



ECO-FRIENDLY OPTIONS FROM PINNACLE

Emerald Finish by Pinnacle

Water based finishes are becoming more and more popular with professional users and consumers because of the multitude of advantages they afford: absence of toxic emissions and unpleasant odors: ease of application: versatility: exceptional aesthetic results and, last but not least, the excellent chemical/physical resistance of the coating. Indeed, Pinnacle's water-based transparent and pigmented coatings provide such high levels of chemical/physical performance that they can be compared favorably to traditional coatings, yet they contain only 3-7% VOCs (Volatile Organic Compounds) against the 55-75% found in solvent-based coatings. Water-based coatings, therefore, make it possible to respect the regulations on the reduction of emissions of solvents into the atmosphere, while guaranteeing the same high-quality results as solvent-based coatings.

This eco-friendly approach, which benefits those applying the coatings and the end users, is intended to facilitate the coating of cabinetry in the greenest possible way by reducing unpleasant solvent emissions as far as possible - both during application and during the drying out phase. Water-based coatings contain the minimum possible amount of noxious substances, thus guaranteeing that the environment remains protected even over the long term, during day-to-day use of the cabinetry by the customer. Emerald Finish is one of many finish options available from Pinnacle Cabinet Company.

Purebond.

Formaldehyde **Free** Plywood

Until recently nearly all interior-grade plywood panels were made with urea-formaldehyde (UF) resin. That reality has changed now that Columbia Forest Products (CFP) has made its transition to a new soy-based adhesive invented at Oregon State University (OSU). Soy-based adhesives have been in the works for a decade or more but until recently soy proteins could be used to replace only a portion of the more conventional adhesives. That changed when Dr. Kai-chang Li, associate professor at OSU, got inspired by the tenacity of mussels attached to rocks in ocean water and decided to investigate their secrets. He discovered that, by combining inexpensive soy protein with an amino acid, he could mimic the action of the mussels. Three patents and numerous trials later, Columbia is using the new binder.

UF-with its potentially unhealthy emissions of formaldehyde which was declared to be a "known" human carcinogen by the International Agency for Research on Cancer in 2004, may be on its way out. 11.3 billion pounds of formaldehyde were produced in the U.S. in 1998. Formaldehyde used in wood adhesives make up half of all the formaldehyde made. Commercialization of Dr. Li's invention was a joint effort among OSU, Columbia, and resin supplier Hercules, Inc. The binder itself is about 87% soy protein. The remaining 13% is a proprietary polymer, a petrochemical-based polyamide resin supplied by Hercules. "it's a water-based product. It's not flammable, not toxic, has a neutral PH- it's very benign," states Steve Pung, CFP Director of Technology. Pung adds, "Now there is nothing but water vapor that comes off when we cure the adhesive." The elimination of off-gassing will benefit both the end user of the product and to a greater degree the employees at Pinnacle that process these panels on a daily basis. The safety team at Pinnacle works regularly with MIOSHA and insurance industry risk management personnel to provide our employees a safe working environment. Air quality testing in our facility has found that the particulate levels are just 10 to 20% of the allowable levels as set by OSHA standards.

This new adhesive is trade named "Purebond" and it is a proprietary product of Columbia Forest Products through the arrangement between OSU, Hercules and CFP. To be sure that the Purebond adhesive is the binder for the plywood in any finished product it must be a Columbia product. Pinnacle is now offering this exciting new panel product as one of our wide range of options.