

# Benchmark International

AHFA Formaldehyde Refresher – It's Even More Complicated

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## DISCLAIMER

This presentation is intended to assist affected entities in understanding the broad compliance issues associated with the U.S. EPA TSCA Title VI regulation, California Air Resources Board (CARB) Airborne Toxic Control Measure (ATCM) Phase II Emission Standard, CANFER, and CAN/CSA 0160-16. Given the complexity of these regulations, it is not possible to include discussion of everything necessary to ensure compliance during a presentation of this nature. Thus, this information must be understood to be a tool for learning more about TSCA Title VI, CARB, CANFER, and CAN/CSA, rather than an exhaustive statement of legal obligations, which are defined by statute, regulations, and standards. Likewise, to the extent that this information references practices or procedures that may enhance compliance programs, but which are not required by a statute, regulation, or standard, it cannot, and does not, create additional legal obligations. Finally, over time regulators routinely modify rules and interpretations in light of new technology, information, or circumstances; to keep apprised of such developments, or to educate yourself and your organization on a wide range of topics, you should frequent regulatory web sites. You have been warned, now let the fun begin!

# **PART 1: CARB ATCM 93120, EPA TSCA Title VI, CANFER and CAN/CSA 0160-16 OVERVIEW**

## Who is CARB and EPA?

### **CARB = California Air Resources Board**

- One of six agencies within the California Environmental Protection Agency (CalEPA)
- Focused on reducing toxic air contaminants caused by consumer and building products, industrial sources, motor vehicles, and others
- Jurisdiction limited to the state of California

### **EPA = U.S. Environmental Protection Agency**

- Federal agency within the US government
- Focused on all facets of environmental protection within the USA
- EPA Administrator is normally given Cabinet-level rank
- Jurisdiction includes all U.S. states and territories



## Who is Canada Minister of Environment and CSA?

### **Minister = Canada Minister of Environment**

- Federal agency within Canadian government
- Focused on all facets of environmental protection within Canada
- Minister is given Parliamentary-level rank
- Jurisdiction includes all Canadian provinces and territories

### **CSA = Canadian Standards Association**

1. Voluntary Standards Development:
  - develops voluntary standards for the Canadian and international markets.
  - Developed CAN/CSA 0160-16 as a voluntary standard modeled after CARB ATCM 93120 before CANFER was established.
2. Testing, Inspection & Certification:
  - provides accredited testing, inspection and certification services.



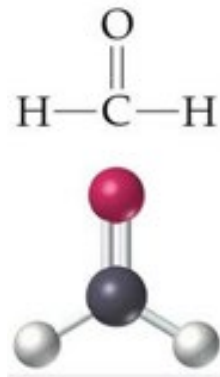
Government  
of Canada

Gouvernement  
du Canada



## What is formaldehyde and why do we care?

- Naturally occurring organic compound found in nearly all homes and buildings
- All plants, animals, and humans produce and emit formaldehyde at some level
- Does not accumulate in the environment or in the body and is broken down quickly
- Elevated or continual levels of exposure may cause respiratory issues and some types of cancers



Examples of Common Environmental Emitters of Formaldehyde			
Plywood, MDF, Particleboard	Carpet	Insulation	Air Fresheners
Cigarettes/Tobacco	Glues and Resins	Gas Stoves/Ovens	Household Cleaners
Architectural/LVL Lumber	Fabric softeners	Engineered/Laminate Floors	Wood Stoves/Space Heaters
Wrinkle-Free cloths	Personal Care Products	Furniture	Coatings and Finishes
Cabinetry	Latex Paint/Wallpaper	Fabric Softeners	Cosmetics

## What are Composite Wood Products (CWP)?

- Panels made from pieces, chips, particles, veneers, or fibers of wood bonded together with a resin
- For CARB, EPA, CANFER and CAN/CSA 0160-16 purposes, composite wood products include:
  - Medium Density Fiberboard (MDF)
  - Thin-Medium Density Fiberboard (Thin-MDF) - MDF with a total thickness  $\leq 8\text{mm}$
  - Particleboard (PB)
  - Hardwood and Decorative Plywood including Veneer Core (HWPW-VC) & Composite Core (HWPW-CC)

**NOTE 1:** In the USA, plywood made from softwood/coniferous trees must be CARB ATCM 93120 AND TSCA Title VI certified UNLESS it is certified and labeled pursuant to PS 1-19 structural plywood or PS 2-18 structural panel standards.

**NOTE 2:** In Canada, plywood made from softwood/coniferous trees must be CANFER or TSCA Title VI certified UNLESS it is certified and labeled pursuant to CSA 0121, CSA 0151, PS 1-19 structural plywood and/or CSA 0325 or PS 2-18 structural panel standards.





# What are Laminated Products?

## CARB Definition:

- Finished good or component part in which a laminate or laminates are affixed to a HWPW, MDF, or PB platform.
- Laminates may be wood, bamboo, or synthetic (encompasses more product types than the EPA term)
- The underlying HWPW, MDF, or PB platform must be CARB-Phase 2 certified.
- Produced by a Fabricator
- While the underlying HWPW, MDF, or PB platform must meet the applicable CARB-P2 emission limit, there are no emission standards applicable to the final laminated product itself
- CAN/CSA 0160-16 does not apply to laminated products



Paper on MDF



Melamine on  
particleboard



Wood veneer on MDF



Bamboo veneer on  
HWPW



# What are Laminated Products?

## EPA and CANFER Definition:

- Finished good or component part in which a wood or woody-grass (e.g., bamboo) veneer is adhered to a HWPW, MDF, or PB core or platform.
- Does not include synthetic laminates (e.g., paper, foil, etc.)
- In the USA, the underlying HWPW, MDF, or PB platform must be EPA certified!
- In Canada, the underlying HWPW, MDF, or PB platform must be EPA or CANFER certified!
- Defined as a subset of hardwood plywood
- Produced by a Laminated Product Producer
- The wood or bamboo-laminated platform must comply with the EPA emission standard for HWPW ( $\leq 0.05\text{ppm}$ )



Paper on MDF



Melamine on particleboard



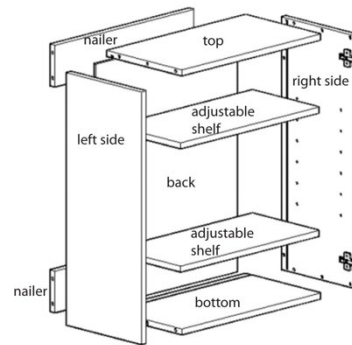
Wood veneer on MDF



Bamboo veneer on HWPW

## Other terminology:

- Component Part (CARB) = Component Part (EPA)
  - An object, other than a panel, that contains HWPW, MDF, PB, or a Laminated Product and is used in the construction or assembly of finished goods
  - Component parts that are packaged and sold directly to consumers are considered finished goods
- Finished Good (CARB) = Finished Good (EPA)
  - Any product, other than a panel, that contains HWPW, MDF, PB, or a Laminated Product and that is not a component part used in the assembly of a finished good.
  - Examples: Engineered wood flooring, laminate flooring, cabinetry, furniture, etc.



