The Effect of Temperature & Humidity on the Performance of Floor Finish

The effects of humidity on the drying and performance of a floor finish are very important. High humidity retards the evaporation of water from the polish film, leaving the film soft, incompletely dry, and very scuffable. Floor finish films, like latex paints, dry (harden) from the surface inward towards the flooring. Thus a floor finish which appears to be dry and feels dry to touch can in fact be wet and soft down close to the floor. Adequate ventilation during and after applying a floor finish is very important. If the air in the area being finished is high in humidity, close the windows and run the air conditioner to lower the humidity. In the winter, turn up the heat to dry the air and also warm-up the substrate (flooring).

Problems caused by high humidity are:

1. Excessive scuffing and black marking from traffic until finish dries hard.
2. Poor detergent and water resistance due to the delay in finish cross-linking.
3. The threat and reality of “gluing” furniture to the floor.
4. Streaking and mop drag created by the coat being applied “biting” into preceding coats. (this phenomenon is caused by the applied coat re-emulsifying the previous coating that has not yet cure.)

Another important aspect in the drying of floor finish is the correlation between drying time and solids of the finish. Higher solids results in a thicker film developing on the floor and thus, a greater period of dry time being required between coats (sometimes in excess of one hour).