

California's Formaldehyde Regulation – Fabricator Requirements for Finished Goods

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Air Resources Board

Overview

- Implementation status
- Proposed regulatory amendments
- Status of U.S. EPA's regulation
- Fabricator requirements in ATCM
- Status of CARB enforcement
- Emissions testing of finished goods
- Questions



Implementation Status

- CARB began implementation of Composite Wood Products Airborne Toxic Control Measure (ATCM) in 2009
- Reduces formaldehyde emissions from particleboard (PB), hardwood plywood (HWPW), & medium density fiberboard (MDF)
- Phase 2 emission standards currently in effect
 - Range from 0.05 ppm for HWPW to 0.13 ppm for thin MDF
- Applies to products sold, supplied, used, imported for sale, or manufactured for sale in California

Implementation Status

continued

- Requires finished goods to be made from compliant HWPW, PB, and MDF panels
 - i.e., flooring, furniture, cabinets, etc.
- Industry sectors affected by ATCM include:
 - Panel manufacturers
 - Fabricators of finished goods
 - Distributors, importers, and retailers of panels & finished goods
- KCMA has been and continues to be a key industry stakeholder

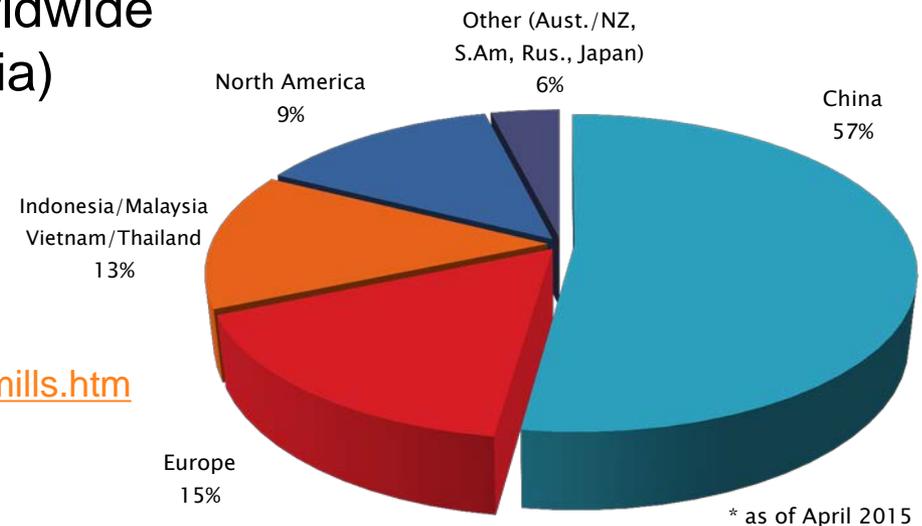
Implementation Status

continued

- Third Party Certification (TPC) Program
 - Panel manufacturers must be third party certified by CARB-approved certifiers
 - TPCs provide two main services:
 - Process verification & emissions testing
 - 40 CARB-approved TPCs worldwide (North America, Europe, & Asia)
 - About 900 certified mills
 - CARB website featuring certified mills:

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

Certified Mills Worldwide*



Implementation Status

continued

- NAF/ULEF Program
 - ATCM allows TPC exemption for manufacturers using no-added formaldehyde (NAF) or ultra-low-emitting formaldehyde (ULEF) resin systems
 - About 200 CARB-approved NAF and ULEF mills worldwide

Proposed Regulatory Amendments

Objectives

- Clarify requirements and applicability
- Align ATCM with proposed U.S. EPA regulations to extent practicable
 - Numerous discussions with U.S. EPA staff
- Explore ways to better ensure compliance of imported products

Proposed Amendments

continued

- Summary of proposed amendments
 - Panel manufacturers
 - Notify customers regarding non-complying panels
 - Third party certifiers of panel manufacturers
 - Clarify and tighten requirements
 - Distributors/retailers of panels
 - Labeling of partial bundles of panels
 - Fabricators
 - Additional requirements for laminated products

Proposed Amendments

continued

- Laminated products – current ATCM approach
 - Applies to laminated products made by fabricators
 - Laminates consisting of wood veneer or synthetic material
 - Requires use of certified platform material
 - Testing revealed opportunities to reduce emissions

