

California's Proposed Composite Wood ATCM



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California Health & Safety Code Requirements

- § 39657 - Requires ARB to identify toxic air contaminants (TACs); identify any minimum threshold levels
- § 39658 - Requires ARB to develop Airborne Toxic Control Measures (ATCMs)
- § 39666 - For compounds with no safe threshold level, the HSC requires control measures to be based on Best Available Control Technology, or more effective controls in consideration of costs and risk



Why did the ARB Target Composite Wood Products?

- Formaldehyde was identified as a TAC in 1992, with no safe threshold for exposure
- Composite wood products are made from urea-formaldehyde resin systems which degrade over time
- Significant personal exposure to emissions of formaldehyde from composite wood products
 - Outdoor - lumberyards, new home construction/remodeling, through open windows and doors, and home ventilation systems
 - Indoor – composite wood products
- Other California sources of formaldehyde being addressed by volatile organic compound controls
 - e.g. motor vehicles & consumer products



International Standards for Composite Wood Panels



- United States

- 1985 HUD standards; voluntary
- New ASTM/ANSI specifications under review

- Europe

- E1 standards for plywood and particleboard are about half of the HUD standards

- Japan (F** - F****)

- F*** standard is stringent, technology-forcing for some products
- F**** standard represents de minimis levels



California's Rule Development Process

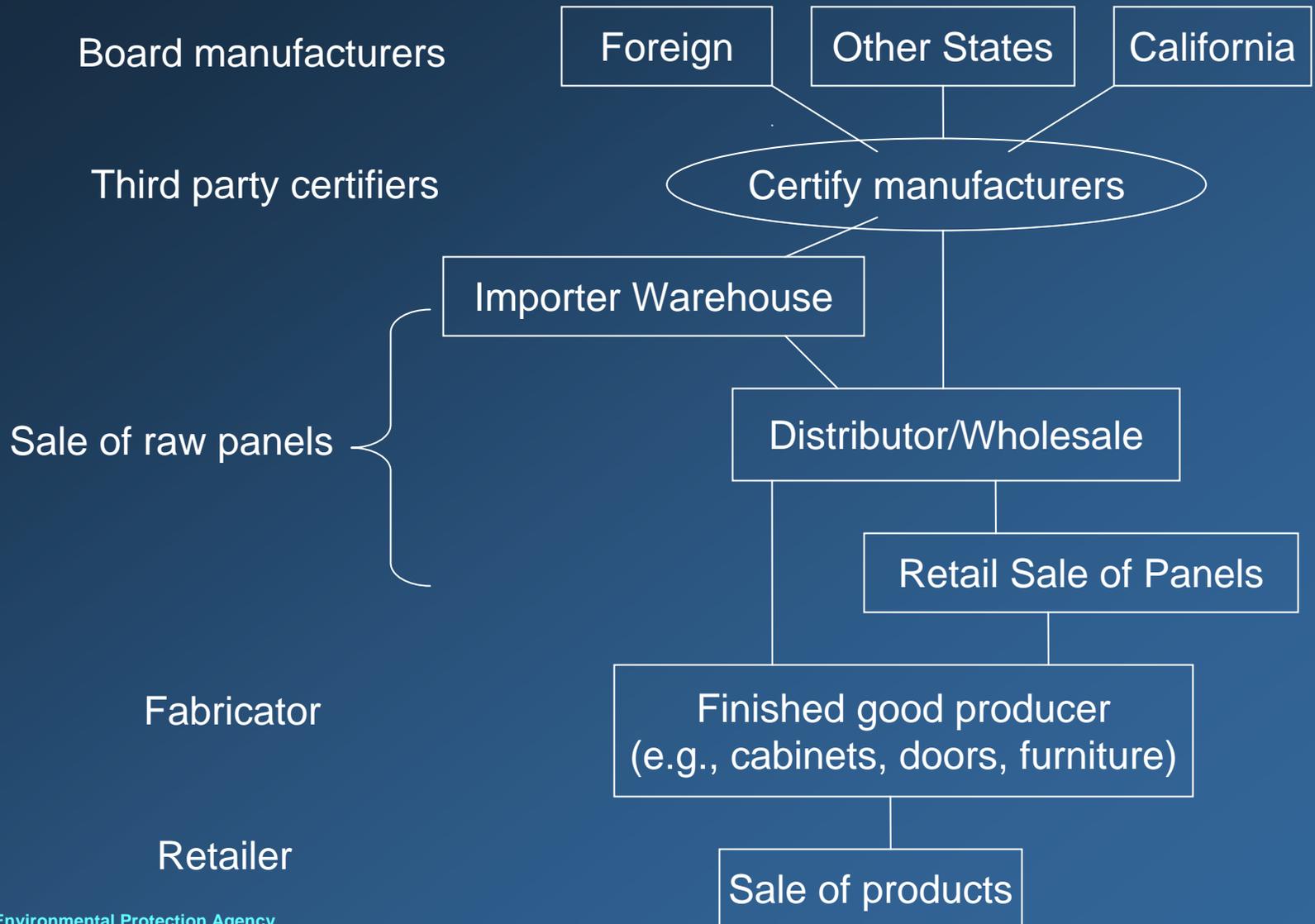
- Sept. 2001 - stakeholder meeting to announce plans to evaluate composite wood products
- Since 2001 - numerous stakeholder meetings and public workshops; evaluated manufacturing and resin technologies
- Initial draft ATCM - May 2006; revised June 2006 and October 2006
- March 9, 2007 - proposed ATCM 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



