Pearlescent paint can cause some difficulty in determining the exact color of the paint job, as the color looks different from different angles.
Image Source: Flickr User robad0b

Iridescence is one of nature's most beautiful and mysterious phenomenon. Normally the colors we see in nature are caused by the pigmentation of a paint, of an animal's skin, or of a colored leaf. However, with iridescent colors, the hues are created by light refracting through microstructures in the surface. This refraction creates interference patterns and, of course, the rich flux of color that we see in peacock feathers and butterfly wings. We've mimicked that beautiful luster in industrial processes like paint manufacturing, by using mica particles—a type of ceramic crystal—to create a similar diffraction grating and gives the vehicle a depth and sparkle of color that's unmatched by traditional paints.[1]

Unfortunately for auto body specialists—and drivers that love their pearlescent car—the **complexity of color**which is so beautiful to a car-buyer is extremely difficult to accurately measure with the unaided eye. When you have customers who bring in a vehicle with pearlescent paint, it's important to be prepared with the right tools to accurately match their paint. The solution? 45°/0° spectrophotometers can accurately measure the true color of a pearlescent paint, ensuring a consistent color when you're patching scrapes and dents. For auto body shops to be able to provide comprehensive paint touch-ups and meet the needs of their customers, it's vital to have a spectrophotometer on hand to deal with repairs that involve pearlescent paint.

Directional Spectrophotometry

A directional 45°/0° spectrophotometer is perhaps the smartest option when taking a color measurement of pearlescent paint, as it is able to collect data from the surface of the paint while ignoring any glare. Older spectrophotometers often didn't include the numbers of sensors or detail in the software algorithms required to measure pearlescent paints that a newer unit offers.

Portable Tools for the Garage

As a body shop owner, you may find that a portable or handheld unit will give you the best results in an attempt to match a pearlescent paint if you're measuring color on spare parts or on a paint job. The portable spectrophotometer can be moved throughout the building or garage, allowing you to bring the color measurement unit to the vehicle, which should simplify the process of making a color match versus trying to place a vehicle near a stationary spectrophotometer.

When replacing a damaged quarter panel on a vehicle, the body shop must make sure the pearlescent paint on the new part matches what could be faded paint on the vehicle.
Image source: Flickr user heymarchetti

Matching Older, Faded Pearlescent Paints

Adding to the challenge of cars with pearlescent paint is that the paint fades over time—you can't rely on the factory color if you want to make a perfect match. As the color fades over time, it will need a different shade for touch-ups.[2] Make sure your auto body shop and your technicians are able to exactly match faded paint by taking a quick measurement of the existing color with a spectrophotometer, and matching them with the paint you use for repairs. Otherwise, you risk a jarring disconnect between the old and new paint.

Stay at the Top of the Game by Investing in a Spectrophotometer

If your auto body shop is going to stay competitive, you need to be able to handle all kind of paint repairs—including pearlescent paints. If it's time to upgrade your spectrophotometer to meet your customer's needs, HunterLab has been providing solutions for analyzing colors for more than 60 years. Let us pair you with the right unit to meet your exact paint matching needs. With our premiere customer service, we can also provide guidance on how to make the most of your instrument when matching pearlescent paints. **Contact us** today to learn more about which HunterLab instrument will best meet your spectrophotometric needs.

1. “Car Paint Types Explained – What Are Solid, Metallic, Pearlescent and Special Colours?” https://www.carwow.co.uk/blog/car-paint-types-guide
2. “Photonics Measures the Quality of Automotive Paint.” Photonics Measures the Quality of Automotive Paint,” http://www.photonics.com/Article.aspx?AID=23155