

Complying with California's Formaldehyde Regulation

**World of Wood Convention
International Wood Products Association
San Francisco, California**

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Air Resources Board

Overview

- Background
- Summary of CARB regulation
- Requirements for industry sectors
- Efforts to harmonize with U.S. EPA regulation
- Status of CARB enforcement
- Emissions testing
- Feedback from industry stakeholders
- Questions



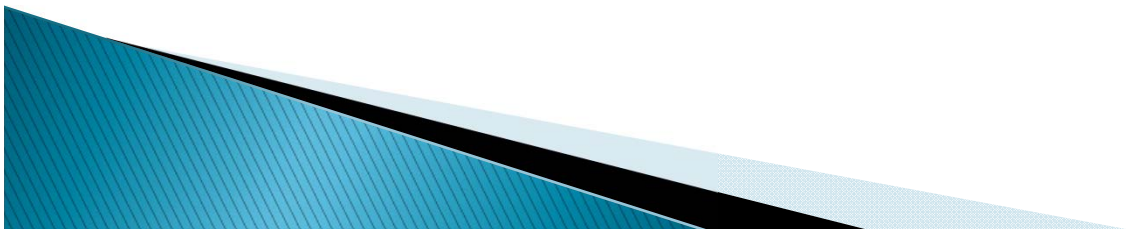
Background

- In 1992, the California Air Resources Board (CARB) listed formaldehyde as a toxic air contaminant
- Majority of formaldehyde emissions in California are from vehicle exhaust
- Highest air concentrations of formaldehyde typically indoors
- Many sources of indoor formaldehyde, but primary indoor source historically has been composite wood products



Summary of CARB Regulation

- CARB's Composite Wood Products Airborne Toxic Control Measure (ATCM) to reduce public exposure to airborne formaldehyde was finalized in 2008
- ATCM established formaldehyde emission standards for hardwood plywood (HWPW), particleboard (PB), & medium density fiberboard (MDF)



Summary

(continued)

- Two phases of formaldehyde emission standards
 - Initial Phase 1 standards no longer in effect
 - Most stringent Phase 2 standards became effective between 2010 and 2012
- Phase 2 standards
 - HWPW-VC = 0.05 parts per million (ppm)
 - HWPW-CC = 0.05 ppm
 - PB = 0.09 ppm
 - MDF = 0.11 ppm
 - Thin MDF = 0.13 ppm



Summary

(continued)

- Applies to products sold, supplied, used, imported for sale, or manufactured for sale in California
- Requires finished goods (e.g., furniture, flooring, cabinets, etc.) to be made from compliant HWPW, PB, and MDF panel material
- Industry sectors affected by ATCM include:
 - Panel manufacturers
 - Fabricators of finished goods
 - Distributors, importers, and retailers of panels and finished goods



Summary

(continued)

- Implementation of regulation began in 2009
- Collaborative interaction with CPA, HPVA, AHFA, KCMA, IWPA, BIFMA, RVIA, and retailers association
- Outreach efforts to assist businesses
 - Established Composite Wood Products ATCM website
 - Advisories, fact sheets, and FAQs
 - Maintain current list of certified panel manufacturers
 - Translated regulation and fact sheets into 5 languages
 - Participated in numerous meetings and gave presentations to inform industry groups



