

A. Weather/Air Conditions

1. **Humidity:** High relative humidity (moisture content in the air) retards evaporation of liquids from the paint; relative humidity over 90% can cause extremely slow drying.
2. **Temperature:** Low temperatures impede evaporation of liquids from paint; significant slowing of dry is generally observed with temperatures below 60° F. Painting in direct sunlight can dramatically increase paint temperature (and thus speed of dry) if the paint is a dark color, which absorbs heat from the sunlight.
3. **Wind:** Air movement speeds drying because fresh air passing over a wet paint film helps liquids in the paint to evaporate; dry times are generally specified assuming little or no air movement.

A. Application

1. Application of the paint in a **thick film** will retard drying.
2. If the paint is cold during application, it causes it to go on heavy and this increases dry time.

B. Surface Characteristics

1. All else being equal, paint on a **porous surface** will dry more quickly than it will on a sealed surface because some of the liquid is absorbed by the surface.
2. A **warm or hot surface will** contribute to speed of dry.

C. The paint composition

1. Factors contributing to **high-film build**.
 - **high viscosity:** high thickener content of high solids content.
 - **nature of the thickener** used in making the paint
2. Factors that **hold onto water** longer.
 - **nature of the binder:** vinyl-acrylic latex dry more slowly than all acrylic or styrene acrylic types, all else being equal.
 - **nature of the thickener:** cellulose types may hold onto water more so than do some synthetic thickeners.
3. **Solids content:** at equal wet spread rate and all else being equal, a lower solids paint takes longer to dry than a higher solids paint because there is more liquid to evaporate.

For further information on factors that affect drying rates, contact your Diamond Vogel® representative or visit the Diamond Vogel® web site at www.diamondvogel.com.