Proposed Amendments

continued

- **Proposal for laminated products**
 - Establish new 0.13 ppm formaldehyde emission standard for unfinished laminated products
 - Standard would apply to laminated products consisting of unfinished wood veneer affixed to certified platform
 - Synthetic laminated products still need certified platform
 - No routine emissions testing or third party certification required
 - Benefit: achieves additional emission reductions beyond current ATCM by ensuring laminated products do not emit more than certified platform

Proposed Amendments

Next steps

- 5th public workshop on proposed amendments
 - Targeting June 2015 in Sacramento
- Present to CARB's Board for consideration in late 2015 or early 2016
 - Timing dependent on when U.S. EPA regulations are finalized

Status of U.S. EPA's Regulation

- U.S. EPA regulation based on CARB's emission standards
- Comment period on draft regulation in 2013
- U.S. EPA's goal is to finalize regulation by late 2015 or early 2016
- Regulation will become effective one year after published in Federal Register

Fabricator Requirements in ATCM

- Use certified composite wood material to make finished goods
- Obtain statement of compliance from suppliers
- Keep records
- Label finished goods or boxes
- Provide statement of compliance on invoice or bill of lading to customers

Fabricator Requirements

continued

- Suggested steps when importing components & composite wood material
 - Verify suppliers are providing certified composite wood material from panel manufacturers on ARB's list of certified mills
 - Verify that certified panel manufacturers are selling material to your suppliers

Status of CARB Enforcement

- Inspections conducted at panel retailers, distributors, & retailers of finished goods
- Products inspected for compliance with labeling requirements
- Documentation reviewed regarding statement of compliance
- Samples collected for emissions testing
- Several enforcement investigations underway

Emissions Testing of Finished Goods

- Purpose is to determine if composite wood material in finished good complies with emission standards as part of enforcement
- Finished good sample preparation/ deconstruction standard operating procedures (SOP)
- Emissions testing using CARB's small chamber test method (ASTM D6007)

