CUSTOMER FACT SHEET
ON THE NEW CALIFORNIA FORMALDEHYDE REGULATION

Q: What is the new California formaldehyde regulation?

A: In April 2007, the California Air Resources Board (CARB), a department of the California Environmental Protection Agency, voted to implement new limits for formaldehyde emitted from composite wood products. These new limits will be implemented in two phases starting January 1, 2009. When the final limits are fully in place in 2012, the regulation will establish the toughest production standard in the world for formaldehyde emissions from composite wood products.

The California regulation governs the formaldehyde in both raw composite wood panels and finished products sold or used in California. Both imported and domestic products are regulated and must be third–party certified and clearly labeled to indicate they meet California's requirements.

Q: What composite wood products are covered by the new regulation?

A: The regulation applies to hardwood plywood, particleboard, and medium density fiberboard (MDF) and all products (such as furniture, cabinets, flooring, store fixtures, mouldings and millwork, countertops, decorative household items, doors, etc.) made with those products.

Composite wood is a popular material for consumer products because of its design flexibility, structural properties, and inherent environmental benefits. In particular, particleboard and MDF are manufactured from recycled and recovered wood residuals and other by–products diverted from the solid waste stream, making them among the greenest building materials in the world.

Q: What is formaldehyde?

A: Formaldehyde is an important organic compound that exists naturally in food, the environment, and our bodies. It is biodegradable and is broken down through the energy of the sun, biological functions in the human body, and by organisms naturally found in soil and water. Formaldehyde's versatility has made it an essential ingredient in the manufacture of products ranging from household cleaners to vaccines.

Q: Why is formaldehyde used in composite wood products?

A: Formaldehyde's prevalence and reactive nature make it an ideal ingredient in adhesives, as it cross–links with other ingredients to form a strong, cost–effective bond. For decades, formaldehyde has been used to produce most of the adhesives used in composite wood products.

Q: Why is California regulating formaldehyde emissions from composite wood products?

A: CARB's mission is to ensure the best possible air quality for the citizens of California. To achieve that mission, CARB continuously monitors sources of air pollution in the state and acts to reduce emissions whenever possible. To that end, CARB has established formaldehyde emission limits for composite wood products at the lowest levels feasible with current technology.

Q: I've heard formaldehyde causes cancer. Will this new regulation reduce the cancer risk from formaldehyde?

A: Like many substances, formaldehyde could have negative health effects on humans at extremely high concentrations. The claim that formaldehyde causes cancer in humans, however, is based on laboratory experiments that placed rats in exposure situations no human being could ever tolerate and out-dated computerized risk models that do not take into account substantial new scientific evidence. As in most risk assessments, the estimated danger is a matter of the duration and intensity of the exposure—just as a thimble full of water poses little risk to anybody but one can easily drown in an ocean.

When reviewing the research for its decision, CARB chose to rely on its 1992 risk evaluation that used extremely conservative assumptions and showed an increased cancer risk from formaldehyde exposure. New risk assessment information used by the U.S. EPA, Health Canada, and other international bodies shows that there is virtually no risk of cancer from formaldehyde at the levels most people are exposed to over their lifetime. CARB chose not to evaluate this new scientific information that has been broadly accepted around the world.

Q: What about the composite wood products I'm using now?

A: Composite wood products have been used safely for more than 50 years. Most composite wood products emit formaldehyde well below the threshold detectable by humans. Further, when encapsulated with a decorative surface treatment or other finish, consumer products made with composite wood products typically emit at around the "background" formaldehyde level (around 0.03 ppm) naturally found in both indoor and outdoor air.

To put formaldehyde exposure from composite wood products in perspective, it is important to remember that formaldehyde exists naturally in low levels in the air we breathe, the water we drink, and the food we eat. CARB's own data show that the formaldehyde emitted by composite wood products accounts for less than 5% of all of the formaldehyde emitted into California air, and the World Health Organization and Health Canada have estimated that the average adult ingests 9 times more formaldehyde each day from food than they inhale from all airborne sources combined. The human body is able to easily and rapidly metabolize formaldehyde, however, so the low levels at which most people are exposed throughout their everyday lives present little risk to health.

