

Airborne Toxic Control Measure for Composite Wood Products

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CAPCOA Enforcement Managers Fall Conference
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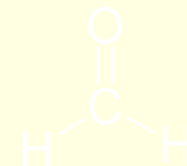




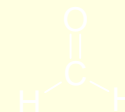
California Health & Safety Code Requirements

- **§ 39657 - Requires ARB to identify toxic air contaminants; identify minimum threshold levels**
- **§ 39658 - Requires ARB to develop Airborne Toxic Control Measures (ATCMs)**
- **§ 39666 - For compounds with no 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 is Formaldehyde a Concern?



- **ARB Identified as TAC in 1992 with no safe threshold exposure level**
 - nasopharyngeal cancer
 - acute and chronic effects- eye, nose, respiratory irritant
- **SRP Identified as a Tier 2 compound under SB 25 evaluation**
 - Children's Environmental Health Protection Act
- **Formaldehyde is both an indoor and outdoor health risk**
 - 4% of CA classrooms above OEHHA's interim 8-hr REL (27 ppb)
 - 80% of ambient levels are photochemically derived
 - CA average concentration above OEHHA chronic REL (3 µg/m³)
 - Avg. ambient levels result in 18 excess cancers per million



Why is ARB Targeting Composite Wood Products?

- Composite wood products made from urea-formaldehyde resin systems
- Formaldehyde emitted outdoors
 - truck/rail/ship transportation, lumberyards, new home construction/remodeling, through open windows and doors, and home ventilation systems
- Significant source of personal formaldehyde exposure
- Other CA sources being addressed by volatile organic compound controls
 - e.g., motor vehicles & consumer products

Air Resources Board Action

at April 26th Hearing

- Board approved ATCM (7-0 vote)
- 15-day Changes
 - Ultra low-emitting formaldehyde (ULEF)
 - Architectural plywood
 - Other clarifications
- Directed staff to report back on enforcement program update for Board in 2008

Approved ATCM

- Applies to particleboard, medium density fiberboard and hardwood plywood
 - Raw boards
 - Finished products
- Formaldehyde Emission Performance Standards
 - **Phase 1** - Provide “Cap”; Level similar to E1 standard
 - **Phase 2** - Technology forcing; similar to Japan F*** standard
- Applies to raw board manufacturers, fabricators, distributors, importers, retailers

Approved ATCM

Enforcement Program

- Third party certification to ensure raw board compliance
- Alternate compliance option for “no-added formaldehyde resins” (NAFs)
- Chain-of-Custody
- Labeling
- Facility inspection
- Record retention
- Lab verification procedures

Approved ATCM Standards*

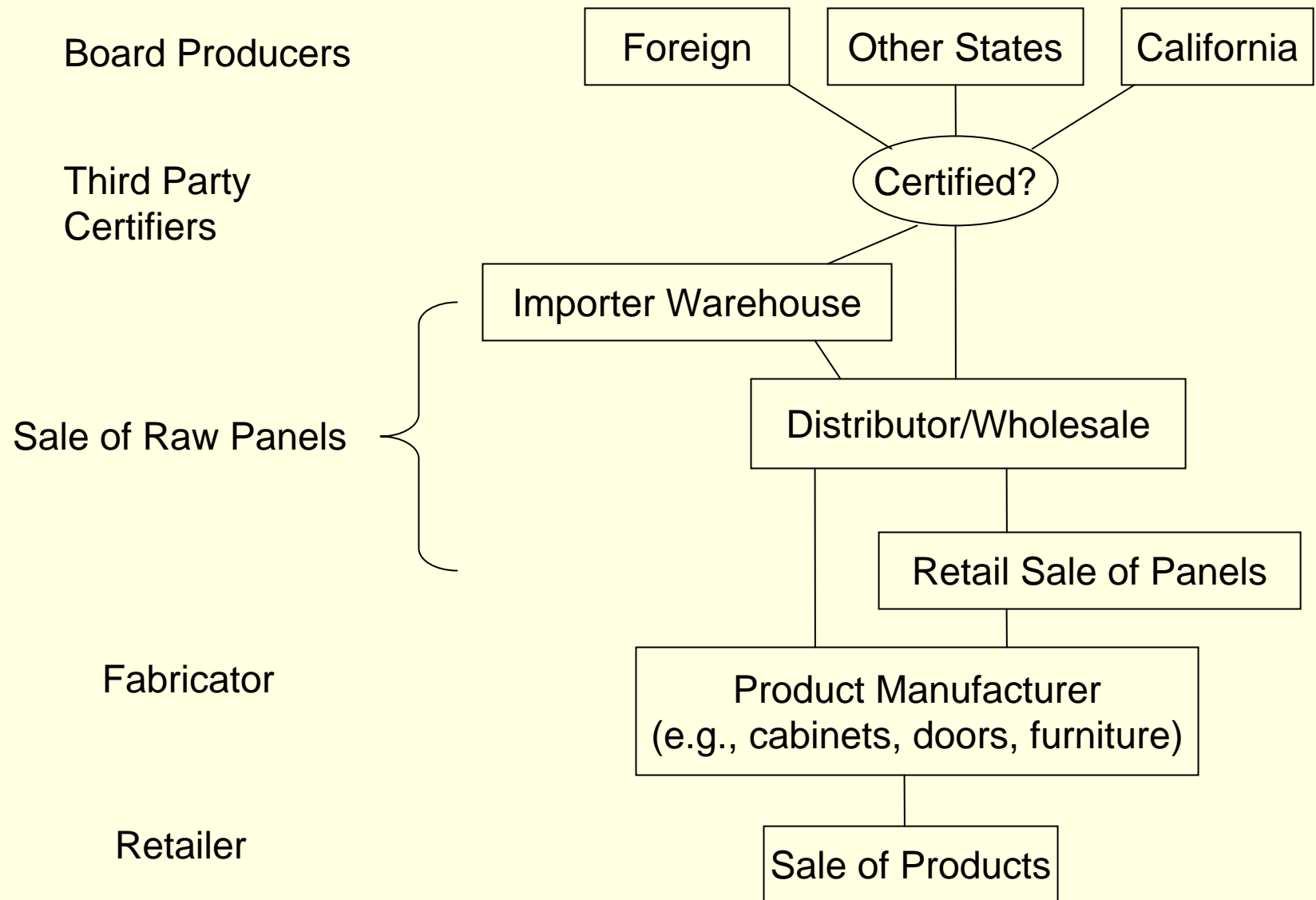
| Wood Product | HUD Std. (ppm) | Phase 1 (ppm) Effective Date: 2009 | Phase 2 (ppm) Effective Date: 2010-2012 |
|-------------------------------------|-------------------|--|---|
| Particleboard | 0.30 | 0.18 | 0.09 |
| Medium Density Fiberboard (>8mm) | None | 0.21 | 0.11 |
| - Thin MDF (<8mm) | None | 0.21 | 0.13 |
| Hardwood Plywood: | | | |
| - Veneer Core | 0.20 | 0.08 | 0.05 |
| - Composite Core | None | 0.08 | 0.05 |