Requirements for Industry Sectors

Panel Manufacturers

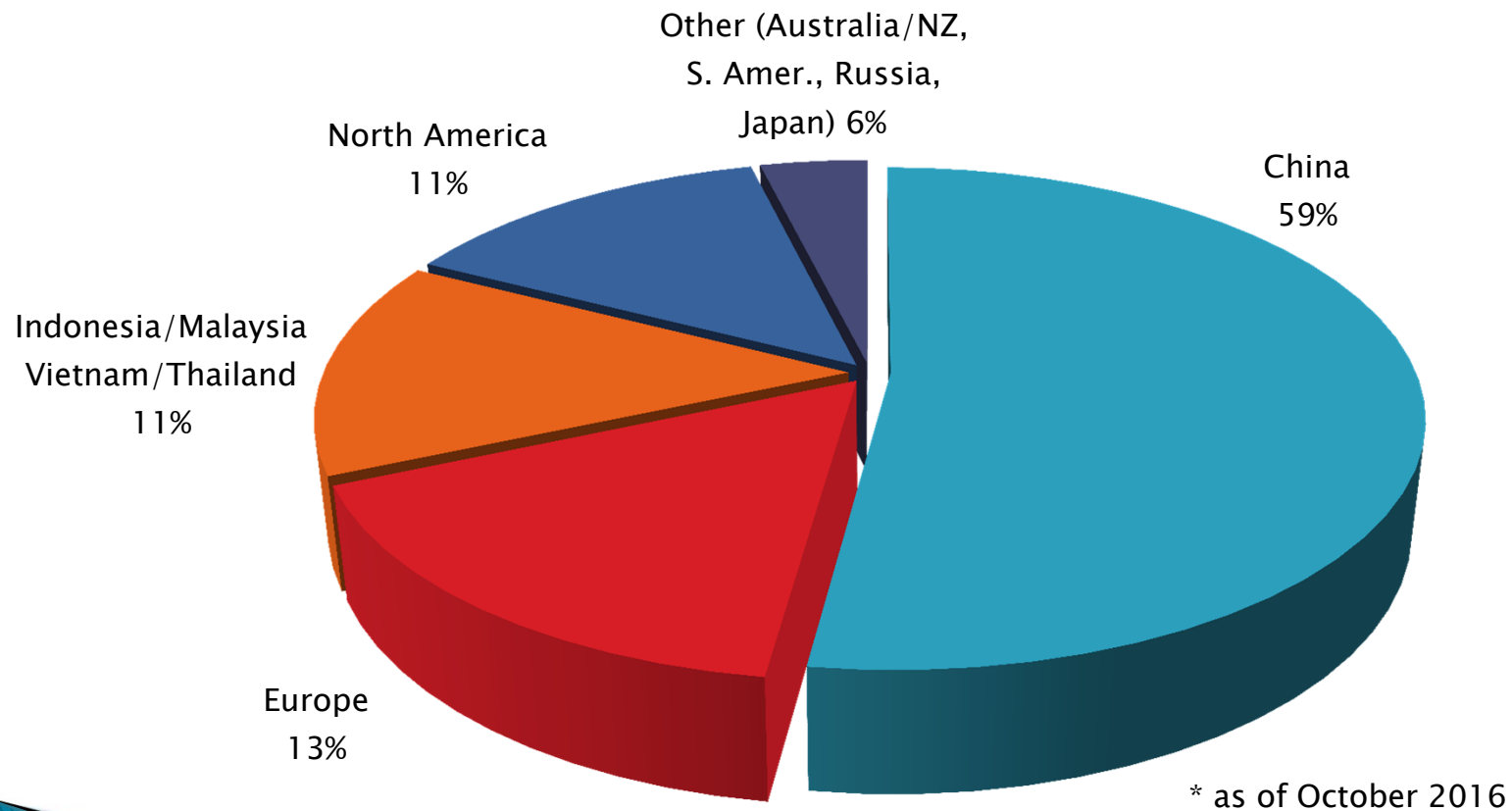
- Must be third party certified by CARB-approved TPCs
 - TPCs provide two main services:
 - Process verification & emissions testing
 - 42 CARB-approved TPCs worldwide (North America, Europe, & Asia)
 - About 1,200 certified mills worldwide



Requirements

Panel Manufacturers (continued)

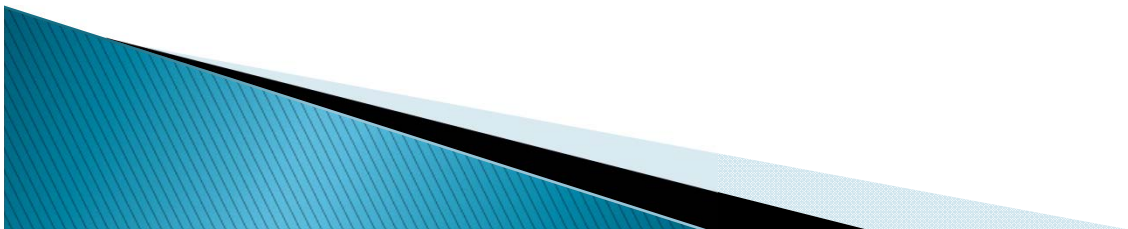
Certified Mills Worldwide*



Requirements

Panel Manufacturers (continued)

