



POWDERS ARE CUSTOM FORMULATED TO MATCH COLOR, GLOSS, TEXTURES, AND PERFORMANCE SPECIFICATIONS.

# Go Green *and Live Healthy* WITH WOOD POWDER COATING

BY CRAIG MARTIN

**T**he use of wood powder coating is environmentally friendly, providing the ABC's of a healthy lifestyle. The powder coating process and finished coating has no VOC's or HAP's (hazardous air pollutants). Users of wood powder coated products can benefit by offering green conscious consumers a product that meets their needs to provide a healthy environment.

Wood powder coating provides new meaning to the phrase "making green bucks." Using powder-coated wood can help make money in two different ways:

- There may be state and/or federal financial incentives for complying with the Leadership in Energy and Environmental Design (LEED) Green Building Rating System is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings.
- Offering green and environmentally friendly products appeals to the growing consumer base of green-conscious buyers.

## NO VOC'S

Wood powder coating offers many healthy benefits when compared with liquid paint, laminate, melamine, and thermofoil surfaces. Powder coated wood has no VOC's (volatile organic compounds) that can negatively impact a healthy interior environment. VOC's found around the house in products such as paint, solvents, and wood preservatives, contribute to "sick building syndrome" because of their high vapor pressure. The Environmental Protection Agency (EPA) studies have found concentrations of VOCs in indoor air quality to be two to five times greater than in outdoor air, during certain activities indoor levels of VOC's may reach 1,000 times that of the outside air. Powder coated wood is free of dangerous chemicals even to the point that the raw powder can be disposed of in landfills without the need for any permits or concerns. At our BTM plant, we reclaim and reuse our powder since our automatic spray application system has a reclaim system.

High levels of VOC Exposure in indoor air can cause numerous problems and will vary widely depending on:

- The volume of air in the room/building;
- The rate at which the VOC is off-gassed;
- The building ventilation rate;
- Outdoor concentrations; and,
- Time spent in the effected environment.

## NO HAP'S

There are no HAP's involved in the powder coating of wood manufacturing process, unlike liquid finishing, which can contaminate the outdoor air quality and ozone levels.



CUSTOM SHAPE, COLOR AND TEXTURE WALL PANELS PROVIDE FOR A VERY CUSTOM LOOK AND ANTIMICROBIAL POWDERS ARE GREAT FOR A HEALTHY ENVIRONMENT WITH NO VOC'S AND NO ADDED FORMALDEHYDE BOARD.



POWDERCOATING OFFERS HIGH GLOSS, RICH COLORS.

The application of the powder is not the only green and environmentally friendly part of powder coated wood, since recently MDF board has been reformulated to be environmentally friendly. Recently MDF manufacturers like Sierra Pine carry SCS (Scientific Certification Systems) certified for their recovered and recycled fiber content. Sierra Pine's PermaCore brand has changed its resin from a urea-based formaldehyde to a no formaldehyde added resin called MDI (methylene-diphenyl-diisocyanate). According to Chris Leffel, vice president of Sierra Pine, "This MDF qualifies for one LEED point credit. In addition, this board meets California standards for CHPS (Certified Collaborative for High Performing Schools)."

"Sierra Pine is also FSC (Forest Stewardship Council) certified for sustainable management of forest land while using residuals from saw mill operations as being FSC which also is a positive in the effort for LEED points."

#### ANTIMICROBIAL POWDERS

DuPont offers an antimicrobial powder additive that will prevent the spread of bacteria on the surface. This powder is reputed to have a seven-plus year active life span and it is effective in removing 99.9 percent of surface bacteria. This powder can be added to almost every color imaginable.

Since this finish is seamless there are no crevices to hide and foster bacteria, and extremely easy to keep clean. Another benefit of this seamless finish is that it yields a more upscale appearance and the custom shaped profile edges can be configured to almost any shape imaginable.

#### POWDER COATED WOOD ADDRESSES GREEN BUILDING SUSTAINABILITY

As stated earlier, wood powder coating meets the ABC's of governmental financial incentives of LEED building as specified by the USGBC (U.S. Green Building Council). The Leadership in Energy and Environmental Design (LEED) Green Building Rating System is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

LEED provides a roadmap for measuring and documenting success for every building type and phase of a building lifecycle. Specific LEED programs include:

- 1 New Commercial Construction and Major Renovation projects
- 2 Existing Building Operations and Maintenance
- 3 Commercial Interiors projects
- 4 Core and Shell Development projects
- 5 Homes
- 6 Neighborhood Development
- 7 Guidelines for Multiple Buildings and On-Campus Building Projects
- 8 LEED for Schools
- 9 LEED for Retail

USGBC is also developing LEED for Healthcare, and LEED for Labs.

