Certified</p> <p>Based in Canada, UL EcoLogo, which falls under the Underwriters Laboratory (UL) suite of environmental certifications, has developed two standards for paints and coatings: CCD-047: Architectural Surface Coatings, which includes low-toxicity (non-recycled) paints, stains and varnishes; and CCD-048: Recycled, Water-borne Surface Coatings. UL/UL EcoLogo-certified products are verified to meet all environmental and performance criteria included in their standards.</p> <p>Note: UL EcoLogo also has two related standards (including certified products): CCD-051: Paint and Varnish Remover and CCD-060: Corrosion Control Products.</p>																		
	<p>UL GREENGUARD-Certified</p> <p>UL GREENGUARD, which falls under the Underwriters Laboratory (UL) suite of environmental certifications, offers two levels of certification for low-emitting paints: UL GREENGUARD Indoor Air Quality and its more stringent UL GREENGUARD Gold (formerly UL GREENGUARD Children & Schools). UL GREENGUARD’s certification criteria can be found here. A list of UL GREENGUARD-certified products can be found here.</p>																		



USDA Certified Biobased Products Label

Biobased products are composed in whole or in significant part of agricultural, forestry, or marine materials. The USDA Certified Biobased Product label assures consumers that a product contains a verified amount of renewable biological ingredients. A list of USDA Certified Biobased Products is maintained by USDA's BioPreferred Program and can be found [here](#).



Water-Based or Waterborne

Water-based (also known as waterborne) coatings are those containing solids that are soluble in and dissolved in water and are able to be thinned with water rather than petroleum-based solvents.

Appendix 2: Environmentally Preferable Paints & Coatings Can Earn LEED Credits

Using Green Seal-certified paints and low-VOC coatings can help facilities earn green building credits under several of the US Green Building Council’s Leadership in Energy and Environmental Design (LEED) standards. Below is a table detailing how preferable paints and coatings qualify for specific LEED credits.

LEED Credit	Preferable Paints Required to Earn Points
<p>LEED for New Construction and Major Renovations LEED for Commercial Interiors LEED for Core and Shell <i>Section: Indoor Environmental Quality</i> <i>Credit #4.2: Low-Emitting Materials—Paints & Coatings</i></p> <p>LEED for Existing Buildings Operations & Maintenance <i>Section: Sustainable Sites</i> <i>Credit #2: Building Exterior & Hardscape Management Plan</i></p> <p>LEED for Schools <i>Section: Indoor Environmental Quality</i> <i>Credit #4.2: Low-Emitting Materials—Paints & Coatings</i></p>	<ul style="list-style-type: none"> • Interior and Exterior Latex Paint: GS-11 • Anti-corrosive Coatings: GS-03 • Clear Wood Finishes, Stains, Primers, Sealers, Shellacs: SCAQMD VOC limit 275 g/l
<p>LEED for Existing Buildings Operations & Maintenance <i>Section: Materials & Resources</i> <i>Credit #3: Sustainable Purchasing—Facility Alterations & Additions</i></p>	<ul style="list-style-type: none"> • Interior and Exterior Latex Paint: GS-11 OR • At least 10% post-consumer recycled content or 20% post-industrial recycled content

**Note: paints must only meet the Green Seal criteria but they are not required to carry the Green Seal label.*

APPENDIX 3: SCAQMD VOC Limits

South Coast Air Quality Management District's (SCAQMD's) current limits on Volatile Organic Compounds (VOCs) in g/L, pursuant to Rule 1113 are as follows and can be found [here](#).

South Coast Air Quality Management District (SCAQMD) Current VOC Limits in g/l under Rule 1113 for Architectural Coatings