Q: Do the new standards apply only to products sold in California?

A: Yes, the California regulation applies only to products offered for sale or use in California. However, a number of other U.S. states are already considering adopting the California regulation, and it will likely be difficult for companies to maintain separate product inventories and track where products go. Most companies will probably choose to offer California–compliant products throughout the domestic marketplace.

Comparison of Worldwide Formaldehyde Standards for Composites (using equivalent U.S. large chamber test values)						
Standard	European E1	Japanese F★★★	Japanese F★★★★	CPA EPP	CARB Phase I (2009)	CARB Phase II (2011)
Maximum Emission Level (ppm)	0.14	0.09*	0.05*	0.18 (PB) 0.21 (MDF)	0.18 (PB) 0.21 (MDF)	0.09 (PB) 0.11 (MDF)

*Standard applies only to structural building materials and built–in cabinets

Q: How does this new California standard compare to other composite wood products formaldehyde emission standards in the U.S. and around the world?

A: When fully implemented, the California regulation will be the world's toughest production standard for formaldehyde emissions from composite wood products. The emission limits set by California are comparable to or lower than the levels in other standards around the world (see chart). However, California's approach to certification and enforcement is far more rigorous than other worldwide standards. For example, the emission limits in the California regulation are maximum limits that 100% of the products must fall below, whereas other worldwide standards do not apply to all products and allow a certain percentage of the covered products to exceed the limits. Also, the California standard requires third–party certification of the composite wood panels to verify compliance, and CARB will enforce the standard through random product testing and a strict chain–of–custody requirement for products containing composite wood products.

Q: How will the North American composite panel industry ensure that products will meet the new California standard?

A: The North American composite panel industry has always been a world leader in the development of high quality, high value, environmentally friendly products. Through advances in adhesive technology, composite wood manufacturers have voluntarily reduced the formaldehyde emissions from their products by 80% over the last 30 years. In addition, many manufacturers are certified to meet the Composite Panel Association's Environmentally Preferable Product (EPP) requirements, which already meet the Phase I (2009) California emission limits.

This leadership will continue as industry develops products to meet or exceed the California standard. Many composite panel manufacturers voluntarily developed low–emitting and "no added formaldehyde" products long before CARB took up the issue, so there are already a wide variety of products available with reduced formaldehyde levels, as well as a growing number of non–formaldehyde alternatives.

The composite wood industry continues to work with adhesive manufacturers to develop additional high quality, cost effective alternate technologies to meet even the most stringent limits in the California regulation when they become effective. Industry is fully confident it will meet the demand for California–compliant products.

Q: What will I have to do to comply with the California regulation?

A: As a distributor, fabricator or retailer that uses and/or sells composite wood products, you will have to follow prescribed recordkeeping and labeling requirements, including being able to demonstrate that you are purchasing compliant panels certified by a CARB–approved third–party. In addition, CARB will require a product label and a statement of compliance on the bill of lading or invoice, and the chain–of–custody documentation must arrive unbroken at the final customer. The records of your composite panel purchases, or purchases of fabricated parts containing composite wood, must be maintained for two years. Distributors and retailers that do not alter the products they purchase can pass along correctly labeled products as received. CPA member companies will work with you to make sure you receive California–compliant board and have the appropriate procedures and documentation in place when the rule goes into effect in 2009.

Q: Will these new California–compliant products cost more?

A: It should come as no surprise that regulations like this that mandate product refinements often require costly changes in raw materials, processes and equipment.

Q: Where can I go to find out more about the new regulation?

A: For detailed information about the California formaldehyde regulation, visit CARB's website at http://www.arb.ca.gov/toxics/compwood/compwood.htm, contact the Composite Panel Association (CPA) at http://www.pbmdf.com, or call CPA toll–free at (866)–4Composites.