- Routine emissions testing
- Keep records
- Label panels or bundles
- Provide statement of compliance on invoice or bill of lading to customers



Requirements

Panel Manufacturers (continued)

- NAF/ULEF Program
 - Regulation allows exemption from third party certification for panel manufacturers using no-added formaldehyde (NAF) or ultra-low-emitting formaldehyde (ULEF) resin systems
 - Manufacturers must apply to CARB
 - About 230 CARB-approved NAF and ULEF mills worldwide



Requirements

Fabricators

- Use certified Phase 2 compliant composite wood material to make finished goods for sale in California
- Obtain statement of compliance from suppliers
- Verify compliance statements
- Keep records
- Label finished goods or boxes
- Provide statement of compliance on invoice or bill of lading to customers



Requirements

Importers, Distributors, & Retailers

- Purchase Phase 2 compliant composite wood panels and finished goods for sale in California
- Take reasonable prudent precautions
- Keep records
- Provide statement of compliance on invoice or bill of lading to customers



Requirements

Labeling

- CARB regulation requires labeling of panels and finished goods
- Panels
 - Manufacturer name
 - Product lot or batch number
 - Compliance level (i.e., Phase 2, NAF, or ULEF)
 - TPC number
- Finished goods
 - Fabricator name
 - Production date
 - Compliance level (e.g., Phase 2)

Requirements

Labeling (continued)

- Labels for finished goods should not include third party certifier (TPC) number
 - Misleads customers that TPC verified emissions of finished good
 - Only panels are required to be TPC verified
- CARB inspectors often find finished goods with no label or label missing key information



Requirements

Labeling (continued)

- CARB will accept U.S. EPA TSCA Title VI labeled panels and finished goods after Dec. 12, 2017
- Finished goods containing less than 144 square inches of composite wood material are exempt from EPA labeling
 - not exempt from CARB labeling requirement



Requirements

Labeling (continued)

- Confusion with California Proposition 65 labeling requirements
 - Voter initiative passed in 1986
 - Requires businesses to warn of significant exposure to chemicals listed by California OEHHA that cause cancer, birth defects, or reproductive harm
 - Warning required unless exposure below OEHHA's “safe harbor” levels
 - Many companies label products to protect against lawsuits, even when no expected harm
 - Such labels alarm consumers

Efforts to Harmonize with U.S. EPA Regulation

- Effective date of EPA regulation delayed to May 22, 2017
- Numerous discussions since 2010 between EPA and CARB staff in effort to harmonize regulations
- EPA regulation based on CARB ATCM – same formaldehyde emission standards
- Several differences between federal and state regulations
 - Laminated products made by fabricators
 - Recordkeeping requirements
 - Testing requirements for third party certifiers
 - Quality control test methods used by panel manufacturers



Efforts to Harmonize

(continued)

- CARB staff expects to amend regulation to clarify requirements and align with EPA regulation, where appropriate
- Goal to improve clarity, enforceability, and to better ensure compliance of imported products
- CARB public workshop on proposed amendments
 - Tentatively, latter half of 2017 or early 2018

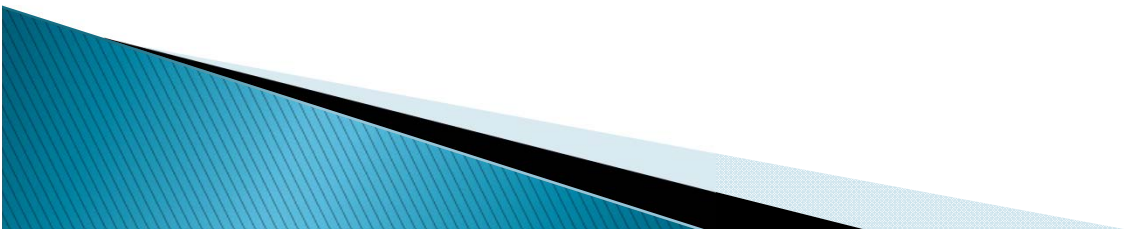


Status of CARB Enforcement

- 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
- March 2016, CARB settled case against Lumber Liquidators for selling noncompliant laminate flooring (labeled Phase 2 compliant) imported from China – penalty of \$2.5 million
- CARB continuing to investigate other businesses

