

CARB's Airborne Toxic Control Measure on Composite Wood Products

Implementation Update

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Air Resources Board

Presentation Overview

- Background
- ATCM overview
- Third party certification program update
- Enforcement program update
- ATCM implementation actions for 2009
- Questions



Why Did CARB Regulate Composite Wood Products?

- CARB identified formaldehyde as TAC in 1992 with no safe threshold for exposure
 - Nasopharyngeal cancer
 - Acute and chronic effects – eye, nose, respiratory irritant
- CA Health and Safety Code requires CARB to reduce TAC exposure to maximum extent possible through best available control technology
- Composite wood products made from urea-formaldehyde resin systems
- Significant source of personal formaldehyde exposure
- Other international standards
 - Europe (E1, E2)
 - Japanese (F***, F****)

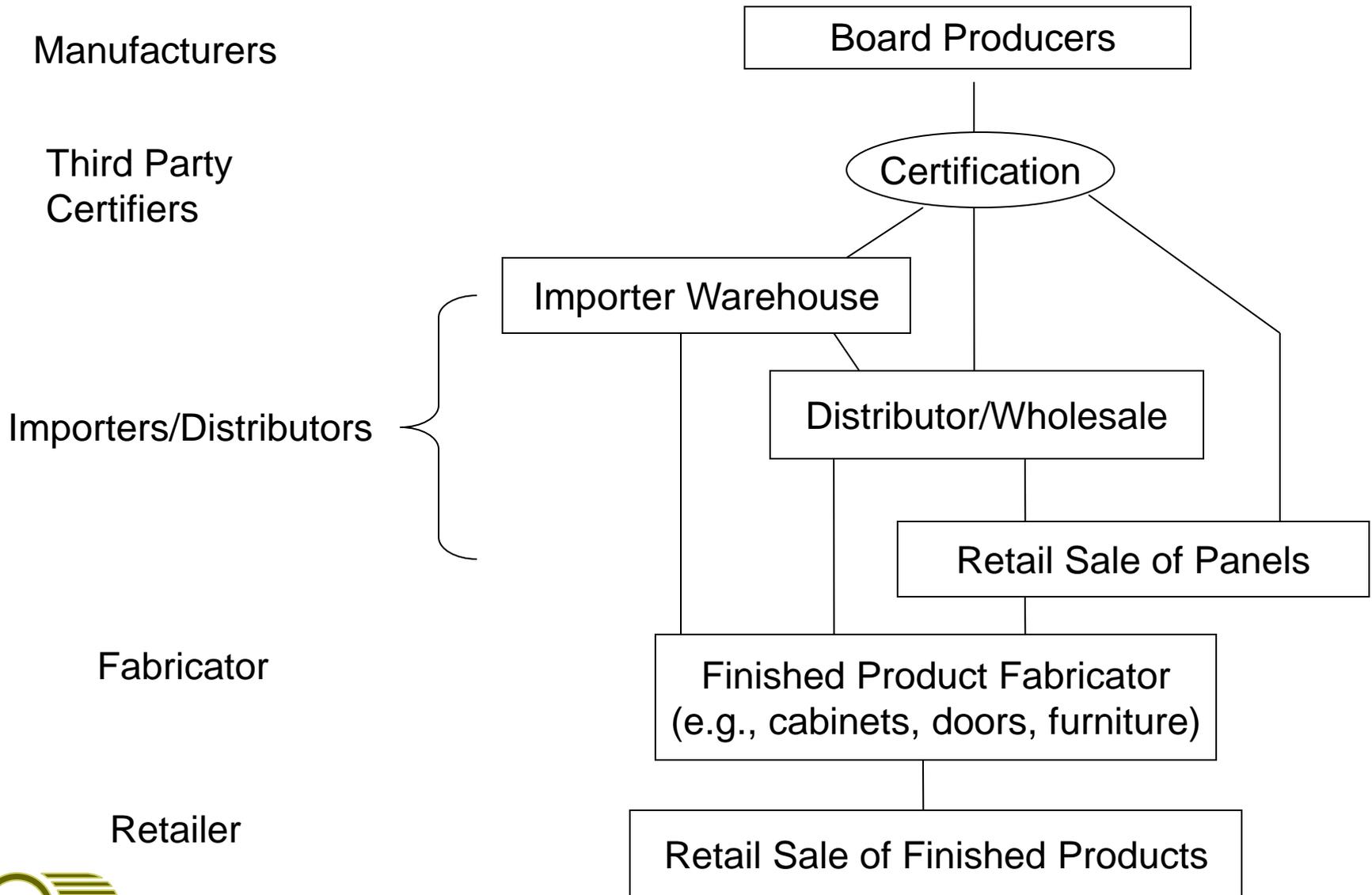


Airborne Toxic Control Measure (ATCM) Overview

- Establishes new formaldehyde emission limits for composite wood products; particleboard (PB), medium density fiberboard (MDF), and hardwood plywood (HWPW) panels
- Applies to products sold, supplied, used, or manufactured for sale in California
- Requires finished goods to be made from compliant PB, MDF, and HWPW panels
- Establishes enforcement program
- Includes sell-through provisions