## CARB ATCM 93120

1992

- Formaldehyde listed as a Toxic Air Contaminant (TAC) by CalEPA with no safe level of exposure
- TAC designation required California to take action to reduce human exposure
- Composite wood products identified as leading contributor to formaldehyde pollution in indoor air

2001-2007

- Formal rulemaking process to draft CARB “Airborne Toxic Control Measure (ATCM) to Reduce Formaldehyde Emissions from Composite Wood Products” (CARB ATCM 93120)

2008-2012

- Final regulation approved by CA Office of Administrative Law in April 2008 (Title 17, California Code of Regulations, Sections 93120-93120.12)
- Emission standards implemented in 2 phases over a 3-year time period beginning January 2009
- CARB Phase 2 emission standards in full effect as of July 2012

2013-2022

- CARB steps up enforcement activities to include site inspections and testing of products in California
- CARB publishes Finished Goods Sample Preparation Procedures (e.g. deconstructed testing) in Sept. 2013
- Multiple large enforcement cases settled 2015-2022

# EPA Toxic Substances Control Act (TSCA) Title VI

2008-2010

- Congress initiates legislative process based on petition to adopt CARB standards as national standards in wake of concerns over formaldehyde in trailers used during Hurricane Katrina recovery efforts
- *"Formaldehyde Standards for Composite Wood Products Act"* signed into law June 2010 adding Title VI to the Toxic Substances Control Act (TSCA)
- Congress gives EPA until Jan 1, 2013 to publish final regulations

2013-2016

- Draft TSCA Title VI regulation published in Federal Register; expand upon existing CARB 93120 requirements
- Draft rules undergo public comment and revision over a 3-year period
- Final consolidated rule published in Federal Register December 12, 2016 (40 CFR Part 770)
- Establishes formaldehyde emission standards for HWPW, MDF, PB, and Laminated Products

2017-2018

- EPA initiates stakeholder outreach
- Accreditation Bodies (AB) and Third-Party Certifiers (TPC) apply for EPA approval
- Sierra Club initiates legal challenge to EPA compliance dates; manufacturer compliance dates modified by court order
- Final rule takes effect June 1, 2018; composite wood panels and finished goods manufactured or imported to the USA must be EPA or CARB certified

2019-2022

- CARB reciprocity ends; composite wood panels and finished goods manufactured or imported to the USA must be EPA certified by March 22, 2019. CARB remains in full effect for goods entering California.
- EPA publishes Technical Fixes Rule in August 2019 to clarify requirements and improve alignment with CARB requirements
- EPA initiates enforcement activities; several enforcement cases adjudicated

# Canada Formaldehyde Emissions Regulation (CANFER)

2016-2017

- Dec 2016: Private members motion introduced to Canada House of Commons to adopt formaldehyde regulations under CEPA 1999 that are similar to EPA TSCA Title VI requirements.
- May 2017: House of Commons unanimously agrees to proceed with developing regulations.
- Jul 2017: Health Canada publishes consultation document to outline proposed regulatory approach.

2017-2019

- Sep 2017: Public meetings conducted to review consultation document and seek stakeholder input
- Jun 2019: Draft regulation published in Canada Gazette Part 1 for public comment. The draft regulation included 2 components:
  1. Proposed regulation
  2. Testing directive

2019-2021

- 2019-2021: Health Canada revises draft regulation based on public comments which strongly advocated against the June 2019 framework.
- Jul 2021: Final regulation (SOR/2021-148) published in Canada Gazette Part II included 3 components:
  1. Final regulation
  2. Testing directive
  3. TPC Guidance document

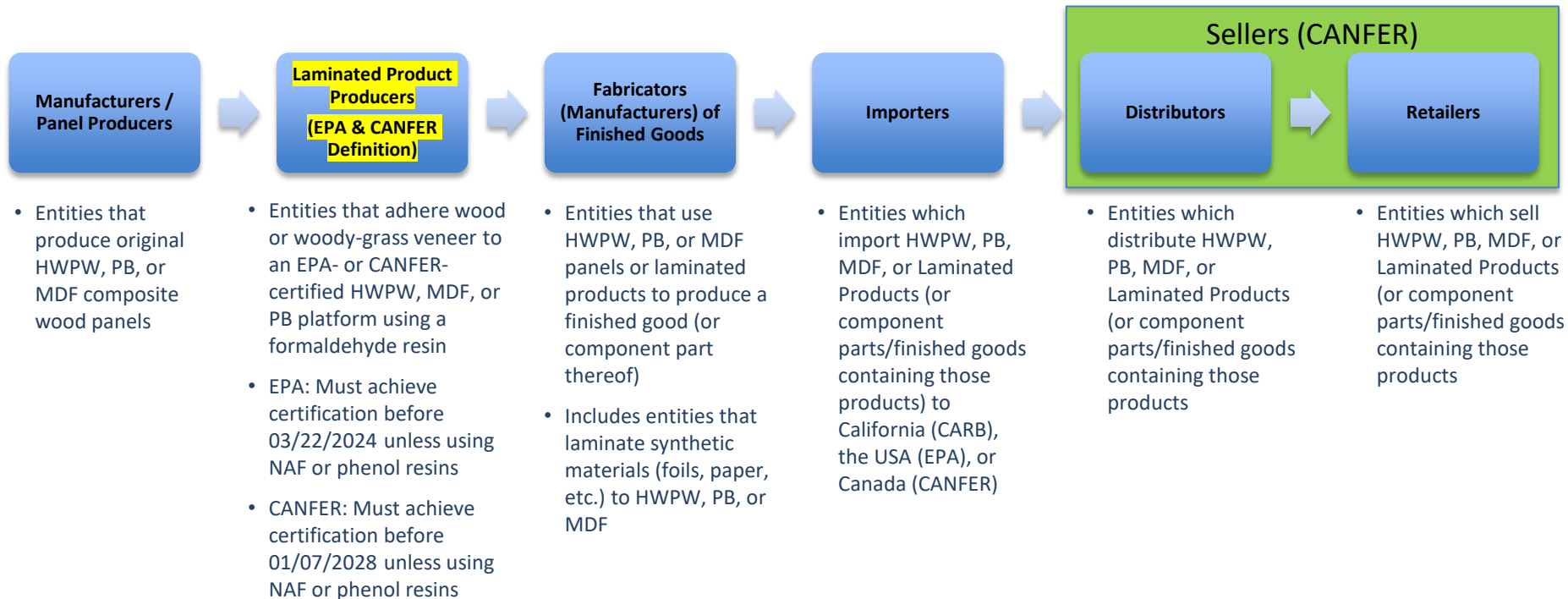
2021-2028

- January 7, 2023: Final regulation takes effect; all composite wood products (including finished goods) manufactured in or imported to Canada must be EPA TSCA Title VI or CANFER-certified.
- January 7, 2028: All laminated product producers must achieve third party certification unless exempt on the basis of the use of NAF for phenol resins.

## Who is affected by CARB, EPA and CANFER regulations?

Role of Entity in Supply Chain	CARB 93120	EPA TSCA Title VI	CANFER	CAN/CSA 0160-16
Producer of composite wood panels	Manufacturer	Panel producer	Manufacturer	Manufacturer
<b>Producer of laminated products</b> Entities that adhere wood or woody-grass veneer to an EPA- or CANFER-certified HWPW, MDF, or PB platform using a formaldehyde resin	<b>Fabricator</b>	<b>Laminated Products Producer</b>	<b>Manufacturer</b>	Not Applicable
Producer of component parts/ finished goods Entities that use certified HWPW, PB, or MDF panels or laminated products to produce a finished good (or component part thereof)	Fabricator	Fabricator	Manufacturer	Not Applicable
Importer	Importer	Importer	Importer	Not Applicable
Distributor	Distributor	Distributor	Seller	Not Applicable
Retailer	Retailer	Retailer	Seller	Not Applicable

