



UV-Cured Coatings

Levanna Restoration Lumber is fortunate to be located just minutes away from one of the most prestigious pre-finishing facilities in the country. This allows us to provide our customers with the very best factory-applied finishes available for our reclaimed wide plank wood flooring.

The first step in the pre-finishing process actually begins with the precise milling of a tiny micro bevel along each edge of our floor boards. This transition protects the coating rollers and is central for the silky smooth finish to blanket the entire surface.

At the pre-finishing plant, the process begins by hand-loading the flooring onto a straight-line conveyor that passes through a custom built 4-head wide belt sander where a typical grit sequence of 80, 100, 120, and 150 confirms a uniform board thickness. Immediately after sanding, a 2 head counter-rotating de-nibbing machine removes loose surface fibers that are deliberately lifted by the sander and creates a flooring surface with less grain raise as the coatings are applied. Then, a 2 head counter-rotating cleaning machine with a secondary blower eliminates the last remaining dust and debris.

The first coat, an epoxy-based tie coat, becomes the foundation for perfect adhesion between the flooring and subsequent layers of coating. A concentrated blast of ultra violet light provides a 90% gel cure followed by the reverse filling machine that fills any open pores. Another intense blast of U. V. light gel cures this layer to 90%, before receiving the ceramic layer.

The ceramic layer is an aluminum oxide-ceramic compound, a fluid solid, that when exposed to intense U. V. light, cures in one-ten thousandth of a second to a super hard material.

Next, is a wet-on-wet application: 2 back-to-back sealer coats bury the ceramic layer; and is then cured to 90%. A final sealer coat is applied and is cured to 75% in preparation for final sanding.

In this critical step, where most floor finishing lines use a de-nibbing machine to scuff the surface, this facility wisely employs another custom-built wide belt sander with a 320 grit silicon carbide abrasive to cut the surface level to a silky smoothness in preparation for top coating. The flooring continues through a second counter-rotating cleaning machine with a secondary blower to eliminate subsequent surface dust.

After a top coat of the aluminum oxide-ceramic compound is applied and fully cured, the flooring gets prepared and bundled for shipping. From initial sanding to final cure, the process takes less than 7 minutes.

The industry average for coating material per meter of flooring is 85 grams. This facility applies 105-110 grams per meter; giving us 25% more finish than industry average and giving our customers the longest lasting factory-applied finish available.

If you have any questions, feel free to call or e-mail Doug at:

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