

Architectural

What are the key green issues?

- » **Energy Consumption and GHG Emissions:** The energy consumed in the process of manufacturing pigments, such as titanium dioxide (TiO₂) in white paints, is one of the most significant environmental impacts associated with paint. Latex and oil-based paints are both formulated with petrochemicals and hazardous substances such as organic solvents. The latex used in water-based latex paint is synthesized from petroleum, i.e. crude oil, and oil-based paints are thinned with petroleum distillate solvents.
- » **Indoor Air Quality, Pollutants and Toxins:** All oil-based, most water-based, and some natural paints contain toxic organic solvents to disperse and bind other paint components. Many paints use Volatile Organic Compounds (VOCs) as solvents, which pollute the air and lower indoor air quality.
- » **Water Quality:** Water-based latex paints generally contain fewer toxic materials and VOCs than oil-based paints but are still ecologically hazardous. When equipment is washed with water, waste paint is washed into waterways and ground water, and can damage aquatic life with toxins that accumulate over time. Latex paint contains high concentrations of pigments that increase turbidity or murkiness in water, which blocks sunlight to plants and disrupts the natural cycle of oxygen.
- » **Waste:** Leftover architectural paint represents between 40 percent and 60 percent of all material collected at household hazardous waste facilities and events. Both steel and plastic paint cans are recyclable, but not every community accepts them as part of their recycling program. The maximum recycled-content in steel cans is 30–35 percent, while plastic containers could be made from 100 percent post-consumer materials.

Architectural paints are coatings intended for on-site application to interior and exterior surfaces of institutional buildings. It includes flat paints, gloss paints, primers, stains and varnishes.



How does green paint advance Government's strategic priorities?

✓ Reducing Energy Use and Toxins

Substituting a petrochemical-based solvent (alkyd) with a water-based solvent (latex) or choosing paints with lower amounts of petrochemical-based solvent reduces the energy and materials used. Reducing VOCs may also reduce negative downstream health and environmental effects.

✓ Reducing Unnecessary Waste

Recycled paint uses leftover paint in place of virgin materials, thus reducing the need for the further extraction of materials. Recycling paint can also mitigate the high cost of end-of-life management and keep waste out of the landfill. Evaluating the need for paint and also ensuring that only the required amount of paint is purchased will reduce leftover paint that has to be disposed of.

✓ Reducing Costs

Switching to environmentally preferable paints can yield savings by reducing the handling and disposal costs of hazardous materials. Using paints with little tint can also save on operating and maintenance costs. Use of colorants often drops the gloss/sheen and the durability of the applied coating. Lighter colours require less maintenance because they are more abrasion resistant and require fewer coats.

Myth Buster

Environmentally preferable paint doesn't last as long as conventional paint. The Green Seal and ECOLOGO certifications assure purchasers that recycled paint is environmentally preferable and performs just as well as virgin paints, both in terms of quality and longevity of finish.

Recommended	Why is it important?	How do I know I am getting it?
<p>✓ Paints shall be low or no VOCs and certified by ECOLOGO, or Greenseal, or be certified by MPI Green Performance Paint standard GPS-2 or MPI extreme Green Performance Standard</p>	<p>Ensures that interior non-flat paints shall not exceed 150 VOC g/L; and interior flat paints shall not exceed 50 VOC g/L. Also ensures reduced or zero quantities of various undesirable chemical components.</p>	<div style="display: flex; flex-direction: column; align-items: center;">     </div> <p>ECOLOGO™ gives you assurance that paint has been thoroughly evaluated for its lifecycle environmental impacts, including a reduced amount of materials and energy use; minimal health impacts, as well as product performance and use.</p> <p>Green Seal gives you assurance on performance requirements and environmental health requirements such as recovered and post-consumer material, and reduced toxicity.</p> <p>Greenguard certification gives you assurance that paints designed for use in indoor spaces meet strict chemical emissions limits, which contribute to the creation of healthier interiors.</p> <p>MPI Extreme Green Performance™ Standard ensures adherence to performance requirements, chemical component restrictions, a maximum allowable limit of 50 g/L of VOCs, and emissions compliance to CHPS (Collaborative for High Performance Schools).</p>
<p>✓ Containers are recyclable and made from recycled materials</p>	<p>Reduces waste and resource use for new container production.</p>	<p>Have your supplier verify that containers are recyclable and made from recycled materials.</p>
<p>✓ Take-back services for paint leftovers and containers</p>	<p>Ensures proper disposal and also reduce government's waste management costs.</p>	<p>Ask your supplier to verify that paint leftovers are returned to a paint recycler and empty containers can be returned.</p>

What else could I look for?

In addition to the minimum recommended criteria outlined above, there are stronger green attributes you can look for when making your purchasing decision.

Recommended	Why is it important?	How do I know I am getting it?
Use light coloured paint for indoor environments	Light-coloured paint reduces the need for artificial lighting indoors, as its reflectivity increases the dispersion of natural light in offices and classrooms. It also reduces maintenance costs, as it requires fewer coats and is more abrasion resistant. It enhances employee productivity through day lighting and tends to contain less hazardous chemicals.	
Paints made from natural non-petrochemical based resources	Natural, non-petrochemical paints are often made from a plant, e.g. soy, or mineral base and ensure better indoor quality.	Natural paints are not always suitable for outdoor painting. Ask your supplier for natural paint options.
Consider alternatives to paint	Some wall treatment options, e.g. some stains, washes, and clay plasters, may be less-toxic options for brightening and protecting all types of surfaces. Wall coverings made from cork, organic cotton, jute, bamboo, 100 percent post-consumer recycled paper and other renewable materials can reduce environmental and health risks.	Ask your supplier for alternative wall treatment options.

Resources

- Responsible Purchasing Network, [Responsible Purchasing Guide Paint](#)
- Resort Municipality of Whistler, [Sustainable Purchasing Product Assessments. Paint](#)
- BC Procurement Services Branch, [Green Purchasing. Buying Goods. Paint](#)