

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2005  
 DateRun: 09/01/2005  
 Experimenters: Jason Marshall  
 ClientType: Environmental Service Firm  
 ProjectNumber: Project #1  
 Substrates: Wood  
 PartType: Coupon  
 Contaminants: Coatings  
 Cleaning Methods:  
 Analytical Methods: Tactile, Visual  
 Purpose: To evaluate drying times for final set of floor finishes.

**Experimental Procedure:** The moisture content at the time of testing will influence results due to the hygroscopic nature of the base materials. Therefore, efforts must be taken to ensure that the moisture content and temperature remain constant during the evaluation period. Ideally, the sample floor should be kept at 65+/-1% relative humidity and 68+/-6 F.

During laboratory testing, conditions were slightly drier, 40% relative humidity, but the temperature was within the given temperature range ~70 F).

The flooring material supplied was Hardwood flooring made from Red Oak. The boards were 3/4" thick, 2 1/4" wide and cut into 8" sections. Some pieces of the flooring had to be sanded prior to making initial thickness readings to remove residual packing tape adhesive.

Three coupons were coated with a supplied floor finish according to the manufacturers' specifications. The finish was applied using a 1" Pure Bristle 1500 paint brush. To ensure consistent coating application, the finish was leveled off using a 10 mils Precision Gage & Tool Co Dow Film Caster. A total of three coats were used for each floor finish as this was common number of coating layers suggested by the various manufacturers. One product was a two part mixture (lacquer and hardener). Three coats were applied on set of boards. The second set of boards were first coated with primer and then followed by two coats of the two part mixture.

Each coating layer was allowed to dry for 2 hours prior to the application of the next coat. Completed coupons were allowed to sit for a minimum period of 24 hours before performance evaluations were conducted.

During the sample preparation with floor finish, drying times were monitored. Observations were made after the first coat at every 10 minutes until the finish was dry to the touch. The amount of drying completed during each time interval was estimated and recorded. Subsequent coats were analyzed in the same manner. Drying times for each finish were compared to each other.

**Results:** Observations made were based on the approximate area that looked and felt dry.

| Drying Times (minutes)          | Observations % Dry - visual |    |     |     |
|---------------------------------|-----------------------------|----|-----|-----|
| First Coat                      | 10                          | 20 | 30  | 40  |
| Kiilto Parquet Lacquer          | 60                          | 90 | 95  | 100 |
| kiilto Parquet Lacquer & Primer | 70                          | 95 | 100 |     |
| Second Coat                     | 10                          | 20 | 30  | 40  |
| Kiilto Parquet Lacquer          | 10                          | 40 | 85  | 100 |
| kiilto Parquet Lacquer & Primer | 10                          | 60 | 90  | 100 |
| Third Coat                      | 10                          | 20 | 30  | 40  |
| Kiilto Parquet Lacquer          | 10                          | 50 | 90  | 100 |
| kiilto Parquet Lacquer & Primer | 10                          | 60 | 95  | 100 |

**Summary:**

**Conclusion:** The first coat for the two sets started drying faster than the second and third coats. However, the overall drying time remained the same for second and third coats.

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