Proposed ATCM

- Proposed ATCM affects products sold, offered for sale, supplied, used, or manufactured for sale in California
- Applies to particleboard, medium density fiberboard and hardwood plywood
 - Raw board manufacturing
 - Finished products made from raw boards
- Formaldehyde performance standards
 - Phase 1- Level similar to E1 std.
 - Phase 2- Technology forcing; similar to Japan F*** stds.
- Enforcement
 - Manufacturers- third party certification to ensure compliance
 - Statement of compliance
 - Product testing

Proposed ATCM Applicability



Proposed Emission Standards *

	HUD Std.	Phase 1 (ppm) Effective Date: 2009	Phase 2 (ppm) Effective Date: 2011-2012
Particleboard	0.30	0.18	0.09
MDF	None	0.21	0.11
Thin MDF (<8mm)	None	0.21	0.13
Hardwood Plywood:			
- Veneer Core	0.20	0.08	0.05
- Composite Core	None	0.08	0.05

* Based on ASTM E1333-96



Requirements for Manufacturers

- Compliance with emission standards via ARB-approved third party certifier
- Quality assurance (QA) testing
- Manufacturers using no-added formaldehyde based resins can avoid the need for third party certification
- Product labeling
- Statement of compliance; third party certifier ID
- Recordkeeping
- Facility inspections



Requirements for 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 also 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 (5 mos. raw boards; 18 mos. finished goods)
 - Fabricators
 - Retailers



Overview of Enforcement

- Facility inspections may include:
 - Review of records regarding statements of complying products
 - Review of documentation showing prudent precautions
 - Obtaining samples for testing at ARB's certified small chamber
- Other ARB enforcement activities:
 - Joint inspections with U.S. EPA, U.S. Customs, and local air districts
 - Follow-up on complaint hotline
 - Enforcement investigations

Benefits of the Proposed ATCM

- Reduce potential formaldehyde emissions
 - i.e. effective pollution prevention
- Achieves reductions in indoor settings where people spend most time
- Phase 1 stds. reduce composite wood emissions by 180 tons per year (-20%); Phase 2 stds. reduce emissions by 500 tons per year (-58%)
- Phase 2 stds. reduce childhood (9 yr.) cancer cases by up to 26 cases (-41%) and lifetime (70 yr.) cancer cases by up to 97 cases (-42%)



Cost of the Proposed ATCM

- Manufactures need to be third party certified
- Importers may need to upgrade inventory control systems; potentially maintain dual inventories
- Incremental mfg. cost is less than 7% for Phase 1 stds.
- Incremental mfg. cost is \$3 to \$6 per HWPW, PB and MDF panel for Phase 2 stds.
- Incremental construction cost of 2000 square foot home is about \$400
 - For median priced home at \$575K, cost increase is 0.07%

Thank You for Your Interest!

- For more information:

- Visit our program website-

- <http://www.arb.ca.gov/toxics/compwood/compwood.htm>

- Contact us-

- Jim Aguila, Manager

- (916) 322-8283 or jaquila@arb.ca.gov

- To obtain the Staff Report and Proposed Regulation, and to submit comments:

- Visit our legal office website-

- <http://www.arb.ca.gov/regact/regact07.htm>

