



It takes a lot of paint to keep the Golden Gate orange. Image Credit: Unsplash User Andreas Selter

It's a bit of an exaggeration to say that the Golden Gate Bridge is painted from end to end each year. In fact, the only time it was ever painted end to end is the first time it was ever painted, nearly a century ago. Since then, there has been touch-ups and maintenance painting, as well as a 30-yr project to remove and replace lead-based paint that ran from 1965 to 1995.¹ However, even these regular touch-ups require a full-time painting staff and, of course, tons of paint. The story is the same for most of the bridges in the United States. Initially and on an ongoing basis, enormous volumes of paint are required to prevent corrosion and to keep the bridge looking trim, rain or shine.

The Golden Gate Bridge is notable for its span, but also its color. The particular shade of orange used is immediately recognizable and only one large suspension bridge in the world boasts a similar color: the 25 de Abril bridge connecting Lisbon, Portugal to Almada. While few other bridges are painted similarly to the Golden Gate Bridge, most other bridges are painted with the same attention to detail. That is to say, that each bridge is its own color as distinctly as the Golden Gate is orange. Naturally, this presents an opportunity for paint makers. The supplier who mixes orange for the Golden Gate Bridge enjoys a steady revenue stream from the ongoing maintenance. [Paint manufacturers able to consistently produce paint](#) that meets the color specifications of bridges stand to benefit from a constant flow of revenue.



Bridges across the country require constant repainting. Image credit: Unsplash User Jeffrey Blum

Spectrophotometers Ensure Paint Color Consistency

The best way to ensure paint color consistency is to employ spectrophotometers as part of the quality assurance process. These instruments are the most accurate and effective way to measure color as part of an industrial application, [like paint production](#). Small enough to fit on a benchtop and fast enough to measure multiple samples per minute, reflectance spectrophotometers assess the color of opaque liquids and solids by measuring reflected light. This makes them an ideal instrument for rapidly determining whether paint batches meet color specifications.

[Spectrophotometers are a significant improvement](#) over other color quality assurance options, especially human observers. When it comes to distinguishing between slight differences in shade on a consistent basis over the course of years, the human eye and human brain cannot match the objective quality of the spectrophotometer. Depending on the observer, the time of day, the person's mood, the ambient quality of light in the room, and the state of the comparison sample, human observers may make color identification errors. Needless to say, these errors can be costly, as paint is wasted and rework is made necessary.



The bright blue paint requires consistent maintenance to keep up. Image Credit: Unsplash User Robert Conklin

Spectrophotometers Provide Objective Data

With spectrophotometers, the potential for color inconsistency inherent to visual inspection is eliminated. Using controlled bursts of light and computer precision, spectrophotometers can identify shades with minute specificity. Their judgment is unaffected by mood or time of day and is based on objectively determined programmed standards. Further, spectrophotometers identify color numerically. This allows them to communicate color objectively and consistently; the precise orange hue of the Golden Gate Bridge is rendered as a series of static, numerical values, rather than “Golden Gate Orange.” This ensures greater consistency in standards and that, as a manufacturer, you’re always able to produce the exact shade your client requests.

Spectrophotometers are versatile instruments as well. Few paint manufacturers produce paint in a single color for a single client. Rather, a paint manufacturer may be producing dozens or hundreds of colors of paint, for dozens or hundreds of applications, from bridges and other large infrastructure to retail wall paint. Fortunately, spectrophotometers are able to save color standards in their memory for technicians to recall as needed. So no matter how many different shades of orange a manufacturer produces, the spectrophotometer will be able to instantly determine if each batch of paint is the correct color based on its archive of color standards.

The HunterLab Difference

HunterLab spectrophotometers have been used for decades to assess paint color for projects big and small. Our instruments offer the highest level of accuracy and precision available on the market, making us one of the most trusted names in color measurement technologies today. Combined with

our customizable software packages, HunterLab spectrophotometers gives you unprecedented color quality control combined with versatile, user-friendly designs. [Contact us today](#) to find the right color measurement solution for your needs

1. "Frequently Asked Questions About the Golden Gate Bridge",

2017, <http://goldengatebridge.org/research/facts.php#PaintEndtoEnd>