# Who is affected by CARB, EPA and CANFER regulations?



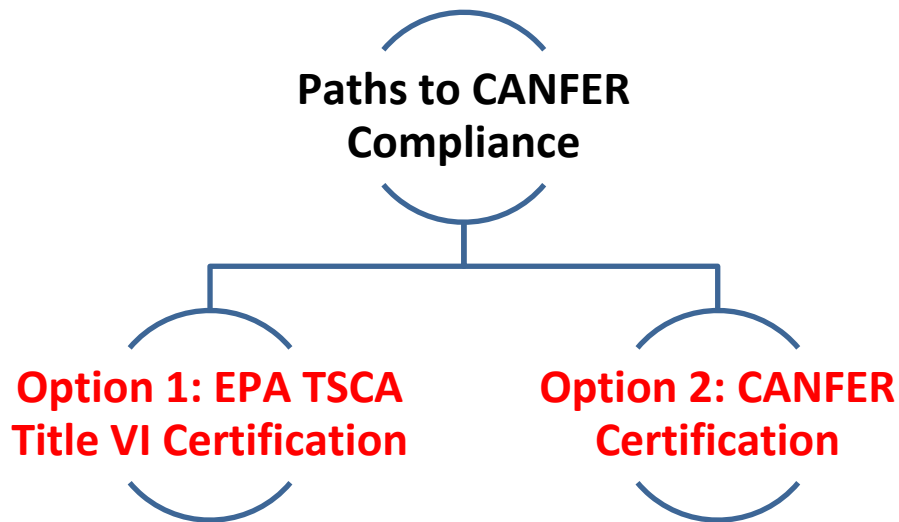


## Who is affected by CAN/CSA 0160-16 voluntary standards?

### **Manufacturers**

- Entities that produce original HWPW, PB, or MDF composite wood panels
- CAN/CSA 0160-16 defines emission standards and certification requirements for the original composite wood panel only (HWPW, MDF, or PB)
- There are no requirements defined for Laminated Product Producers, Fabricators, Importers, Distributors or Retailers

## What are the paths to CANFER compliance?



**IMPORTANT:** Must meet additional labeling, record-keeping, and Canada Minister of Environment reporting requirements specified in CANFER §20-31 as applicable to scope of EPA certification.

- CANFER-certified manufacturers and laminated product producers must prepare a “Declaration of Certification”
- Declaration requirements defined in CANFER §19
- Declarations must be issued to every purchaser of composite wood products at the time of shipment (functions similar to EPA invoices/bills of lading)
- Declarations must be handed down by importers, fabricators, and sellers to every subsequent commercial purchaser in the supply chain (document burden)

## In general, which CARB, EPA, and CANFER requirements apply?

Requirement	Manufacturer/ Panel Producer	Laminated Product Producer <sup>See Note 1</sup>	Fabricator	Importer	Distributor	Retailer
Emission Standards:	✓	✓	✓	✓	✓	✓
Written Quality System:	✓	✓	✗	✗	✗	✗
Third Party Certification: (or Qualified NAF/ULEF Exemption)	✓ CANFER: Certification by 1/7/2023	✓ EPA: Certification by 3/22/2024 CANFER: Certification by 1/7/2028	✗	✗	✗	✗
Product Testing:	✓	✓	✗	✗	✗	✗
Labeling:	✓	✓	✓	<b>!!</b>	<b>!!</b>	<b>!!</b>
Reasonable Prudent Precautions:	✓ Required if purchasing HWPW, MDF, or PB for panel production	✓	✓	✓	✓	✓
Import Declaration: (EPA TSCA Title VI Only)	✓ N/A for CARB/CANFER	✓ N/A for CARB/CANFER	✓ N/A for CARB/CANFER	✓ N/A for CARB/CANFER	✓ N/A for CARB/CANFER	✓ N/A for CARB/CANFER
Invoice/Bill of Lading:	✓ N/A for CANFER	✓ N/A for CANFER	✓ N/A for CANFER	✓ N/A for CANFER	✓ N/A for CANFER	✗ N/A for CANFER
Declaration of Certification: (CANFER Only)	✓ N/A for EPA/CARB	✓ N/A for EPA/CARB	✓ N/A for EPA/CARB	✓ N/A for EPA/CARB	✓ N/A for EPA/CARB	✗ N/A for EPA/CARB
Record Keeping:	✓	✓	✓	✓	✓	✓
EPA/CARB Facility Inspections:	✓ N/A for CANFER	✓ N/A for CANFER	✓ N/A for CANFER	✓ N/A for CANFER	✓ N/A for CANFER	✓ N/A for CANFER

**NOTE 1:** Laminated Product Producers must comply with Fabricator requirements until the 3/22/2024 (EPA) or 1/7/2028 (CANFER) laminated product certification deadlines.

# What products are exempt from CARB and EPA regulations?

CARB ATCM 93120	EPA TSCA Title VI
✓ Hardboard (per ANSI A135.4, ANSI A135.5, or ANSI A135.6)	✓ Hardboard (per ANSI A135.4, ANSI A135.5, or ANSI A135.6)
✓ Structural Plywood (per PS 1-09/PS 1-19)	✓ Structural Plywood (per PS 1-09/PS 1-19)
✓ Structural Panels (per PS 2-10/PS 2-18)	✓ Structural Panels (per PS 2-10/PS 2-18)
✓ Structural Composite Lumber (per ASTM D5456)	✓ Structural Composite Lumber (per ASTM D5456)
✓ Oriented Strand Board (OSB)	✓ Oriented Strand Board (OSB)
✓ Glued Laminated Timber (per ANSI A190)	✓ Glued Laminated Timber (per ANSI A190)
✓ Pre-fabricated wood I-joists (per ASTM D5055)	✓ Pre-fabricated wood I-joists (per ASTM D5055)
✓ Finger-jointed lumber	✓ Finger-jointed lumber
✓ CWP used in new vehicles (per Section 430 of the California vehicle code), rail cars, boats, aerospace craft, or new aircraft (excluding recreational vehicles)	✓ CWP used in new vehicles (other than recreational vehicles), rail cars, boats, aerospace craft, or new aircraft that have never been sold or registered
❖ HWPW and PB manufactured, sold, supplied for installation, or installed in manufactured homes subject to HUD 24 CFR Part 3280	❖ Windows that contain less than 5% by volume of CWP in relation to the total volume of the finished window
	❖ Exterior doors/garage doors if (a) the doors are made from CWP manufactured with NAF or ULEF resins or (b) the doors contain less than 3% by volume of CWP, combined, in relation to the total volume of the finished door
	❖ Wood packaging, including pallets, crates, or dunnage material

## What products are exempt from CANFER regulations?

CANFER	
✓ Curved plywood	✓ Hardboard
✓ Finger-jointed lumber	✓ Spools and packaging, including pallets, crates and dunnage
✓ Structural Plywood (per CSA O121, CSA O151, or PS 1-09/PS 1-19)	✓ Windows that contain a composite wood product that represents less than 5% of the total volume of the window, including glass
✓ Oriented Strand Board (per CSA O325 or PS 2-10/PS 2-18)	✓ Composite wood products used for research and development activities
✓ Glued Laminated Timber (per CAN/CSA-O122 or ANSI A190.1)	✓ Composite wood products that are to be used in a laboratory for analysis, in scientific research or as a laboratory analytical standard
✓ Pre-fabricated wood I-joists (per ASTM D5055)	✓ Composite wood products that are manufactured or imported for export only
✓ Cross-laminated Timber (per ANSI/PRG 320)	✓ Second-hand goods and other finished goods after they have been acquired by a consumer for a purpose other than resale.
✓ CWP used in a vehicle other than a mobile home, motor home or recreational trailer; any car or railway equipment that is designed for movement on its wheels on the rails of a railway; a vessel as defined in section 149 of CEPA 1999; or an aircraft	✓ Exterior doors/garage doors if (a) the doors are made from CWP manufactured with NAF or ULEF resins or (b) that contain less than 3% by volume of CWP, combined, in relation to the total volume of the finished door

## Other notable exceptions from CARB, EPA and CANFER regulations:

- **SOLID** strand woven, horizontal, and vertical bamboo

**NOTE 1:** Products such as engineered bamboo flooring and bamboo plywood produced by laminating veneers of bamboo must be EPA- and CANFER-certified.

