



PureBond.
HARDWOOD PLYWOOD

A REMARKABLE BREATH OF **FRESH THINKING** FOR OVER TWENTY YEARS!

Original, leading brand of formaldehyde-free decorative hardwood plywood. Since 2006, Columbia has manufactured **hundreds of millions of PureBond panel assemblies** with zero-added formaldehyde.

Columbia took a step further through organization of the PureBond Fabricator Network in the US and Canada. The PFN is a community of fabricators committed to offering a **formaldehyde-free alternative** in cabinet and case good construction with PureBond panel production.

PureBond is proven technology through **soy and PVA-based decorative panel assembly** that is cost competitive and widely available across North America.

Visit www.cfpwood.com to find a fabricator in your area.

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WWW.CFPWOOD.COM

FORMALDEHYDE-FREE.

When we say PureBond technology is “formaldehyde-free,” we’re describing our hardwood plywood panels which are comprised of **no-added urea formaldehyde components** and assembled with no-added urea-formaldehyde (UF) adhesives.

COST COMPETITIVE. HIGHER PERFORMANCE.

What really makes PureBond special is that it’s **cost-competitive with standard urea-formaldehyde (UF) adhesives**. No added formaldehyde, plus the same high-quality panel construction customers have come to expect from Columbia Forest Products makes it an easy switch.

INDEPENDENT, THIRD-PARTY ASSURANCE FOR GREEN BUILDING PROGRAM SUCCESS.

Columbia panels are certified as **CARB** and **TSCA Title VI** Compliant by a third party certifier, Capital Testing and meet Canada CANFER formaldehyde regulations. This certification is accepted by **USGBC LEED®** and other, related standards through the **Composite Wood Evaluation**.



Eastern US: Chatham
800-237-2428

Eastern US: Old Fort
800-438-6069

Western US & Canada
800-547-1791

Northeastern US & Canada
888-664-1964 • 1 888-525-1964

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PUREBOND'S STORY & LEGACY

In the early 2000's, Columbia enjoyed the fact that the design and architecture community valued North American hardwood in commercial and residential projects.

But these specifiers were beginning to seriously inquire about the **environmental impact** of the materials they selected for buildings where people live, worship, learn, and work... especially around the topic of indoor **air quality**.

To meet these emerging expectations, Columbia's Innovation Team sought cost-effective ways to eliminate formaldehyde from its hardwood plywood products - but it was meeting with little support from the traditional adhesive supply industry.

Meanwhile, a researcher at Oregon State University was enjoying a family picnic at the Oregon seashore. Dr. Kaichang Li noticed how the mussels were clinging tenaciously to rocks along the beach, despite the continuous bashing by saltwater waves. He became immediately curious and immersed himself in understanding how that worked. He eventually presented his findings about the unique protein mussels secrete which behave as adhesives, and how he was working to use soy flour to mimic this effect for industrial applications.

Li began a collaboration through Oregon State University and Columbia Forest Products to adapt his **innovative soy-based adhesive** for use in hardwood plywood manufacturing. In 2006, **Columbia Forest Products successfully replaced former formaldehyde-based adhesives** - which by then were being called out for their carcinogenic emissions - with their new soy-based assembly technology and called it **PureBond®**.

"Plywood is ubiquitous in our homes—in floors, ceilings, cabinets, and walls. Knowing that soy is being used as a healthier alternative to formaldehyde is significant," says Robert Petter, a soybean farmer from Arkansas and director on the United Soybean Board (USB).

Petter observed the use of the **EPA award-winning PureBond® technology** during a visit to Columbia Forest Products' plant in Old Fort, North Carolina.

Petter and others joined mill employees to celebrate the production of **150 million plywood panels** using PureBond®. If laid end-to-end, these panels would span the distance from the Earth to the moon!

"As farmers, we plant and harvest soy, but we often don't realize the significant impact of the products we help create," says Susan Watkins, a USB leader who farms in Virginia on land granted by the King of England.

