



Recycled paint is the cornerstone of paint product stewardship programs that aim to protect environmental and public health by diverting leftover paints from landfills, incinerators, and wastewater.

Image Source: Flickr user United Soybean Board

There are certain truisms when it comes to home renovation: buy 10% more flooring than you need. Measure twice, cut once. And, in my case, buy double the amount of paint you end up using. Unfortunately, I am not alone in my overzealous paint buying; according to the U.S. Environmental Protection Agency (EPA), “10% of paint purchased in the United States each year—about 65-69 million gallons—is discarded.”<sup>1</sup>

Without proper disposal, these paints typically end up poured down the drain, incinerated, or embedded in landfills, where they can pose serious environmental and health risks due to the inclusion of toxic pigments, additives, and VOCs. Paints not disposed of in the correct manner can be responsible for up to 32% of [natural emissions to wastewater](#) and a single gallon has the potential to pollute up to 250,000 gallons of water.<sup>2</sup>

To address this issue, governments and paint suppliers are increasingly turning to a product stewardship approach in which “all participants involved in the life cycle of a product take shared responsibility for the impacts to human health and the natural environment that result from the production, use, and end-of life management of the product.”<sup>3</sup> Since the passing of the first paint stewardship law in Oregon in 2009, several other states have followed suit, and the United States is increasingly joining countries around the world who have established their own stewardship programs to protect environmental and human health. At the heart of these programs is recycled paint.



Paint recycling protects fragile ecosystems from the damage caused by toxic wastewater.

Image Source: Pexels user Eutah Mizushima

### The Benefits of Paint Recycling

The primary purpose of paint stewardship programs is deterring improper paint disposal and offering environmentally sound alternatives. As such, paints must first be sorted according to type to determine the next steps in their lifecycle, with the ultimate goal being paint recycling or beneficial reuse. Latex paints that are not suitable for re-processing as new paints may be used as [a binder in cement production](#) and oil-based paints can be turned into alternative fuels, for example. However, high quality latex paint can be re-processed to become new, usable paints, allowing paint manufacturers to “create premium products without the raw material costs and energy consumption needed to make paint from scratch.”<sup>4</sup> These recycled paints have significant benefits for manufacturers, consumers, and the environment:

- Reduces greenhouse gas emissions: Using a gallon of recycled paint rather than new paint saves 100 kWh of energy, dramatically decreasing the CO<sub>2</sub> produced and creating real cost savings for manufacturers.
- Minimizes or eliminates the manufacture of new raw materials, including petrochemical ingredients, and avoids the creation of unnecessary waste.
- Saves up to 13 gallons of water per one gallon of recycled paint.
- Qualifies for LEED credits if the paint contains more than 80% post consumer content.

As an additional benefit, recycled paints are typically less expensive to purchase than comparable high-quality virgin paints in part due to their lower manufacturing costs.



Expanding the color palate of recycled paints can make these eco-friendly products more attractive to discerning consumers.

Image Source: Pexels user Krzysztof Puszczynski

#### Spectrophotometric Color Measurement of Recycled Paint

As [environmental awareness has grown amongst consumers](#), a niche market has opened up specifically for manufacturers of recycled paint. This market is likely to expand significantly as paint stewardship legislation continues to take hold in new states and the availability of recyclable paint grows; already recycled paint is appearing within product line-ups at major retailers across the United States and Canada. Spectrophotometric color measurement can optimize the efficacy of paint recycling programs as well as enhance the paint color creation processes to expand the spectrum of available hues, making recycled paints more attractive to consumers on aesthetic grounds in addition to its environmental benefits.

Recycled paint manufacturers must first sort paints according to like colors, which are then mixed to create a new product. Currently, this sorting process is primarily performed via [visual inspection, an inherently unreliable system of color evaluation](#).<sup>5</sup> Spectrophotometer-based color sorting is a more precise method that offers the ability to distinguish between similar but discrete shades with the highest degree of accuracy, allowing recycled paint manufacturers to engage in more refined sorting practices and achieve a higher level of color quality control.

Once the paints are sorted, spectrophotometers allow for continuous monitoring of paint color throughout the production process to ensure that your desired shade is consistently achieved within and between batches. Spectrophotometers are also capable of [analyzing critical variables such as paint opacity](#), coverage, and durability for comprehensive quality assurance.

Although recycled products are making inroads in the paint market, many paint manufacturers currently offer a limited range of color options that pales in comparison to the virtually endless rainbow of shades offered by traditional paint producers. Expanding the range of color options in recycled paint may be a key element of capturing a larger share of the paint market and inviting more consumers to make environmentally responsible choices. Via spectrophotometric analysis,

paint manufacturers are able to accurately analyze new formulations and make more discerning choices regarding choice of recovered paints, blending practices, and the introduction of additives, opening up possibilities for new color formulations.

#### HunterLab Quality

HunterLab has been a pioneer in the field of spectrophotometric color measurement for over 60 years. Our sophisticated line up of portable, benchtop, and in-line instruments gives recycled paint manufacturers the tools it needs for accurate color analysis at every stage of the production process, from sorting to mixing. When used with our customizable [EasyMatch QC software](#), you are able to easily collect, display, and analyze color information for the ultimate in color quality control. [Contact us](#) to learn more about our renowned color measurement technologies and how we can help you achieve the highest level of quality assurance.

1. "How Best to Recycle Old Paint," July 7, 2015,  
  
<http://www.scientificamerican.com/article/how-best-to-recycle-old-paint/>
2. "Study on Hazardous Household Waste (HHW) With A Main Emphasis on Hazardous Household Chemicals (HHC)," July 2002,  
  
[http://ec.europa.eu/environment/waste/studies/pdf/household\\_report.pdf](http://ec.europa.eu/environment/waste/studies/pdf/household_report.pdf)
3. "ACA and PaintCare: Driving a Post-Consumer Paint Solution," September 2014,  
  
<http://www.paint.org/publications-resources/issue-background/aca-paintcare/>
4. "Paint Recycling," [https://en.wikipedia.org/wiki/Paint\\_recycling#cite\\_note-4](https://en.wikipedia.org/wiki/Paint_recycling#cite_note-4)
5. "How It's Made," <http://www.amazonpaint.com/how-its-made.html>