

ATCM: Reducing Formaldehyde Emissions from Composite Wood Products



What is CARB?

CARB stands for the California Air Resources Board, a "clean air agency" established by California's Legislature to attain and maintain healthy air quality as well as conduct research into the causes of and solutions to air pollution. On April 26, 2007, the CARB approved an Airborne Toxic Control Measure (ATCM) which aims at reducing formaldehyde emissions from composite wood products.

What is ATCM?

The ATCM issues new standard to govern formaldehyde emissions from composite wood products including hardwood plywood (HWPW), particleboard (PB), medium density fiberboard (MDF), thin medium density fiberboard, and also furniture and other finished products made with such composite wood products. The ATCM was approved on April 18, 2008, by the Office of Administrative Law. The regulation has been filed with the Secretary of State to be codified into Title 17 of the California Code of Regulations, and the formaldehyde emission standard is immediately effective.

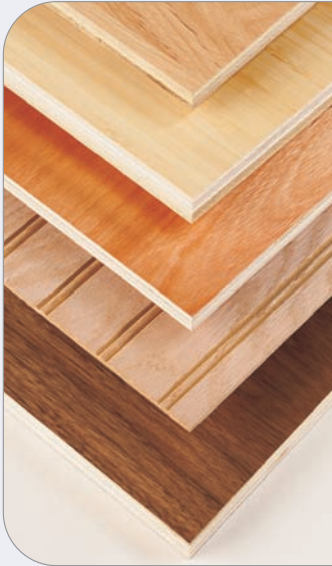
Why ATCM?

There were problems arising from trailers made from composite wood provided by the Federal Emergency Management Agency to residents displaced by the Iowa floods in 2008 in the United States. After moving into the trailers for a couple of months, occupants reported violent coughing, headaches, as well as asthma, bronchitis, and other health problems. Tests showed that in some trailers, levels of formaldehyde exceeded the limits recommended by the U.S. Environmental Protection Agency and American Lung Association. This associated publicity resulted in additional requirements on composite wood products.

What is Formaldehyde?

Formaldehyde can be emitted into the air from composite wood products. One of the possible sources of formaldehyde emission is from the urea-formaldehyde resin which is commonly used in permanent adhesives such as those used in composite wood products. Formaldehyde is classified as a human carcinogen and has been linked to nasal and lung cancer, with possible links to brain cancer and leukemia. Shortterm exposure to high levels of formaldehyde can be fatal. Long-term exposure to low levels of formaldehyde may cause respiratory difficulty, eczema, sensitization, as well as aggravating asthma symptoms.

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The Challenge

The ATCM places different roles and obligations to panel manufacturers, distributors, importers, fabricators, as well as retailers.

The ATCM regulation consists of two phases of emission standards (see table 1 below), and requires good documentation control on the production quality management and formaldehyde emission standard compliance. To ensure compliance with the ATCM, panel manufacturers must be "third party certified" using a third party certifier (TPC) such as Intertek approved by the CARB. This involves independent emission testing of panels and factory audit of the manufacturing processes for manufacturers that sell or supply products to California.

Finished goods manufactured before the phase 1 and 2 effective dates containing HWPW-VC, HWPW-CC, PB, MDF, or thin MDF may be sold, supplied, offered for sale for specified periods after the effective dates. The expiry dates are shown in Table 2.

The ATCM will be enforced by the CARB or local air district personnel. Enforcement activities include facility inspections, auditing of records, and securing samples for compliance testing.

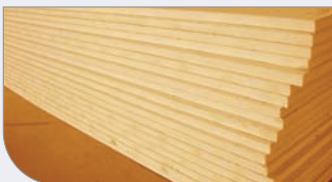
Table 1
Phase 1 and 2 Formaldehyde Emission Standards (ppm) Hardwood Plywood (HWPW), Particleboard (PB), and Medium Density Fiberboard (MDF)

Phases	Effective Date	HWPW-VC	HWPW-CC	PB	MDF	Thin MDF
Phase 1	1 Jan 2009	0.08 ppm		0.18 ppm	0.21 ppm	0.21 ppm
	1 Jul 2009		0.08 ppm			
Phase 2	1 Jan 2010	0.05 ppm				
	1 Jan 2011			0.09 ppm	0.11 ppm	
	1 Jan 2012					0.13 ppm
	1 Jul 2012		0.05 ppm			

Table 2
Sell-through Provisions for Finished Goods Containing Hardwood Plywood (HWPW), Particleboard (PB), and Medium Density Fiberboard (MDF)

Expiry Dates	HWPW-VC	HWPW-CC	PB/ MDF	Thin MDF
Last day for selling pre-Phase 1 non-complying composite wood products	31 Dec 2010	31 Dec 2010	31 Dec 2010	31 Dec 2010
Last day for selling Phase 1 compliant composite wood products	30 Jun 2011	31 Dec 2013	30 Jun 2012	30 Jun 2013

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Roles and Obligation

Panel Manufacturers	Distributors & Importers	Fabricators	Retailer
Testing on Formaldehyde Emission	Emission Standard Compliance	Emission Standard Compliance	Emission Standard Compliance
Factory Audit	Product labeling (if product modified)	Labeling on Products	Record and Documentation Keeping
Labeling Requirement	Record and Documentation Keeping	Record and Documentation Keeping	
Quality Assurance Requirements Compliance			
Record and Documentation Keeping			

Certification Process

To ensure compliance with the ATCM, panel manufacturers must be "third party certified" using a third party certifier (TPC) such as Intertek approved by the CARB. The certification process includes initial plant audit and quarterly plant audit.



Our Solution

Intertek is a leading independent third-party testing and inspection services provider and a CARB-approved Third Party Certifier (TPC) qualified to perform an extensive range of services including factory audits, and formaldehyde testing for manufacturers seeking ATCM compliance. Our global network and multiple CARB approved locations cater to every part of the world and provides convenience no matter where you are.

Intertek Services

1. Formaldehyde emission testing on wood panel and finished goods
2. Establishing Quality Control Limit
3. Qualifying factory personnel
4. Review on quality control manual
5. Factory Audit
6. Labeling review for manufacturers and fabricators Should you have any queries on the above service, please feel free to contact:

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