Murphy Panel Finishing System

A shortage of skilled labor for production work is placing constraints on cabinet manufacturers and woodworking companies. The finishing process generally requires higher concentrations of labor and frequently constitutes a manufacturing bottleneck. Murphy Company finishing capabilities can relieve that bottleneck and help increase overall throughput.

Murphy Company can provide a wide array of finishing services. Offerings include PermaGuard® UV clear topcoat, opaque and transparent colors, grooving, and paper overlay.

The UV curing technology used on the Murphy finishing system is an environmentally conscious way to finish a product. UV curing contains no formaldehyde and no harmful volatile organic compounds. The overall finish cost for UV coated panels is well below traditionally applied coatings.

Please ask your Murphy salesperson for specific details about our services to improve your bottom line.

PANEL FINISHING SERVICES

- PermaGuard® UV Clear Topcoat
- Opaque Color (water-based solid color finish)
- Stain (applied to color veneer grain)
- Sealer (seal panel for further finishing)
- Primer (base for further color application)
- Toner (transparent tint to final wood coloring)
- Flood Coat
- Color Matching
- Paper/Vinyl Overlay & TFL Laminates

GREEN AND CERTIFIED

The Murphy finish coatings use 100% UV solids. They contain no formaldehyde and emit no volatile organic compounds in manufacture or in use. All coloring components are water-based and environmentally friendly. Our flatline finishing process creates virtually no waste.

Murphy Hardwood Plywood panels are CARB Phase II exempt and TSCA Title VI compliant. Our plant is one of the few hardwood panel producers in the country with HP-1, third party mill certification.

As part of the ongoing HP-1 certification process, pre-finished panels are tested for compliance with the ANSI/KCMA A161.1 – 2017 finish standards with regards to shrinkage and heat resistance, hot and cold check resistance and chemical resistance. Other testing is outlined on the back of this product sheet.

Murphy industry association memberships include DHA® (Decorative Hardwoods Association), KCMA® (Kitchen Cabinet Manufacturers Association), AWFS® (Association of Woodworking & Furnishings Suppliers), NBMDA® (North American Building Material Distribution Association), APA® (Engineered Wood Association) and NAWLA® (North American Wholesale Lumber Association).
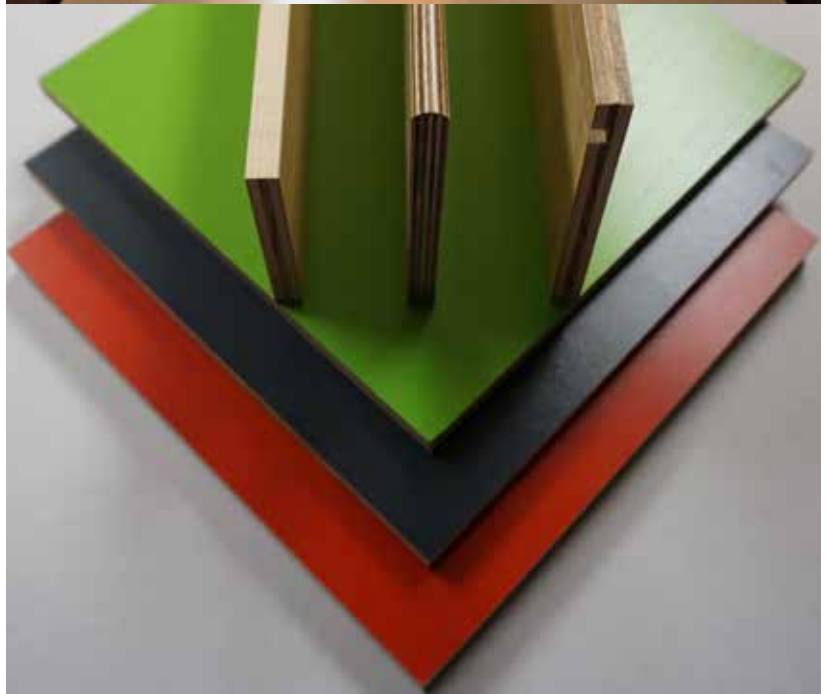
Finish Choices

PermaGuard® UV Topcoat
Our durable, clear finish, perfect for full panels, cabinets, vanity interiors, shelving, and drawers, is stain and chemical resistant. The UV curing process is more durable than catalyzed topcoats and is available in various sheens ranging from satin to high gloss.

The topcoat process includes application of a UV sealer and a double application of the top clear coat (two coats are applied instead of a single, thicker coat for a more durable finish).

Transparent and Solid Colors
Adding color to real wood can emphasize the grain and enhance its beauty. Murphy has the ability to apply transparent or solid colors to meet your specifications.

Sealer and Primer
Many manufacturers still wish to perform their own final finishing. However, Murphy can save them time, money and a time-consuming step with the application of primer or sealer to the panels.

> **Sealer:** A "first coat" sealer helps prevent blotches and provides a uniform final finish, even with water-borne systems.
> **Primer:** Receive your panels in a color-ready state for easy final finishing.

Color Matching

Murphy works with many customers to color-match new and existing finishes. If you have a color to match, Murphy works with the finish supplier to create the correct mix of finishing steps. Once the color-match recipe is in place, future orders can be finished and match-verified using our commercial spectrometer and software system.

From sample receipt to color approval, the first-time match process generally takes two weeks. Please ask your Murphy salesperson for additional details.

The Finishing Process

Prior to the panel coating process, they are finish sanded. The subsequent finish-line steps vary, depending on desired finish:

Clear UV Topcoat: Apply sanding sealer, buff panel, apply UV sealer, buff panel again, apply B-stage UV clear, and apply final UV clear topcoat.

Stain: Apply sanding sealer and tint (stain), buff panel, apply UV sealer, buff panel again, apply water-based toner, apply B-stage UV clear, and apply final UV clear topcoat.

Opaque Colors: Buff panel, apply UV tie coat, apply primer, apply 3 mil color coat, apply B-stage UV clear, and apply final UV clear topcoat.

Testing and Certifications

Sample panels are tested on a consistent basis for conformance to the ANSI/KCMA A161.1-2017 Section 9.0 Finish Tests. The specific sections are:

- 9.2 - Shrinkage and Heat Resistance
- 9.3 - Hot and Cold Check Resistance
- 9.4 - Chemical Resistance

Additional, ongoing testing includes:

- ASTM D 3359 (Crosshatch Tape Adhesion: 5B)
- ASTM D 5178 (Balance Beam Mar Resistance Test: 10Kg)
- ASTM D4060 (Taber Abrasion Test: 500 cycles, CS-17 1,000g)
- ASTM D2179 (Hoffman Scratch Test: 400g)
- MEK Rub: 200 Pass

The Murphy finishing system uses water-based products. The topcoat uses 100% UV solids. All finish components are environmentally friendly.