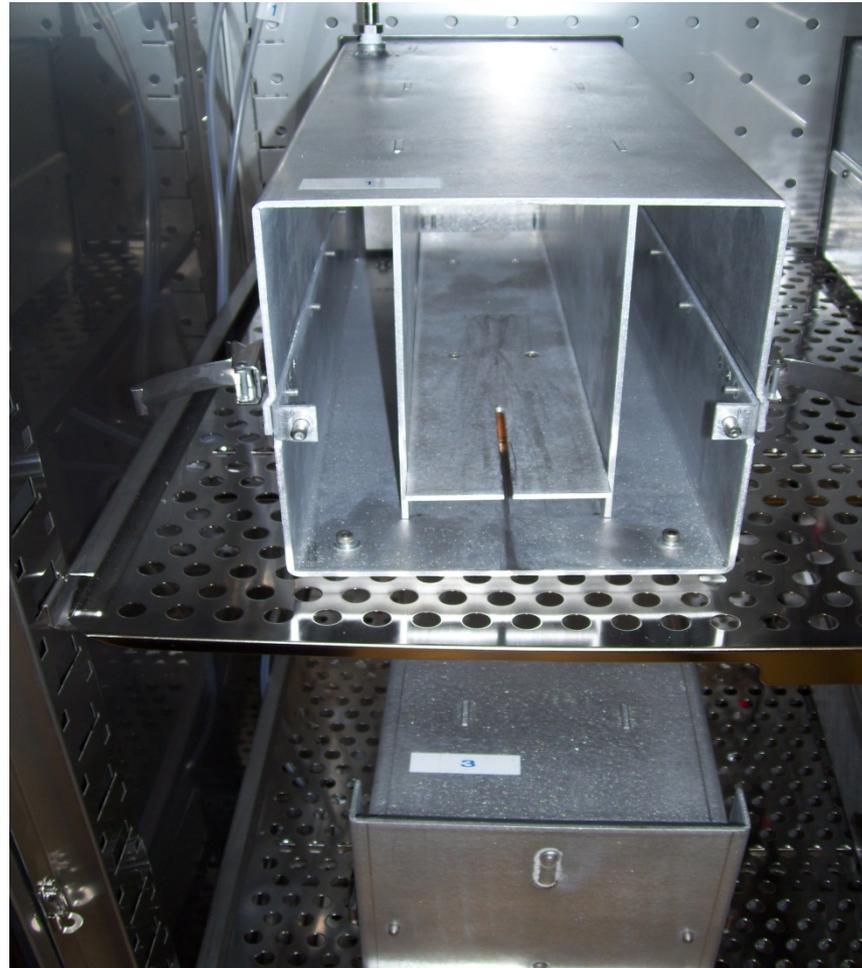
Emissions Testing of Finished Goods

Sample preparation – sanding off laminate



Emissions Testing of Finished Goods

CARB's small testing chamber



Emissions Testing of Finished Goods

continued

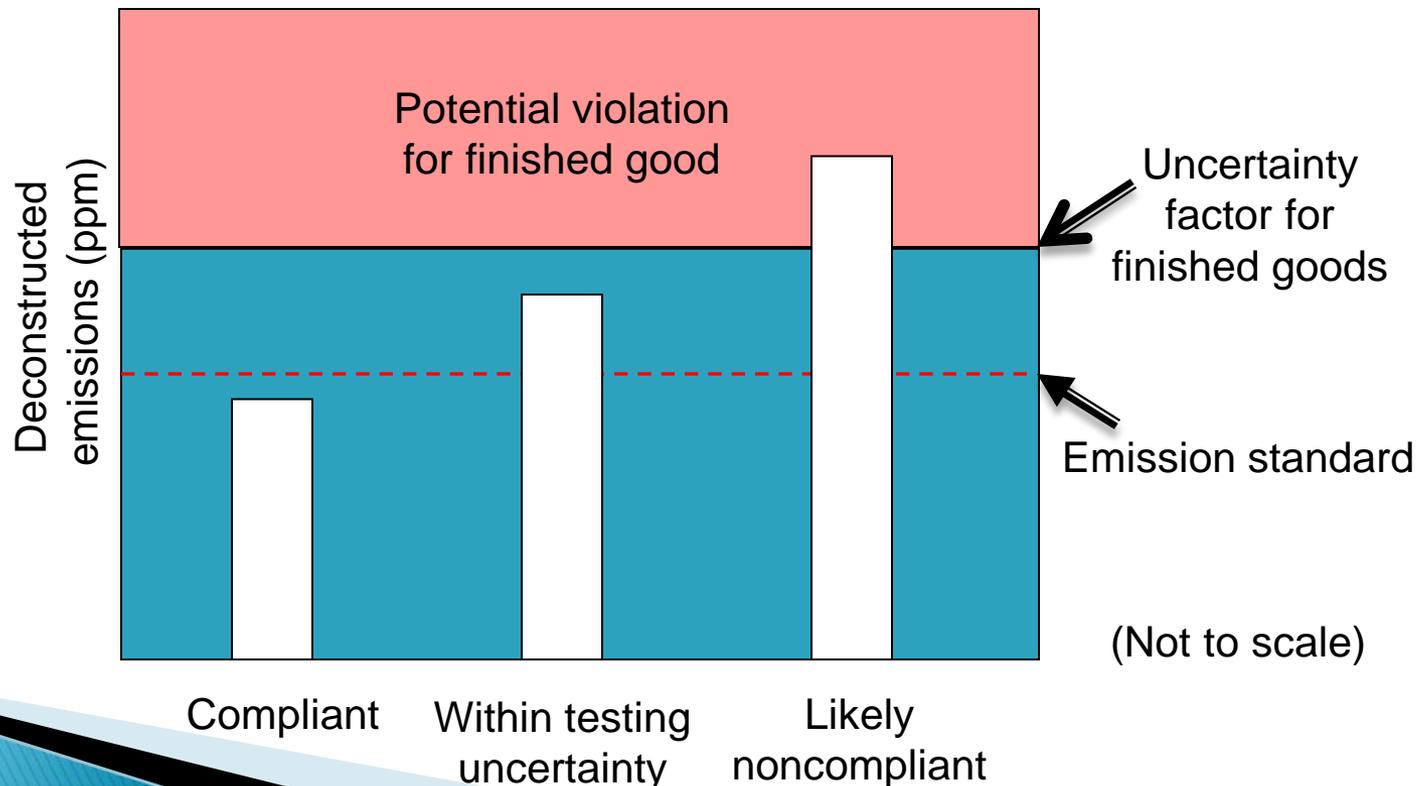
- Extensive testing conducted to develop sample preparation procedures
 - Procedures finalized in 2013
 - Posted to CARB's composite wood products webpage
- CARB accounts for uncertainty caused by sample preparation when interpreting test results

Emissions Testing of Finished Goods

Interpreting test results

Uncertainty factor accounts for variation in:

- Sample preparation/deconstruction of finished goods
- Chamber test method



Questions



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