- 3-Ply Lumber Core (aka "Sandwich Core")

**NOTE 2:** Center layer must consist of staves (small pieces of wood placed adjacent to each other) **OR** the center layer must consist of lumber measuring >6.4mm thick. If the center layer consists of rotary peeled or sliced/sawn veneers measuring ≤6.4mm thick, the product must be CARB, EPA, and/or CANFER-certified as HWPW (≤0.05ppm).

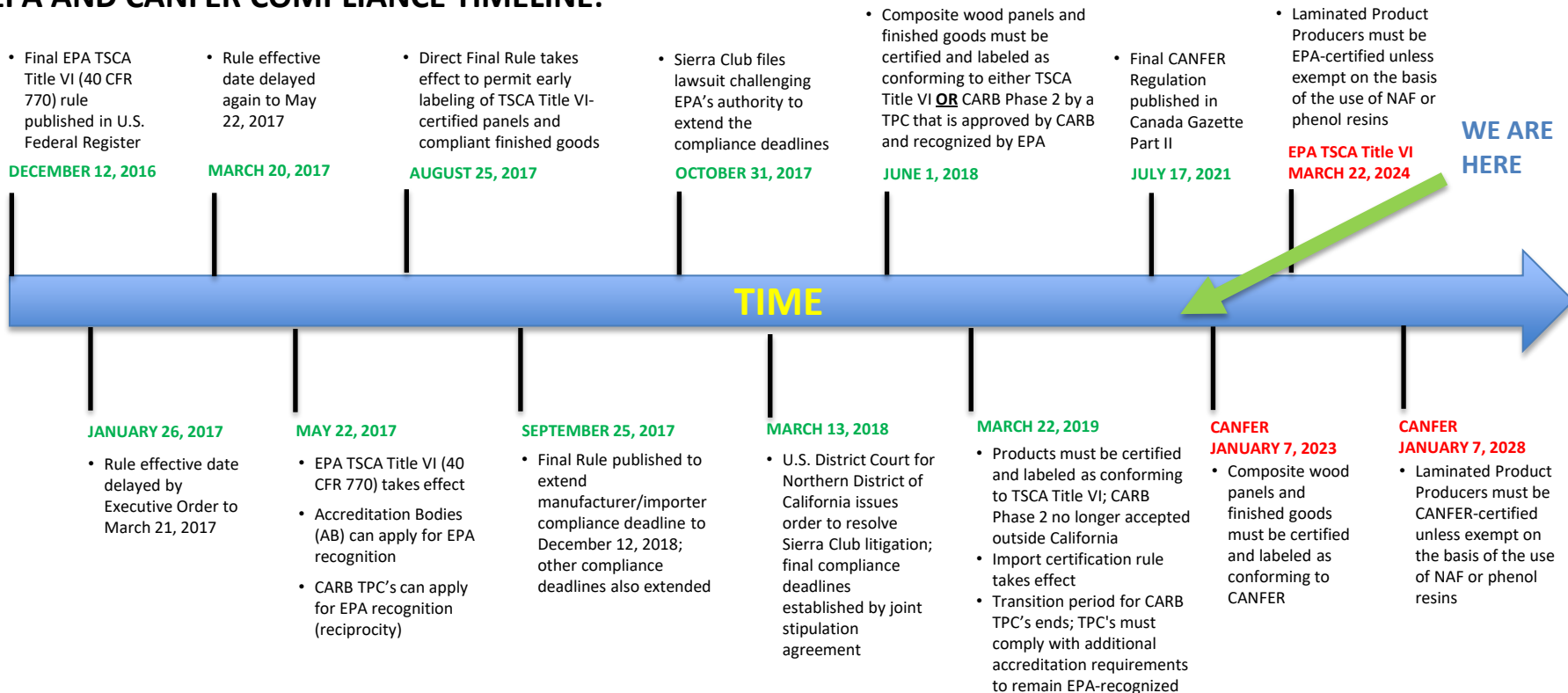
- Curved plywood
- Military specified plywood



## **PART 2: EPA TSCA TITLE VI and CANFER TIMELINE**



## EPA AND CANFER COMPLIANCE TIMELINE:



## What is the EPA “manufactured-by” date for Laminated Products?

The “manufactured-by” date for laminated product producers is **22 March 2024**

- Laminated product producers must achieve third party certification to EPA TSCA Title VI by 22 March 2024 **UNLESS** they:
  - Purchase and use only No-Added Formaldehyde (NAF) or phenol resins to adhere wood or bamboo veneers to the EPA-certified HWPW, MDF, or PB platform
  - Comply with the additional record-keeping requirements specified in 770.40(c)

### **IMPORTANT:**

1. Laminated product producers must purchase and use only EPA-certified HWPW, MDF, or PB panels. *This requirement applies even after third party certification is achieved!*
2. A panel producer who manufactures EPA-certified HWPW, MDF, or PB panels internally, then laminates additional wood or bamboo veneers to these certified panels in a second production step must apply to their TPC to expand their scope of certification before 22 March 2024!

## What is the EPA “manufactured-by” date for Laminated Products?

- Prior to 22 March 2024, laminated product producers must comply with EPA Fabricator requirements:
  - All purchased HWPW, MDF, or PB cores/platforms used to make laminated products must be EPA-certified
  - CARB certification is also required if selling/distributing to California
  - All Fabricator reasonable prudent precaution, record-keeping, and labeling requirements must be met

# When must importers comply with the import certification rule?

The import certification deadline was **22 March 2019**

- The importer of record is responsible for submitting the import certification to U.S. Customs
- Import certification must be submitted at the time of entry for all:
  - HWPW, MDF, and PB panels
  - Component parts/finished goods containing HWPW, MDF, or PB
- Import certification requirements are specified in TSCA Title 19 (19 CFR 12.118 – 12.127)
- Certification is required regardless of the mode of transportation (e.g., air, rail, cargo ship, truck, small parcel, etc.)
- Contact your customs broker to identify the procedures for submitting the import certification



## Why is the import certification rule important?

- When entering a composite wood product or finished good into the USA, only two import certification options are available:
  - 1) *“I certify that all chemical substances in this shipment comply with all applicable rules or orders under TSCA and that I am not offering a chemical substance for entry in violation of TSCA or any applicable rule or order thereunder”*
  - 2) *“This product is not subject to the requirements of EPA TSCA Title VI”*
- Noncompliant products cannot be entered into the USA for any reason. Examples of noncompliant events which prohibit entry to the USA include, but are not limited to:
  - a) Failure of the products to meet EPA formaldehyde emission standards
  - b) Failure to properly produce and certify the products according to EPA TSCA Title VI
  - c) Failure to properly label the products according to EPA requirements (including labeling errors)
  - d) Noncompliant invoices or bills of lading issued by the seller

# What is the CANFER “coming into force” date for HWPW, MDF, & PB?

**The CANFER “coming into force” date is 7 January 2023**

- All composite wood products, to include component parts or finished goods, that are manufactured in or imported to Canada must be CANFER compliant by either:
  1. EPA TSCA-Title VI certification (additional CANFER labeling, record-keeping, and reporting requirements apply)
  2. CANFER certification (in the case of no EPA TSCA Title VI certification)
- Composite wood panels or finished goods that are manufactured and imported to Canada before 7 January 2023 are not required to comply with CANFER:
  - Organizations must have records to prove the material was manufactured, labeled and imported BEFORE 7 January 2023.
  - If the products were not labeled as conforming to TSCA Title VI and/or records are not available from the original product manufacturer to prove the goods were made before 7 January 2023, then the goods cannot be distributed or sold in Canada after 7 January 2023.

