



FAQ:

Drying vs. Curing (and tips that can help)

Q: What are the most important factors contributing to proper drying of a finish?

A: There are four - Temperature, humidity, film thickness, and airflow. Temperature affects viscosity, which contributes to film thickness. Humidity affects the evaporation rate of the solvents. The amount of airflow determines how much oxygen will crosslink with the finish to initiate the cure. High temperatures, low humidity, thin film thickness, and adequate airflow will all expedite dry time and cure time. Caution must be used during these conditions due to the risk of finish drying too quickly.

Q: How important is airflow?

A: It is critical. After solvent evaporation, the film is very weak. The film must then build strength by crosslinking with oxygen from the air directly over the coating. If the air is stagnant, the solvent vapors, which are heavier than air, blanket the floor blocking the access of oxygen to the film. Things such as wrinkling, paint bleeding and peeling, and stain pull can occur. After the film has become tack free, even slight air circulation will bring oxygen in contact with the floor. Complete curing can take several days, but overnight is usually enough for topcoating.

Q: What is the difference between drying and curing?

A: Drying occurs when the solvents evaporate from the surface of the film and it becomes tack free. Curing is when the residual solvents leave the film and it begins crosslinking with oxygen in the air to develop its strength, toughness, abrasion resistance, and chemical resistance. Although most finishes reach 90% cure in seven days, full cure takes up to thirty days.

Q: When are hardwood floors ready for foot traffic?

A: That will depend on the type of finish used. Light traffic in three days for Supreme or World Class Finish, normal traffic in seven. Zenith, Prism, and Express can handle light traffic the next day, normal traffic in three days. For fast use of the floor with an oil-modified, Primero and Magnum boast light traffic in one day, normal traffic in three.

Q: What could I expect from a finish that has been applied too heavily?

A: Slow drying, soft film, gummed screens, alligatoring when top coated, and poor adhesion. The dry time will increase exponentially with the film thickness (see PoloPlaz Tech Bulletin "Finish Too Thick").

Q: How do I know if the finish is drying too quickly?

A: If temperature is high, humidity is low, and the area to coat is large, exercise caution. Symptoms of finish drying too quickly are excessive drag during application, poor flow and leveling, and bubbles that won't disappear. The cure time might also be extended as the surface of the film may skin over and retard through drying. The solution is to eliminate airflow, check the temperature of the air, floor, and finish.