Benefits of the Proposed ATCM

- Reduce potential formaldehyde emissions
 - i.e. effective pollution prevention
- Achieves reduction in indoor settings where people spend most time
- Reduces composite wood emissions by 30% in Phase 1 and 80% in Phase 2
- Reduces overall exposure by 15% (Phase1) to 40% (Phase2)
- Reduces cancer cases by
 - 9 to 26 per million for children (9 year exposure)
 - 35 to 97 per million for adults (70 year exposure)

Points for Enforcement

Flow of Commerce



Composite Wood ATCM Enforcement

Inspection Approach

- Records audit
- Chain of custody documentation audit
- Review of third party certification emissions data
- Raw panel sampling and testing at ARB's certified small chamber under ASTM 6007
- Finished good documentation and labeling audits
- Use finished product test method (under development) to test components used
- If warranted, ARB enforcement investigation

Composite Wood ATCM Enforcement

Other Inspection Approaches

- Enforcement under ARB's program on ports
- Joint enforcement activities with U.S. EPA, U.S. Customs and local air pollution control districts
- Follow up on complaint hotline

Current ARB Enforcement Activities

- Ongoing coordination between ARB enforcement and laboratory
- Begin construction of small chamber for ARB raw panel testing
- DHS coordination
 - Chamber study contract
 - Develop testing protocols
- Initiate industry coordination for finished products test method development
- Evaluation of chain of custody requirements
- Conference participation for enforcement outreach

Future Work on ATCM Enforcement Program

- Ongoing updates for CAPCOA Enforcement Managers
- Develop third party certification application and approval process
- Continual outreach for international manufacturers, fabricators, and importers
- Round robin testing – ARB small chamber
- Evaluate field and laboratory emission cell (FLEC) for enforcement purposes
- Continue development of finished product test method

APCD/AQMD Involvement

- Comments on 15 day changes
- Affected businesses
 - Composite wood panel mills, furniture manufacturers, cabinet shops, retail stores, warehouses, distribution centers
- Potential enforcement activities
 - Labeling and records audits for fabricator facilities, production mills, distribution points, and retail stores
 - Sample procurement

CWP ATCM Schedule

2007

4th Qtr.

- Submit ATCM rulemaking file to OAL
- CDPH chamber studies
- Release modified regulation to public (Mid/late Nov)
- ARB small to large chamber correlation
- Develop review criteria for TPC's and NAF's
- FLEC evaluation

2008

1st Qtr.

- ATCM codified into CCR
- Review first TPC and NAF applications
- Small chamber round robin testing

2nd/3rd Qtr.

- ARB status report to Board
- Finalize lab protocol for enforcement sampling



For Latest ATCM Text and More Information:



Contact the Substance Evaluation
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Visit our website-

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

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issues please join our CARBIS **List Serve** through our website.