Coating Category <i>(click on a category to see the full list of definitions or simply roll your mouse over a category to see a pop-up definition)</i>	Ceiling Limit ¹	Current Limit ²	Effective Date		
			7/1/08	1/1/12	1/1/14
Bond Breakers		350			
Clear Wood Finishes		275			
Varnish	350	275			
Sanding Sealers	350	275			
Lacquer		275			
Concrete-Curing Compounds		100			
Concrete-Curing Compounds For Roadways and Bridges ³		350			
Concrete Surface Retarder		250			50
Driveway Sealer		100		50	
Dry-Fog Coatings		150			50
Faux Finishing Coatings					
Clear Topcoat		350		200	100
Decorative Coatings		350			
Glazes		350			
Japan		350			
Trowel Applied Coatings		350		150	50
Fire-Proofing Coatings		350			150
Flats	250	50	50		
Floor Coatings	100	50			
Form Release Compound		250			100
Graphic Arts (Sign) Coatings		500			150
Industrial Maintenance (IM) Coatings	420	100			
High Temperature IM Coatings		420			
Non-Sacrificial Anti-Graffiti Coatings		100			
Zinc-Rich IM Primers	340	100			
Magnesite Cement Coatings		450			
Mastic Coatings		300			100
Metallic Pigmented Coatings	500	500			150
Multi-Color Coatings		250			
Nonflat Coatings	150	50			
Pre-Treatment Wash Primers		420			
Primers, Sealers, and Undercoaters	200	100			
Reactive Penetrating Sealers		350			
Recycled Coatings		250			
Roof Coatings	250	50			
Roof Coatings, Aluminum		100			
Roof Primers, Bituminous	350	350			
Rust Preventative Coatings	400	100			
Stone Consolidant		450			
Sacrificial Anti-Graffiti Coatings		100		50	
Shellac					
Clear		730			
Pigmented		550			
Specialty Primers	350	100			
Stains		100			
Stains, Interior	250	250			
Swimming Pool Coatings					
Repair		340			
Other		340			
Traffic Coatings		100			
Waterproofing Sealers	250	100			
Waterproofing Concrete/Masonry Sealers	400	100			
Wood Preservatives		350			

APPENDIX 4:

Painting Supplies Vendor Sustainability Questionnaire

For Firms Providing Architectural Paints and Coatings

Please answer all questions, provide supporting documentation and return with your bid

VENDOR NAME _____ Date _____
Website _____
Address _____

Contact Name _____ Title _____
Contact Phone _____ Email _____

A. How environmentally sustainable are the painting supplies that you are offering?

1. Does your company offer paints and/or coatings that are verified as environmentally preferable by any of the following third party organizations?
 - A. Green Seal? (Yes or No)
 - B. Master Painters Institute (X-Green or Green Performance Standard)? (Yes or No)
 - C. UL GREENGUARD? (Yes or No)
 - D. UL EcoLogo? (Yes or No)
 - E. US EPA (Design for the Environment Program)? (Yes or No)
 - F. US EPA/DOE (ENERGY STAR Program)? (Yes or No)
 - G. USDA (Certified Biobased Product) UL EcoLogo? (Yes or No)
 - H. Other? (List and Provide Documentation)

If yes, please provide a list of all of the third party-verified environmentally preferable paints and coatings that you offer and note the certification/recognition it has received.

2. Does your company offer recycled paint and related supplies? (Yes or No) If yes, please list and note the % of recycled and post-consumer content each product contains.

B. How sustainable are your packaging methods?

1. Does your company restrict the use of unsustainable packaging materials such as polyvinyl chloride (PVC) or polystyrene? (Yes or No) If yes,
2. Does your company use packaging materials that contains recycled content? (Yes or No)
3. Is any of your company's packaging materials returnable? (Yes or No)
4. Please describe any sustainable packaging initiatives of your company? (Yes or No)

C. How sustainable are your transportation methods?

1. Is your company an EPA SmartWay Partner or are products shipped via any EPA SmartWay Partners? (Yes or No)
2. Are any of your company's passenger vehicles and light-duty trucks EPA SmartWay certified? (Yes or No) If yes, what percentage?
3. Do your fleet vehicles utilize hybrid technology, electricity, or alternative fuels (e.g., biodiesel)? (Yes or No) If yes, please describe your company's use of alternative-fuel vehicles and alternative fuels.
4. Does your company minimize transportation-related environmental impacts in other ways? (Yes or No) If yes, please describe.

D. What environmental services does your company provide to your customers?

1.
 - A. Does your company label the environmentally preferable products offered on your website or in your catalog or brochures? (Yes or No) If yes, does your company's green product labeling system list the certification/recognition that each product has received or other environmental attributes it has? (Yes or No) Please provide documentation such as a website link or screenshot.
2. Does your company provide LEED information as it pertains to the products on your company website? (Yes or No) If yes, provide the LEED information.
3.
 - A. Does your company promote on your website (or in your catalog) the benefits of choosing the environmentally preferable painting products you offer? (Yes or No) If yes, please provide a link to the website or a copy of the catalog where the benefits of choosing these products are highlighted.
 - B. Can your company's website be tailored to block non-sustainable products? (Yes or No) If yes, please provide an example of how you did this for one of your existing customers.
 - C. Does your company's website display environmentally preferable products first during a website search? (Yes or No) If yes, please provide documentation such as a website link or screenshot.
 - D. Does your company's website recommend "green" alternatives when customers attempt to order conventional products? (Yes or No) If yes, please provide documentation such as a website link or screenshot.
4.
 - A. Does your company post the Material Safety Data Sheets (MSDSs) of the products you offer on your website? (Yes or No) If yes, please provide website link or screenshot.