The LEED Rating System was created to transform the built environment to sustainability by providing the building industry with consistent, credible standards for what constitutes a green building.



ANTIMICROBIAL POWDERS CAN BE USED FOR HEALTH CARE, CHILD CARE AND A VARIETY OF OTHER APPLICATIONS.

## Powder Coated Wood Applications

This technology has a wide range of versatile applications, many of which are just now being developed. It is expected that over the next several years, powder coated wood may be the preferred finish used in a wide range of applications. Many of the photos in this article do not necessarily represent wood powder coated materials but rather illustrates possible applications. Listed below are a few of the market niches and applications for using powder coated wood:

#### CONSTRUCTION AND BUILDING MATERIALS

There are many product uses that are well suited for the durability that wood powder coating offers as compared to liquid paint, especially those products that have the potential to experience extreme abuse. Plus, the added benefit of using antimicrobial powders will provide continual protection against bacteria. Interior passage doors, wall panels are just a couple of great examples.



#### CABINETRY

Powder coated wood can be an excellent product for cabinet doors and drawer fronts. Wood powder coated components will not delaminate or peel. In addition, because it is moisture and stain resistant, this is a more durable finish than most other options. It is available in a variety of colors and stain finishes with a host of shapes and styles. In the bathroom, laundry room, garage, commercial buildings, etc. the moisture and stain resistance prove to be a great benefit.

#### COUNTERTOP APPLICATIONS

Bathroom vanity tops and serving islands are also great uses for this product. About the only application not recommended would be for kitchen counter tops since it can be vulnerable to knife cuts, although this problem exists with any type of laminate finish.

#### HEALTH CARE APPLICATIONS

Patient and waiting rooms in hospitals, doctor's offices and clinics, nursing homes and school nurse offices today are finding the features of this product undeniable. This



is a great product for many surfaces in this environment, such as the above-mentioned cabinetry and countertops, plus it works great with furniture, medical cabinets, laboratory surfaces, cafeteria tables, medical products, and a host of other applications limited only by the imagination.

#### **SCHOOL AND INSTITUTIONAL APPLICATIONS**

There are endless possibilities for this product in any market ranging from desk tops, computer work stations, laboratory tops, countertops, for upscale and color coordinated lockers and doors, and many other custom designed applications to fit each facility's specific need. Plus custom branding with school colors and logos can be designed.



THE SURFACE WORKS GREAT FOR COMPUTER MOUSE OPERATION, SO NO MOUSE PADS ARE REQUIRED.

#### **HOSPITALITY AND LODGING APPLICATIONS**

Powder coated wood is great for table tops, bed headboards, furniture, built-in cabinetry, bathroom surfaces and many other applications.

#### **OFFICE FURNITURE APPLICATIONS**

Office furniture manufacturer's are now offering powder coated wood components for desks and desk tops, computer work stations, boardroom components, writing tables, swivel chair arms with writing surfaces, office cube system components, cabinetry door and drawer fronts and many other custom applications.

#### **STORE FIXTURES AND DISPLAY APPLICATIONS**

Wood powder coated components can be embossed with logos or messages and use of custom color matching can aid in branding opportunities. Retailers love the shapes and designs that can be custom designed for specific applications including cutouts for wiring, custom foot prints to hold products, business card holders, etc.

#### **FURNITURE**

Powder coated wood is an excellent fit for ready to assemble furniture since there are no concerns with edge banding, there is more flexibility to design furniture that does not require



UNLIMITED CHOICE IN TRANSLUCENT STAIN COLORS THAT OFFER BEAUTIFUL WOOD TONES.

hardware or nuts/bolts for assembly. With the ability to use many fun and interesting shapes and colors this is a perfect fit for children's furniture creations, plus the antimicrobial powders provide for a healthy surface and durable finish. In addition, there are no health concerns with the powders used in wood powder coating so it is very "kid friendly."

Wood powder coating is also frequently used for TV and computer stands, tables, plus bases for furniture.

Powder coated wood offers a great look, with sound durability, and is very green friendly. Powder coated wood will help provide for a healthier, greener lifestyle and the opportunity to make a lot of green bucks.

**s&p**

*Craig Martin is president of BTD Wood Powder Coating, technology leader and manufacturer of powder coated wood components.*

[www.btdwoodpowdercoating.com](http://www.btdwoodpowdercoating.com)  
[cmartin@btdwoodpowdercoating.com](mailto:cmartin@btdwoodpowdercoating.com)



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