# What is the CANFER “coming into force” date for laminated products?

The CANFER “coming into force” date for laminated products is **7 January 2028**

- Laminated product producers manufacturing or importing to Canada must achieve third party certification to CANFER by 7 January 2028 **UNLESS** they:
  - Purchase and use only No-Added Formaldehyde (NAF) or phenol resins to adhere wood or bamboo veneers to the EPA- or CANFER-certified HWPW, MDF, or PB platform
  - Comply with the additional record-keeping requirements specified in CANFER § 27.

## **IMPORTANT NOTES:**

1. Laminated product producers must purchase and use only EPA- or CANFER-certified HWPW, MDF, or PB panels. *This requirement applies even after third party certification is achieved!*
2. A panel producer who manufactures EPA-certified HWPW, MDF, or PB panels internally, then laminates additional wood or bamboo veneers to these certified panels in a second production step must apply to their TPC to expand their scope of certification before 7 January 2028!



## **PART 3: COMPLIANCE REQUIREMENTS FOR EPA LAMINATED PRODUCT PRODUCERS**

## Important Notes about EPA and CANFER Laminated Product Producers:

1. Remember the EPA and CANFER definition of a laminated product producer:

*An entity which laminates a wood or woody-grass (e.g., bamboo) veneer to an EPA (or CANFER)-certified HWPW, MDF, or PB platform.*

2. Laminated product producers can either:

- a) Purchase EPA (or CANFER)-certified HWPW, MDF or PB panels from a supplier
- b) Manufacture EPA (or CANFER)-certified HWPW, MDF or PB panels internally. Such panel producers must be certified for both the **\*\*panel production step\*\*** and the **\*\*veneer-laminating step\*\*** (dual process certification)

3. Certification deadlines:

- a) EPA: On/before March 22, 2024
- b) CANFER: On/before January 7, 2028

MANUFACTURER REQUIREMENT	CARB 93120 + CAN/CSA	TSCA Title VI	CANFER
<b>Compliance Requirements – Laminated Product Producers</b>			
Use certified HWPW, MDF or PB to produce the laminated product	✗ Not applicable; see CARB Fabricator requirements	✓ Must use EPA TSCA Title VI certified panels	✓ Can use either EPA or CANFER certified panels
Laminated product producers must achieve third party certification	✗ Not applicable; see CARB Fabricator requirements	✓ Required by 22 March 2024 if using formaldehyde resin	✓ Required by 7 January 2028 if using formaldehyde resin
Exemption from Third Party Certification if using NAF or phenol formaldehyde resins	✗ Not applicable; see CARB Fabricator requirements	!! • Optional if using NAF or phenol resins in laminating step • Additional EPA record-keeping requirements apply	!! • Optional if using NAF or phenol resins in laminating step • Additional CANFER record-keeping requirements apply
Reasonable prudent precautions	✗ Not applicable; see CARB Fabricator requirements	✓ • Mandatory • Records will vary depending on supply chain risk and the actions taken	✓ Must obtain/retain CANFER Declaration of Certification for every purchased lot
Record of written notification to panel suppliers regarding compliance requirements	✗ Not applicable; see CARB Fabricator requirements	✓ • Must specify in writing to all suppliers that purchased panels must be EPA-certified • Must retain records of supplier agreement to comply	✓ Must obtain/retain CANFER Declaration of Certification for every purchased lot

MANUFACTURER REQUIREMENT	CARB 93120 + CAN/CSA	TSCA Title VI	CANFER
<b>Labeling Requirements - Laminated Product Producers</b>			
Label content	✗ Not applicable; see CARB Fabricator requirements	✓ <ul style="list-style-type: none"> <li>• Must comply with EPA Fabricator labeling requirements until 22 March 2024</li> <li>• After 22 March 2024, must comply with EPA panel producer labeling requirements unless exempt on the basis of the use of NAF or phenol resins</li> </ul>	✓ <ul style="list-style-type: none"> <li>• Must comply with CANFER laminated product/ component part/finished goods labeling requirements:</li> <li>• Manufacturer, importer, or seller name of the laminated product</li> <li>• Month &amp; year of manufacture</li> <li>• Compliance Statement               <ul style="list-style-type: none"> <li>➢ <b>EPA Path:</b> <i>TSCA Title VI compliant / conforme au titre VI de la TSCA</i></li> <li>➢ <b>CANFER Path:</b> <i>CANFER compliant/conforme au CANFER</i></li> </ul> </li> <li>• <b>IMPORTANT:</b> The certification status of the underlying panel (EPA or CANFER) matters when determining the compliance statement text!</li> <li>• Reference to NAF/ULEF exemption (if applicable):               <ul style="list-style-type: none"> <li>➢ "NAF / SFA"</li> <li>➢ "ULEF / TFEF"</li> </ul> </li> </ul>

MANUFACTURER REQUIREMENT	CARB 93120 + CAN/CSA	TSCA Title VI	CANFER
<b>Labeling Requirements - Laminated Product Producers</b>			
Dual-translated English and French label content	✗ Not required	✗ Not required	✓ Required
Label formatting	✗ Not required	✗ Not required	✓ <ul style="list-style-type: none"> <li>Text color must contrast sharply with background</li> <li>Text must have a type height ≥2mm</li> <li>Text easily distinguishable from other graphic material on the package</li> </ul>
De-minimis labeling exemption	✗ Not applicable; see CARB Fabricator requirements	✓ Laminated product is exempt from labeling if it contains less than 144 square inches of HWPW, MDF, or PB	✓ Laminated product is exempt from labeling if it contains less than 929 square centimeters of HWPW, MDF, or PB
Record-keeping	✗ Not applicable; see CARB Fabricator requirements	✓ Must conform to additional record-keeping requirements (see upcoming slides)	✓ Must conform to additional record-keeping requirements (see upcoming slides)
Import certification	✗ Not applicable; see CARB Fabricator requirements	✓ Required for all laminated products entering the USA	✗ Not applicable

MANUFACTURER REQUIREMENT		CARB 93120 + CAN/CSA		TSCA Title VI		CANFER
Invoice/Bill of Lading Requirements – <b>Laminated Product Producers</b>						
Invoice/Bill of Lading issued to purchasers of laminated products	✗	Not applicable; see CARB Fabricator requirements	✓	<ul style="list-style-type: none"> <li>Must comply with EPA Fabricator invoice/BOL requirements until 22 March 2024</li> <li>After 22 March 2024, must comply with EPA panel producer invoice/BOL requirements unless exempt on basis of NAF or phenol resins</li> </ul>	✗	Not Applicable
CANFER Declaration of Certification – <b>Laminated Product Producers</b>						
Declaration of Certification for each underlying composite wood panel	✗	Not Applicable	✗	Not Applicable	✓	Required for each underlying panel component
Declaration of Certification for the certified laminated product	✗	Not Applicable	✗	Not Applicable	✓	Required unless exempt from certification due to use of NAF/phenol resins
Frequency	✗	Not Applicable	✗	Not Applicable	✓	Issued to purchasers of every outgoing shipment