Regulated Community



ATCM Overview

Manufacturers

- “Producers” of composite wood products
- Meet emission standards
- CARB product certification
 - Obtained from CARB-approved third party certifier
- Product labeling
- Statement of compliance to provide chain of custody



Adopted Phase 1 Standards*

Product	Jan 1, 2009	Jul 1, 2009
HWPW-VC	0.08 ppm	-----
HWPW-CC	-----	0.08 ppm
PB	0.18 ppm	-----
MDF	0.21 ppm	-----
Thin MDF	0.21 ppm	-----

* Based on ASTM E1333-96 (2002)



Adopted Phase 2 Standards*

Product	Jan 1, 2010	Jan 1, 2011	Jan 1, 2012	Jul 1, 2012
HWPW-VC	0.05 ppm		-----	-----
HWPW-CC		-----	-----	0.05 ppm
PB		0.09 ppm	-----	-----
MDF		0.11 ppm	-----	-----
Thin MDF		-----	0.13 ppm	-----

* Based on ASTM E1333-96 (2002)



ATCM Overview

Third Party Certifiers (TPC)

- “Validates” CARB compliance at manufacturing mill
- Independently verifies manufacturers’ ability to provide consistent quality
- Certification is an integral aspect of ATCM
- Only qualified certifiers approved by CARB



ATCM Overview

Fabricators

- **Title 17, California Code of Regulations § 93120.7**
 - (a) Emission limits for HWPW, PB, and MDF
 - Required to use compliant composite wood products
 - (b) Exemptions
 - Limited to windows and doors
 - (c) Additional requirements
 - “Reasonable prudent precautions”
 - Recordkeeping
 - (d) Product labeling; Statement of compliance
 - (e) Facility inspections

ATCM Overview

Fabricators

- **Title 17, California Code of Regulations, §93120.12, Appendix 1, section (d)**

Sell-through provisions – **18 months** after the effective dates for the sale of finished goods:

- made before the effective date
- made after the effective date with non-compliant panels purchased before the effective date
- made with panels purchased during the manufacturer's, distributor's, importer's sell-through periods for non-compliant panels



ATCM Overview

Importers/Distributors

- “Transporters of goods”
 - Raw panels (PB, HWPW, MDF)
 - Finished goods
- Reasonable prudent precaution
- Product labeling, only if product is modified
- Statement of compliance
- Recordkeeping



ATCM Overview

Retailers

- “Goods provider” to consumers/public
 - Raw panels (PB, HWPW, MDF)
 - Finished goods
- Reasonable prudent precaution
- Recordkeeping



Third Party Certification Program Update



Third Party Certification Program Update

- List of approved TPCs are posted on ARB website
 - 19 applications are approved
 - 16 applications are under review
- Numerous contacts by candidate TPCs
- Approved TPCs are providing global certification services



Status of Composite Wood Product Mill Certifications

- Certified U.S. mills (61mills total)
 - 29 PB mills
 - 18 MDF mills
 - 14 HWPW mills
- Certified foreign mills (188 mills total)
 - 77 certified mills in China
 - 42 certified mills in Southeast Asia
 - 45 certified mills in Europe
 - 24 other (Mexico, AU, Canada)
- >90 mills initiated CARB certification process in China, Malaysia, Indonesia, Thailand, and Vietnam
- CARB website featuring certified mills:

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

Enforcement Program Update



ATCM Enforcement Program

- Labeling requirements
- Recordkeeping requirements and chain of custody documentation
- Inspections
- Emission testing
- Investigations
- Case settlement
- Assistance & outreach



Enforcement

Labeling Requirements

- Labeling requirements for fabricators
 - Fabricators name
 - Date of fabrication
 - Statement of compliance
- Statement of compliance on invoices or bills of lading
- Sample statement of compliance:
 - “CARB §93120 Compliant for Formaldehyde”