At the Old Fort mill, about 29,000 pounds of soy flour from 794 bushels of soybeans are used daily to produce PureBond®. **This positive, industrial-level use of soy has driven success for many farmers in North America.**

PureBond® products are even more popular among fabricators and customers alike, according to Todd Vogelsinger, Columbia Forest Products' director of marketing. *"PureBond® formaldehyde-free technology continues to be a market differentiator for us, appealing to health-conscious woodworkers, DIY enthusiasts and their customers,"* he says.

Over the past 20 years, PureBond® has seen incredible success, being **quickly accepted by health-conscious designers and architects**. PureBond® has been used in numerous projects requiring FSC® or formaldehyde-free materials, like the [Jones Beach Energy & Nature Center](#) in New York, which focuses on the interconnectedness of energy and nature.

JONES BEACH ENERGY & NATURE CENTER



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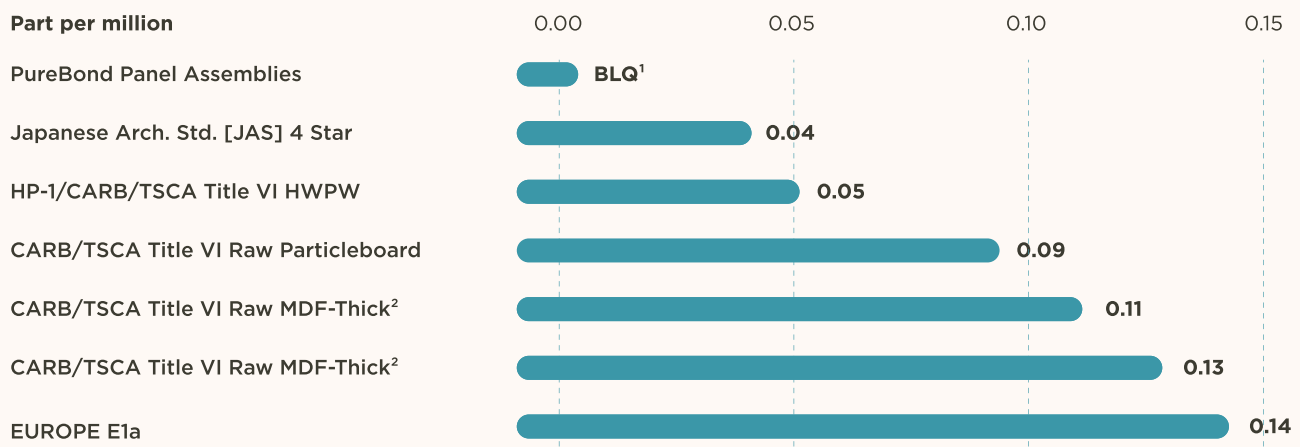
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PUREBOND FACTS

- As of today, Columbia has manufactured over **200 million panels** with PureBond formaldehyde-free hardwood plywood assembly technology.
- PureBond assembly is formaldehyde free with no added scavengers to mitigate urea formaldehyde hydrolysis and off gassing as there is **no added formaldehyde to start with!**
- PureBond panels can be specified as **FSC® MIX [FSC-C017500]** at time of order placement.
- PureBond panel assemblies are compliant with **USGBC®, LEED® Composite Wood Evaluation**. LEED® is the preeminent program for the design, construction, maintenance and operations of high-performance green buildings.
- TSCA Compliant, Red List Free PureBond also qualifies for International **Living Future Institute Living Building Challenge®** Materials Petal as well as use in buildings managed to Well® Building standards.

PURE BOND TEST RESULTS COMPARED TO EMISSION LIMITS



¹ Purebond Panels; VC and CC w/ NAF MDF and NAF panel adhesives have had an average emission test rating of 0.0033 ppm over 60 test reports over the past two years.

² HWPW and PB are tested in the E1333 large chamber at a 0.13 ft²/ft³ loading rate, and MDF is tested at 0.08 ft²/ft³, so not as much MDF surface is exposed during tests. If tested to same loading rate, MDF test results would be higher but may or may not exceed the standards thresholds here.



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