MANUFACTURER REQUIREMENT	CARB 93120 + CAN/CSA	TSCA Title VI	CANFER
<b>Record-Keeping Requirements – Laminated Product Producers</b>			
Resin trade name and manufacturer/supplier information	✗ Not applicable; see CARB Fabricator requirements	✓ Required	✓ EPA Path: Per EPA CANFER Path: Same as EPA
Panel producer contact information	✗ Not applicable; see CARB Fabricator requirements	✓ Required if purchasing EPA-certified panels from suppliers	✓ EPA Path: Per EPA CANFER Path: Same as EPA
For panels produced in-house, all records required of certified manufacturers	✗ Not applicable; see CARB Fabricator requirements	✓ Per EPA panel producer record-keeping requirements	✓ Per CANFER manufacturer record-keeping requirements
For resins produced in-house, records demonstrating the production of phenol or NAF resins	✗ Not applicable; see CARB Fabricator requirements	✓ Required if exempt from certification on basis of use of NAF or phenol resins	✓ Required if exempt from certification on basis of use of NAF or phenol resins
Date of purchase of certified composite wood raw materials used in lamination	✗ Not applicable; see CARB Fabricator requirements	✓ Required if purchasing EPA-certified panels for laminating	✓ EPA Path: Per EPA CANFER Path: Same as EPA
Records of reasonable prudent precautions	✗ Not applicable; see CARB Fabricator requirements	✓ Required if purchasing EPA-certified panels for laminating	✓ EPA Path: Per EPA CANFER Path: Retain CANFER Declaration of Certification
Copies of invoices/bills of lading from each supplier of certified composite wood panels	✗ Not applicable; see CARB Fabricator requirements	✓ Required if purchasing EPA-certified panels for laminating	!! Retain CANFER Declaration of Certification
Copies of import certification for certified composite wood raw materials used in laminated product production	✗ Import certification not applicable	✓ Requirement applies to importer of record for all laminated products entering the USA	✗ Import certification not applicable



## PART 4: TEST METHODS

## APPROVED TEST METHODS:

### CARB:

- ✓ ASTM E1333 Large Chamber (Primary)
- ✓ ASTM D6007 Small Chamber (Secondary)
- ✓ ASTM D5582 Desiccator (QC)
- ✓ JIS A 1460: 2015 Desiccator (QC)
- ✓ GP Microchamber (QC)
- ✓ Dynamic Microchamber (QC)
- ✓ ISO 12460-3 Gas Analysis (QC)
- ✓ ISO 12460-5 Perforator (QC)
- ✗ Perten Near Infrared (approval revoked 2017)
- ✗ EN 717
- ✗ EN 120

### EPA:

- ✓ ASTM E1333-14 Large Chamber (Primary)
- ✓ ASTM D6007-14 Small Chamber (Secondary)
- ✓ ASTM D5582-14 Desiccator (QC)
- ✓ JIS A 1460: 2015 Desiccator (QC)
- ✓ GP Microchamber (QC)
- ✓ Dynamic Microchamber (QC)
- ✓ ISO 12460-3 Gas Analysis (QC)
- ✓ ISO 12460-5 Perforator (QC)

## ASTM E1333/ASTM D6007 (TPC Qualification, Verification, and EPA/CARB Enforcement):

### ASTM E1333: Large Chamber (Primary)



### ASTM D6007: Small Chamber (Secondary)



## Manufacturer quality control test methods:

**ASTM D5582: Desiccator**



**JIS A1460: Japanese, 24-hr Desiccator**



## Manufacturer quality control test methods:

### ISO 12460-3: Gas Analysis



### ISO 12460-5: Perforator



## Manufacturer quality control test methods:

### GP™ Dynamic Microchamber



## How is test method equivalence/correlation established?

- ASTM E1333 is the test method of reference
- For equivalence between ASTM E1333 and ASTM D6007, CARB & EPA specify minimum equivalence values to be met
- For correlation between ASTM E1333/ASTM D6007 and any other test method:
  - EPA & CANFER specify the minimum correlation coefficient (r-value) to be met
  - CARB permits the TPC to determine an acceptable r-value; no minimum r-value is specified
  - The higher the r-value, the better the correlation

### EPA/CANFER Minimum r-values

[40 CFR 770.20(d)(2)(ii) and CANFER Test Directive]

Degrees of freedom (n-2)	"r" value
3 .....	0.878
4 .....	0.811
5 .....	0.754
6 .....	0.707
7 .....	0.666
8 .....	0.632
9 .....	0.602
10 or more .....	0.576

# What are key factors for test accuracy and repeatability?

- Sample collection/handling
  - Collect samples within required timeframe (<30 days from production)
  - Immediately cut and wrap
- Sample preparation
  - Minimize exposure to uncontrolled environmental conditions
  - Proper dimensions and edge treatments
- Sample conditioning and test
  - Time
  - Temperature
  - Relative Humidity
  - Background concentration of formaldehyde in air
  - Airflow
  - Chamber loading ratio
- Use only ISO/IEC 17025-accredited test labs; verify the test method (e.g. ASTM E1333, ASTM D6007, etc.) and “EPA TSCA Title VI” is identified within the scope of lab accreditation
- If a CARB/EPA-approved TPC lab; review the annual inter-laboratory results to verify performance



# **PART 5: BMH AUDITING PROCEDURES FOR CERTIFICATION OF MANUFACTURERS AND LAMINATED PRODUCT PRODUCERS**

## What are BMH auditing procedures?

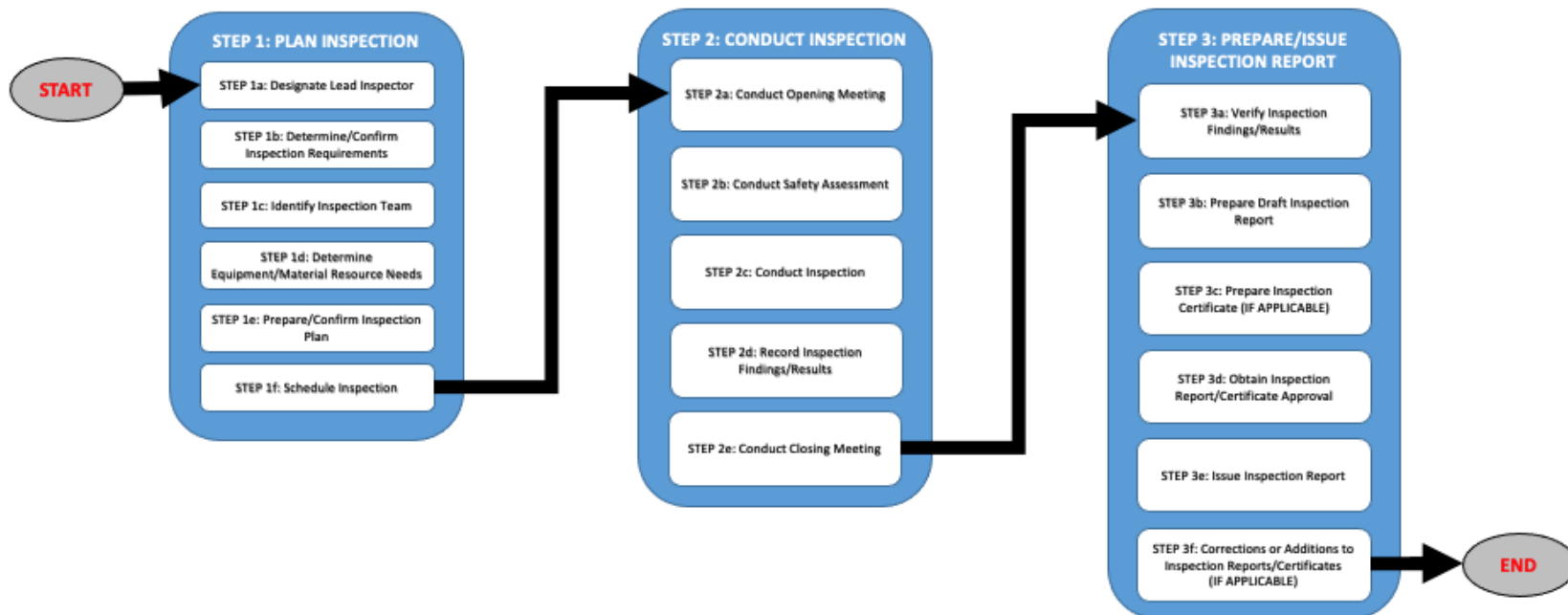
- Site audits must be performed according to the procedures defined in:
  1. **OP-016: Inspection Methods and Procedures**
  2. **OP-016a: Remote Assessment and ICT Policy (if conducting the audit remotely or if using special technologies to assist during the assessment)**
- Site audits represent systematic reviews of the production and quality control processes in place at the time the inspection is conducted.
- Audits are performed on a sampling basis meaning that every process, product, or system may not be assessed each time.
- **NOTE:** certifications issued to composite wood product manufacturers constitute a certification of the process used to produce the certified composite wood products, not a certification of every lot/batch of the composite wood product itself.