Enforcement

Recordkeeping Requirements and Chain of Custody Documentation

- Purchase records
 - Date of purchase
 - Supplier
- Reasonable prudent precautions
 - Written documentation from each supplier
 - Any other precautions taken to ensure compliance
- Chain of custody documents
- Records kept for 2 years



Enforcement

Inspections

- Field inspections
 - Check labels & review available records
 - Product emission screening
 - FLEC
 - Purchase samples
 - Submit samples to lab



Enforcement

FLEC Screening Test

- Field and Laboratory Emission Cell (FLEC) for materials emissions testing - Markes Intl.
- The FLEC simulates the large chamber test
- Initial correlation demonstrates FLEC viability
- Correct for temperature and humidity
- Can be used in a retail store
- Interscan portable formaldehyde analyzer, 0-500ppb, model 4160-500b



STATE OF CALIFORNIA, D.P.B.
20062306

PPB

112

SPAN

ALARM SET

CALIBRATED
DATE: 7/25/07
Environmental Calibration - Quality

SAMPLE
ZERO OFF A B BAT. TEST

ZERO

scan

HCHO

Enforcement

Testing of Panels and Finished Goods

- Test methods
 - Established for panels and finished goods (raw; 1-side laminated)
 - Secondary test method – small chamber (ASTM D6007)
- ARB is developing a protocol for preparation of finished good samples
- ARB will share progress on sample preparation methods with interested stakeholders



