

Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products

Public Workshop

March 20, 2007

ARB's Annex 4 Auditorium
9480 Telstar Ave.
El Monte, California

California Environmental Protection Agency
 Air Resources Board

Meeting Agenda

- ATCM development process
- Overview of staff report
- Proposed regulation
- Overview of enforcement
- Open session

California Environmental Protection Agency
 Air Resources Board

ATCM Development Process

- Sept. 2001 - stakeholder meeting to announce plans to evaluate composite wood products
- Since 2001 - numerous stakeholder meetings and public workshops; evaluated manufacturing and resin technologies
- Initial draft ATCM - May 2006; revised June 2006 and October 2006
- March 9, 2007 - proposed ATCM and Staff Report were released for a 45-day public comment period
- April 26, 2007 - Air Resources Board public hearing to consider adoption of proposed ATCM

Overview of Staff Report

- Ch. 1 - Introduction
- Ch. 2 - Public outreach
- Ch. 3 - Need for regulation of formaldehyde
- Ch. 4 - Manufacturing of composite wood products
- Ch. 5 - Best Available Control Technology
- Ch. 6 - Proposed ATCM
- Ch. 7 - Health impacts of proposed ATCM
- Ch. 8 - Economic impacts of proposed ATCM
- Ch. 9 - Environmental impacts of proposed ATCM

Proposed Regulation

- Purpose: the ATCM will reduce formaldehyde emissions from composite wood products and finished goods that contain these products
- “Composite wood products” includes hardwood plywood, particleboard, and medium density fiberboard
- Definition excludes: hardboard, structural plywood, structural panels, structural composite lumber, oriented strand board, glued laminated timber, prefabricated wood I-joists, composite wood used in vehicles, military specified plywood
- Regulation affects products sold, offered for sale, supplied, used, or manufactured for sale in California

California Environmental Protection Agency
Air Resources Board

Applicability



California Environmental Protection Agency
Air Resources Board

Exemptions

- Non-California composite wood products or finished goods
- Hardwood plywood and particleboard installed in manufactured homes subject to HUD regulations
- Windows that contain less than 5% by volume of composite wood products in relation to total volume of finished window product

Proposed Phase 1 and Phase 2 Emission Standards

(parts per million, ppm)

Effective Date	HWPW-VC	HWPW-CC	PB	MDF	Thin MDF
1-1-2009	P1: 0.08		P1: 0.18	P1: 0.21	P1: 0.21
7-1-2009		P1: 0.08			
1-1-2011	P2: 0.05		P2: 0.09	P2: 0.11	
1-1-2012					P2: 0.13
7-1-2012		P2: 0.05			

Requirements for Manufacturers

- Compliance with applicable emission standards
- Quality assurance (QA) testing
- Validation by ARB-approved third party certifier
- Manufacturers using no-added formaldehyde based resins may avoid requirements for QA testing and third party certification
- Product labeling
- Statement of compliance
- Recordkeeping
- Facility inspections

Third Party Certifiers

- Must be approved and registered by ARB
- Verify that manufacturers comply with quality assurance testing requirements to validate compliance with emission standards
- Provide independent audits/inspections
- Maintain records
- Provide annual report to ARB on manufacturers certified in prior calendar year

Requirements for Distributors/Importers

- Must take “reasonable prudent precautions” to ensure that products being distributed/imported comply with applicable emission standards
- Must keep records to document precautions taken
- Subject to fabricator labeling requirements if products are modified
- Statement of compliance
- Facility inspections

Requirements for Fabricators

- Must take “reasonable prudent precautions” to ensure that products being used to make finished goods for California comply with applicable emission standards
- Includes architectural plywood fabricators
- Must keep records to document precautions taken
- Labeling of finished goods
- Statement of compliance
- Facility inspections

Requirements for Retailers

- Must take “reasonable prudent precautions” to ensure that products being sold, supplied, or offered for sale comply with applicable emission standards
- Must keep records to document precautions taken
- Facility inspections

Test Methods

- Proposed regulation specifies ASTM E 1333-96 as the test method for determining compliance with applicable emission standards
- Proposed regulation also includes ASTM D 6007-02 as the test method to be used by ARB or local air districts for enforcement purposes for:
 - Raw panels
 - Finished goods
 - Raw or one-side laminated
 - Two-side laminated
- Alternative methods are allowed

Sell-through Provisions

- Regulation includes sell-through provisions for products entering commerce immediately prior to effective dates of applicable emission standards
- Raw panel and finished good sell-through provisions included for:
 - Manufacturers
 - Distributors
 - Importers
 - Fabricators
 - Retailers

Overview of Enforcement

- Facility inspections may include:
 - Review of records regarding statements of complying products
 - Review of manufacturer's quality assurance testing data and third party certifier's testing data
 - Obtaining samples for testing at ARB's certified small chamber
- Other enforcement activities:
 - Joint inspections with U.S. EPA, U.S. Customs, and local air districts
 - Follow-up on complaint hotline
 - ARB enforcement investigations

Open Session

Closing Remarks

- Initial Statement of Reasons and Proposed ATCM available at:
<http://www.arb.ca.gov/regact/regact07.htm>
- For more information, please contact:
Brent Takemoto, Ph.D., Staff Air Pollution Specialist
(916) 327-5615 or btakemot@arb.ca.gov
- Thank you for your participation!