Pontiac Paint

50104 Woodward Ave.
Pontiac, MI 48342
Phone: 248/335-3175
Fax: 248/335-0725
www.pontiacpaint.com

DRYING CONDITIONS

Industry standards use 77'F. (25'C.) and 50% relative humidity to indicate a common point of reference for drying times. The approximate drying times given on label directions and product data sheets are based on these conditions and should not be regarded as all-inclusive.

There are many factors that affect the rate of drying and/or curing of paint or coating. These include temperature, humidity, film thickness, ventilation, etc. These conditions may cause a wide variation in the time for paint to actually dry.

HOW DOES TEMPERATURE AND HUMIDITY AFFECT DRYING TIMES?

Generally speaking, cooler temperatures and/or higher humidity will increase drying times. Conversely, warmer temperatures and lower humidity may facilitate faster drying times. Substrate temperature and dew point must also be considered.

HOW DOES FILM THICKNESS AFFECT DRYING TIMES?

Adequate film build is essential for satisfactory performance and protection. However, heavier film thickness (or lower spread rates) will quite naturally take longer to dry simply because more wet paint has been applied.

HOW DOES VENTILATION AFFECT DRYING TIMES?

Ventilation is a critical aspect of drying. Solvent or moisture-laden air must be exhausted and replaced with fresh air during drying. For example, if ten gallons of paint with a volume solid of 50% is applied in a given confined area, five gallons of volatiles (solvent or water) must be evaporated out of the wet film and into the air for drying to occur.

WILL ADDING A FAST SOLVENT TO PAINT MAKE IT DRY QUICKER?

No, adding a fast or "hot" solvent to paint formulated with mineral spirits, as its primary solvent will <u>not</u> cause the mixture to dry any faster. You simply cannot make the mixture dry any quicker than the slowest solvent that is already in it. For example, it the primary solvent discussed takes 45 minutes under a given set of conditions to evaporate, adding any amount of a faster "5-minute" solvent will not change its evaporation rate. Additionally, the faster, foreign solvent may actually cause the temperature of the wet paint to drop lower than normal due to the increased evaporation rate, thus slowing the actual drying time. Other problems may also occur such as blushing, wrinkling, etc. Also adding additional dries to a properly formulated oil or alkyd paint will not really speed up the drying, but may cause problems such as light sensitivity and accelerated aging conditions such as early chalking and cracking.