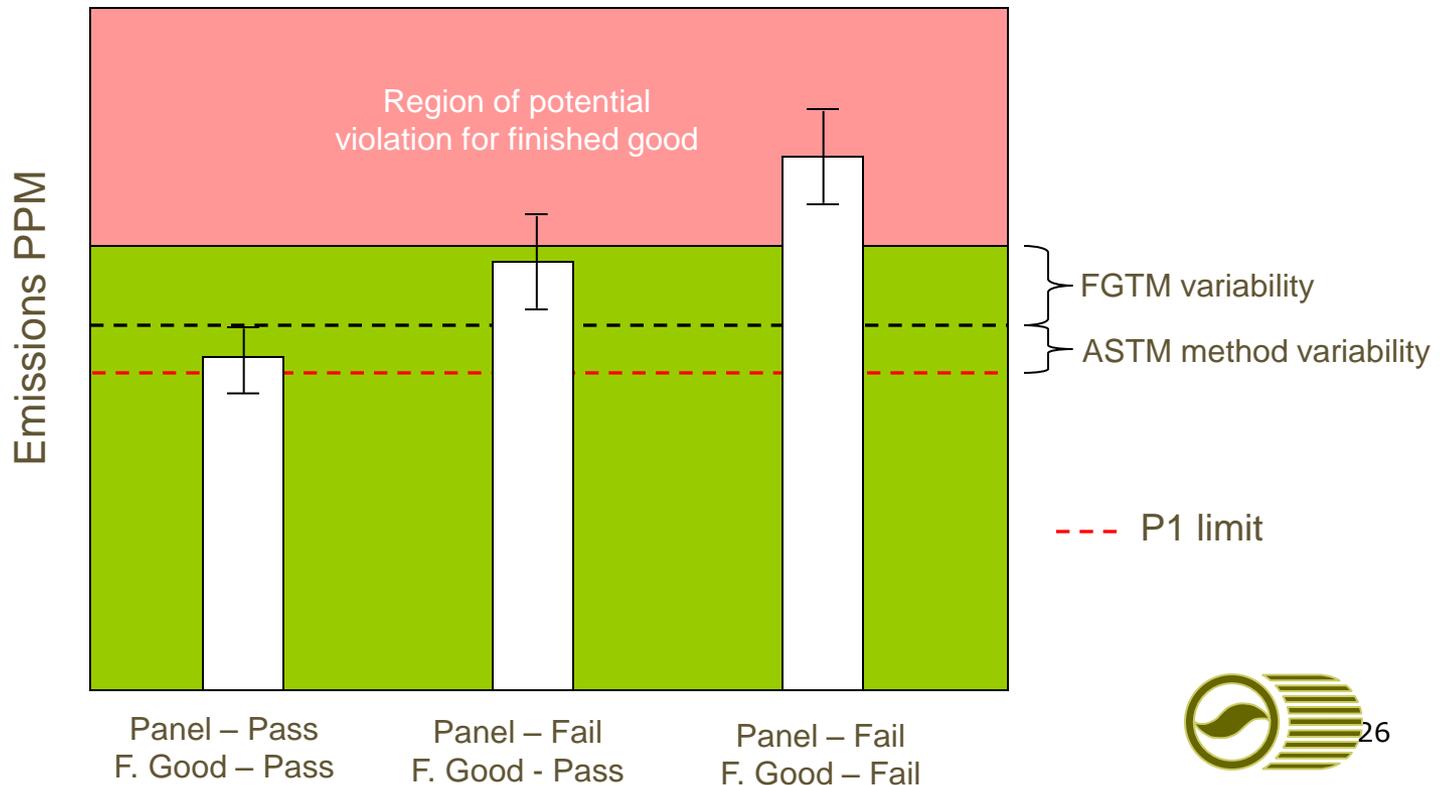
Finished Goods Test Method

- Purpose – to determine if composite wood substrate in a finished good complies with emissions limits
- Finished good sample preparation protocol:
 - Sample handling
 - Sample deconstruction
- Chamber test method
 - ASTM D 6007
 - Emphasis placed on longer conditioning time



Finished Goods Test Method

- Primary variables to be considered:
 - Variability of the emissions test method
 - Variability introduced in the deconstruction



Enforcement

Investigations

- Investigations
 - Evaluate lab results
 - Request & analyze information
 - Determine who is the responsible party
 - Issue Notice of Violation (NOV)



Enforcement

Settlement Process

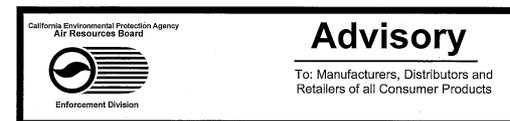
- Settlement process
 - Office conference
 - Mutual settlement or referral
 - Monitor corrective actions & continued compliance
- California Health & Safety Code Sections
 - §42402-42402.4 Violation of emission limitations
 - §42400.8 Determination of amount of fine



Enforcement

Assistance and Outreach

- Enforcement advisories
- Outreach at conferences and trade shows
- Site visits
- Press releases
- Staff consultations



Number 370

December 2007

Consumer Products Regulations: 2008 Requirements

The purpose of this advisory is to remind the consumer products industry of the upcoming changes in the volatile organic compound (VOC) standards as they apply to two consumer product categories (see Table 1). In addition, there is a definition change for Multi-purpose Solvents. Finally the sell-through period for 10 consumer product categories or forms will expire on December 31, 2007, and the sell-through period for an additional 10 consumer product categories or forms will expire on January 1, 2008 (see Table 2).

The California Code of Regulations (CCR), Title 17, Section 94509(a) lists standards for VOC (by weight percent) for consumer products sold, supplied, offered for sale, or manufactured for sale in California. On December 31, 2007, new VOC standards for electronic cleaners and nail polish removers will become effective, as shown in Table 1. All electronic cleaners and nail polish removers manufactured after December 31, 2007 must comply with these new VOC standards.

Table 1: New VOC Standards

Product Category	Effective Date	VOC Standard (percent VOC by weight)	
		Existing	New
Electronic Cleaner ¹	12/31/2007	(none)	75
Nail Polish Removers ²	12/31/2007	0	1

¹Electronic Cleaners that contain methylene chloride, perchloroethylene, or trichloroethylene and were manufactured before December 31, 2005, may be sold, supplied, or offered for sale until December 31, 2008, as long as the product container or package displays the date on which the product was manufactured, or a code indicating such date.

²Nail Polish Removers manufactured after 12/31/2004 were required to meet a zero (0) percent VOC limit. Since the VOC limit for Nail Polish Removers was increased to one (1) percent on 12/31/2007 and the sell-through period ended for the zero percent limit on the same date, all Nail Polish Remover products sold, supplied or offered for sale in California must meet the one (1) percent VOC limit.

The definition for a "Multi-purpose Solvent" has changed for products manufactured on or after January 1, 2008. The new definition includes any liquid product designed or labeled to be used for dispersing or dissolving or removing contaminants or other organic materials. The new definition also clarifies that, a "Multi-purpose Solvent" which makes any representation that the product may be used as, or is suitable for use as another consumer product; the most restrictive VOC limit for which the "Multi-purpose Solvent" could be categorized will be used for compliance purposes.



ATCM Implementation Actions for 2009

- Global supply monitoring
- Finished good test method development
- Guidance on “laminated products”
- TPC program administration
- On-going NAF/ULEF certifications
- Composite wood ATCM website maintenance



For More Information

Visit our website:

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



Or contact us:

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Substance Evaluation Section