B. Does your company's website include any resources to help buyers understand the environmental impacts of products such as Health Product Declarations (HPDs) or Green Screen reports? (Yes or No) If yes, please provide website link or screenshot.

C. Does your company's website help customers identify products that contain substances of concern such as lead or mercury, volatile organic compounds (VOCs), or chemicals that are known to cause cancer or birth defects? (Yes or No) If yes, please provide documentation such as a website link or screenshot.

5. Can your company provide to your customers purchasing reports that identify and sort by the products' sustainability certifications/attributes (e.g., Green Seal, UL EcoLogo or UL GREENGUARD, MPI, ENERGY STAR, etc.)? (Yes or No) If yes, please describe your company's "green spend reporting" capabilities and services.
6. Does your company offer a product "take-back" program to its customers to facilitate the collection and recycling of leftover/unused paint and coating products? (Yes or No) If yes, please indicate whether this services if available free-of-charge or whether there is a fee for this service. Also, please describe how you manage the paints/coatings that are collected and recycled.

E. How sustainable are your buildings and operations?

1. Has your company implemented any of the following environmental policy initiatives for your facilities? (Please attach or link to relevant policies or plans)
 - A. Environmental or Sustainability Policy or Plan (Yes or No)
 - B. Climate Action Policy or Plan (Yes or No)
 - C. Zero Waste Policy or Plan (Yes or No)
 - D. Toxics Reduction Policy or Plan (Yes or No)
 - E. Water Reduction Policy or Plan (Yes or No)
 - F. Green Transportation Policy or Plan for Employees (Yes or No)
 - G. Sustainable Purchasing Policy or Plan (Yes or No)
2. Describe the specifications for the following environmentally preferable products bought for your facilities over the past year and list their sustainability certifications and/or attributes.
 - A. Copy paper
 - B. Office electronics
 - C. Cleaning chemicals and services
 - D. Hand soaps
 - E. Furniture
 - F. Lighting equipment
 - G. Paint
 - H. Pest control products and services
 - I. Up to two other products
3. Does your company's operations meet an environmental management standard (e.g., ISO 14001, EMAS)? (Please describe and document)

4. A. Does your company have a recycling program in place? (Yes or No) If yes, please describe the program, including the materials that are accepted in it.

B. Does your company have a composting collection program? (Yes or No) If yes, please describe the program, including the materials that are accepted in it.
5. A. Has your company received any environmental and/or sustainability awards in the past five years? (Yes or No) If yes, please describe.

B. What are your company's greatest environmental achievements? Please describe.
6. Is your company certified as a Green Business or does it hold any other environmental certifications? (Yes or No) If yes, please list certifying agency and document.
7. Does your company staff have environmental accreditations (such as LEED AP)? (Yes or No) If yes, please list, including the number of staff that are accredited, and document.
8. Does your company adhere to specific sustainability principles when managing your supply chain? (Yes or No) If yes, please describe.
9. Does your company produce a public sustainability or environmental report about its internal sustainability policies and practices? (Yes or No) If yes, please provide a copy or link to it and indicate compliance with any international standards (e.g., Global Reporting Initiative, Carbon Disclosure Project, ISO 14000).
10. Has your company ever been cited for non-compliance of an environmental or safety issue (Yes or No). If yes, please describe date, reason, outcome.
11. Have any buildings that you own or lease been LEED-certified by the U.S. Green Building Council? (Yes or No) If yes, please indicate what % of buildings you own are LEED-certified.

If no, please describe any green building initiatives of your company.
12. Does your company create or purchase renewable energy for its operations?
 - A. On-site (Yes or No)
 - B. Off-site (Yes or No)
 - C. Purchases electricity with Green-E certification
 - D. What percentage of your company's overall energy is derived from renewable sources? (Please provide documentation)