

Engineering

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## **Oil vs. Latex Paint, What's the Difference?**

Nearly all paints fall into one of two categories, either oil based paints or latex paints. Choosing the right type of paint for the job at hand is the first step to ensuring an attractive and durable finish and minimizing rework and repeated maintenance.

### **Oil Paints**

Sometimes referred to as solvent-based or alkyd paint, oil paints afford a high degree of protection, durability, and generally offer excellent adhesion characteristics, especially to chalky surfaces or surfaces coated previously with multiple layers of oil-based paint. To determine if the surface is chalking, one can merely rub his hand across the surface. If a fine powder or dust is visible on the hand, an oil based paint would be the best option.

Though referred to as "oil-based", most paints in this category are comprised of a combination of petroleum distillates and vegetable oils. Oil paints actually contain a binder, referred to as a resin, which is derived from a vegetable oil such as linseed or soya bean. This resin is usually dissolved in a petroleum-based solvent such as mineral spirits. Alkyd paints are manufactured similarly but use a synthetic resin, usually containing a vegetable oil, as the binder.

After curing, most oil based paints are scrub resistant and offer a higher degree of stain and moisture resistance. Some interior and exterior finishes (referred to as sheen) of oil based paints also provide vapor barrier protection from moisture penetration.

There are various drawbacks associated with using oil based paints. Most significantly, oil paints take considerably longer to dry and cure than latex paints and often emit an undesirable odor. Depending on the amount of moisture in the air, the coating thickness applied to the surface, and the paint's sheen, interior oil paints can often take 12-24 hours to dry before they may be painted with a second coat of paint and 3-5 days to before they may be scrubbed. Cleanup requires paint thinner, which is combustible and must be disposed of according to EPA or state and municipal hazardous waste guidelines. Because of the vegetable oils and lack of rubberized binding content, oil paints may yellow and crack or chip over time. Finally, oil paints tend to cost about 20-25% more than latex paints.

### **Latex Paints**

Latex paints contain a rubberized emulsifier set in a water-based solution that binds the titanium and other paint ingredients. As such, latex paints dry and cure much more quickly than oil paints (often in as little as 1-6 hours) and can be cleaned up with warm water and soap. Hence, no need to buy paint thinner for cleanup.

The best type of latex paints contains 100% acrylic binders, which add to their durability, flexibility, and color retention. They are less likely to blister, chip, or peel and application is often much smoother and quicker. Latex paints usually emit minimal odor, are less likely to chalk, and may be applied at lower temperatures than oil paints.

Because of the decreased drying time and water based cleanup, latex paints are an excellent choice for hotels and those high traffic areas that cannot be cordoned off for prolonged periods. Also, unused latex paint is easy to dispose of by allowing the remaining paint content to dry thoroughly and disposing in the trash.

Latex paint is ideal for aluminum, masonry, and primed wood surfaces as well as drywall and primed plaster. It is not recommended for surfaces that will be subject to extreme moisture (i.e., ceilings above showers or bathtubs) or those areas where guests may come into frequent direct contact with surfaces (i.e., metal hand railings).

*(Bill Frye spent 7 years managing paint stores and advising painting contractors before becoming involved with the hospitality industry. You may email your paint related questions to him at [wfrye@roomschronicle.com](mailto:wfrye@roomschronicle.com)).*