## What are BMH auditing procedures?

- Audit findings must be based on objective evidence collected and documented at the time of the audit/inspection.
- The auditor/inspector is the eyes and ears of the BMH program manager and decision-makers who usually will not be present during the audit/inspection. Audit accuracy and thoroughness are critical! We rely on you!
- Clear and complete audit reports, with findings supported by objective evidence, are essential to ensuring the audits results are clear and the assessment was conducted impartially.

# What are BMH auditing procedures?

## OP-016 INSPECTION PROCESS OVERVIEW



## What documents provide sources of requirements to be evaluated?

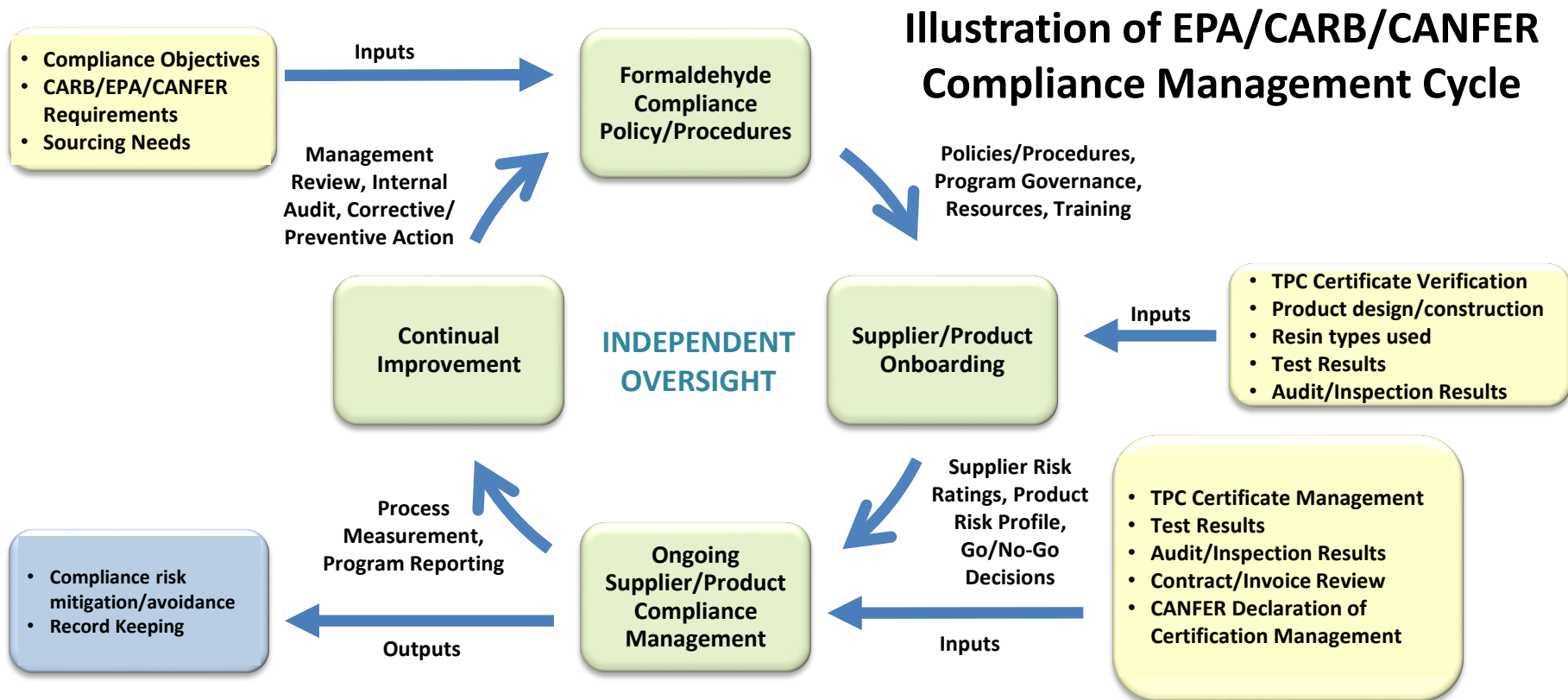
- CARB ATCM 93120
- EPA TSCA Title VI
- CAN/CSA 0160-16 (if included in the scope of BMH certification)
- CANFER Regulation & Test Directive
- ASTM E1333 test method
- ASTM D6007 test method
- The QC test method used by the factory (e.g., JIS A 1460, ASTM D5582, ISO 12460-3, etc.)
- Manufacturer's written quality control manual and procedures (**NOTE:** the manufacturer's quality system and internal procedures are auditable and hold the same weight as the regulations themselves!)
- BMH EPA, CARB, CANFER, CAN/CSA Certification Program Summary (WI-018)
- Other requirement sources as applicable

## **PART 6: REASONABLE PRUDENT PRECAUTIONS**

## What does “Reasonable Prudent Precautions” really mean?

- An organization must make every effort to assure the products they purchase comply with EPA/CARB regulations
- The minimum requirements specified in CARB 93120 and EPA TSCA Title VI must be met, but typically are not sufficient to effectively manage compliance risk!
- A holistic, supply-chain wide approach to compliance and supplier risk management is needed
- No “one size fits all”; what is adequate for one organization may not be adequate for another
- CANFER does not specify Reasonable Prudent Precaution requirements; due diligence is implied to meet record-keeping obligations







## Develop and implement a written compliance policy/procedure that addresses:

- 1. Written policy stating commitment to product regulatory compliance, including CARB, EPA & CANFER**
- 2. Program authority and governance**
  - Designate a member of management who, irrespective of other duties, is responsible for formaldehyde compliance
- 3. Standard procedures to clearly define the process and roles/responsibilities for managing compliance activities. Examples include, but are not limited to:**
  - new supplier and product onboarding/approval
  - ongoing supplier and product compliance management
  - internal production & quality management (Manufacturers, Laminated Product Producers, & Fabricators only)
  - raw material, work-in-process, and/or finished goods inventory management and traceability
  - Product labeling and invoice/bills of lading procedures (incoming and outgoing)
  - incoming and/or outgoing shipment inspection and test
  - supplier site audits/inspections (do not rely on “paper assurances”)
  - supplier corrective action and improvement