Emissions Testing

- Purpose is to determine if composite wood panels and composite wood material in finished goods comply with emission standards
- Sample preparation procedures for panels and finished goods
- Emissions testing using CARB's small chamber test method (ASTM D6007)



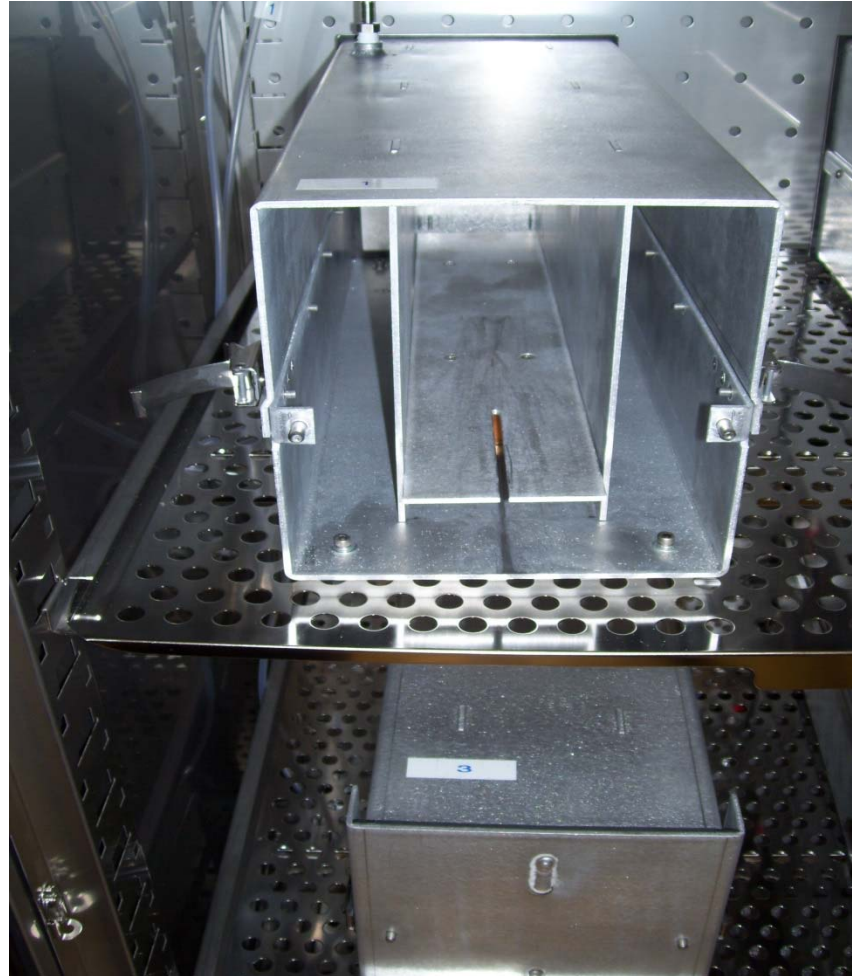
Emissions Testing

*Sample preparation of finished good –
sanding off laminate*



Emissions Testing

CARB's small testing chamber



Emissions Testing

(continued)

- Extensive testing conducted to develop sample preparation procedures
 - Procedures finalized in 2013
 - Posted to Composite Wood Products ATCM website
- CARB accounts for uncertainty associated with sample preparation & emissions testing when considering whether to take enforcement action
- Only CARB has authority to determine compliance



Feedback from Industry Stakeholders

- Contact CARB staff if you come across issues you think we should be aware of
- Contact CARB staff with compliance questions



Questions

- Lynn Baker, Staff Air Pollution Specialist
(916) 324-6997 or lynn.baker@arb.ca.gov
- Composite Wood Products ATCM website:
<http://www.arb.ca.gov/toxics/compwood/compwood.htm>