## Develop and implement a written compliance policy/procedure that addresses:

### **4. Procedures for stop shipment, stop sale, and product recall**

- EPA TSCA Title VI 72-hour customer notification requirement
- CANFER 48-hour customer and Canada Minister of Environment notification requirement

### **5. Reporting, management review, and corrective/preventive action procedures to monitor program effectiveness & address compliance process gaps/improvement needs**

### **6. Employee communication and training plan**

- Communicate personnel roles/responsibilities and set expectations for program effectiveness

### **7. Supplier communication and training plan**

- Communicate supplier requirements and company expectations

### **8. Notification and management policy in the event of an enforcement inspection or other contact by a government authority**

### **9. Records management and retention policy (including minimum retention timeframe):**

- Records required by CARB, EPA & CANFER
- Other records as needed to demonstrate conformance procedures

## PART 7: ENFORCEMENT

## How do CARB and EPA enforce their respective regulations?

- ✓ Field site inspections to evaluate:
  - Labeling compliance
  - Check chain of custody documents and record retention (invoices/BOL or other records)
  - Screen suspect products (FLEC chamber)
  - Purchase samples at retail, commercial, and internet outlets
- ✓ Product emissions testing (to include “deconstructed testing” of finished goods)
- ✓ Document and record requests (compliance policies/procedures, sourcing/purchasing records, inventory records, sales records, test records, etc.)
- ✓ Shipment data provided by U.S. customs



## What are some issues that could trigger an enforcement action?

- Failure to meet EPA/CARB certification requirements
- Failure to meet EPA/CARB formaldehyde emission standards
- Failure to use EPA/CARB certified composite wood panels in the construction of a finished good
- Failure to submit accurate and timely import certifications to U.S. customs at the time of entry to the USA
- Failure by the panel producer/fabricator to properly label products prior to shipment:
  - Labeling errors are considered critical violations; unlabeled or incorrectly labeled products are prohibited from entry or distribution in the USA! [see 40 CFR 770.45(f)]
  - Labeling errors cannot be corrected after the product has left the manufacturer. Consult your legal counsel for advice.
- Failure to obtain/retain records of purchase contracts, invoices, bills of lading and other records which prove product compliance

## How do organizations prepare for a potential enforcement inspection?

1. Retain clear records to document the actions taken to ensure compliance. At a minimum this must include:
  - ✓ Records of the panel producer and the date the panels were produced
  - ✓ Records of the supplier (if different from the panel producer) and the date of purchase of the panels or component parts/finished goods
  - ✓ Bills of Lading/Invoices (or equivalent records from the supplier to demonstrate the delivered products comply with CARB and/or EPA requirements)
  - ✓ Other records of “Reasonable Prudent Precautions” taken
  - ✓ Records of import declarations made (EPA only)
2. Validate products are properly labeled on an ongoing basis
3. Verify products are traceable to the incoming shipment (PO, lot, or batch)
4. Prepare an enforcement inspection action plan; train corporate and field staff to understand what to do/who to contact in the event of an inspection

# Question & Answer

# ACRONYMS:

AB = Accreditation Body

ANSI = American National Standards Institute

ASTM = ASTM International

ATCM = Airborne Toxic Control Measure

CANFER = Canada Formaldehyde Emissions from Composite Wood Products Regulation

CARB = California Air Resources Board

CWP = Composite Wood Product

EN = European Norme

EPA = U.S. Environmental Protection Agency

FT2 = Square Foot (unit of area)

HUD = U.S. Department of Housing and Urban Development

HWPW = Hardwood Plywood

HWPW-CC = Hardwood Plywood Composite Core

HWPW-VC = Hardwood Plywood Veneer Core

IAF = International Accreditation Forum

ILAC = International Laboratory Accreditation Cooperation

ISO = International Standards Organization

JIS = Japanese Industrial Standard

MDF = Medium Density Fiberboard

NAF = No- Added Formaldehyde

OSB = Oriented Strand Board

PB = Particleboard

ppm = Parts per million

QC = Quality Control

SOP = Standard Operating Procedure

TPC = Third-Party Certifier

ULEF = Ultra-Low Emitting Formaldehyde



## REFERENCED INFORMATION SOURCES:

1. Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products, Title 17, California Code of Regulations, Sections 93120-93120.12 ([https://ww3.arb.ca.gov/regact/2007/compwood07/fro-final.pdf?\\_ga=2.169633189.526149977.1614029911-37474927.1611857444](https://ww3.arb.ca.gov/regact/2007/compwood07/fro-final.pdf?_ga=2.169633189.526149977.1614029911-37474927.1611857444))
2. California Air Resources Board (CARB) Composite Wood Products ATCM Website (including Program Links and FAQs) (<https://ww2.arb.ca.gov/our-work/programs/composite-wood-products-program>)
3. 40 CFR, Chapter 1, Subchapter R, Part 770, Toxic Substances Control Act (TSCA) Title VI: *Formaldehyde Standards for Composite Wood Products* (<https://www.ecfr.gov/cgi-bin/text-idx?SID=7b1af0d73477f9dd7cc60abf32cabbe4&mc=true&node=pt40.34.770&rgn=div5>)
4. Canada Formaldehyde Emissions from Composite Wood Products Regulation (SOR/2021-148) (<https://canadagazette.gc.ca/rp-pr/p2/2021/2021-07-07/html/sor-dors148-eng.html>)
5. CANFER Directive Concerning Testing for Formaldehyde Emissions (<https://www.canada.ca/en/health-canada/services/chemical-substances/other-chemical-substances-interest/formaldehyde.html#a1>)
6. CEPA, 2017. “Consultation on the proposed regulatory approach to reduce emissions of formaldehyde from composite wood products” <https://www.canada.ca/en/environment-climate-change/services/canadian-environmental-protection-act-registry/consultation-document-reducing-formaldehyde-emissions.html>
7. U.S. Environmental Protection Agency Website (including Program Links and FAQs) (<https://www.epa.gov/formaldehyde>)
8. Joint ARB/AHFA/KCMA Webinar for Fabricators, California Air Resources Board, June 23, 2008. (<http://www.arb.ca.gov/toxics/compwood/outreach/arb062308webinar.pdf>)
9. National Wood Flooring Association (NWFA) commentary regarding Docket ID number EPA-HQ-OPPT-2012-0018, p. 34827 Issue: Bamboo Inclusion. October 2, 2013 (<http://www.regulations.gov/#!docketDetail;D=EPA-HQ-OPPT-2012-0018>)

# USEFUL WEB LINKS:

1. US EPA Formaldehyde: <https://www.epa.gov/formaldehyde>
2. US EPA List of approved Accreditation Bodies: <https://www.epa.gov/formaldehyde/recognized-accreditation-bodies-under-formaldehyde-emission-standards-composite-wood>
3. US EPA List of approved Third Party Certifiers: <https://www.epa.gov/formaldehyde/recognized-third-party-certifiers-under-formaldehyde-emission-standards-composite-wood>
4. US EPA Frequently Asked Questions for Stakeholders: <https://www.epa.gov/formaldehyde/frequent-questions-regulated-stakeholders-about-implementing-formaldehyde-standards>
5. US EPA Compliance Guides: <https://www.epa.gov/formaldehyde/resources-and-guidance-materials-translations-formaldehyde-emission-standards-composite#questionsandanswers>
6. California Air Resources Board ATCM 93120: [https://ww3.arb.ca.gov/regact/2007/compwood07/fro-final.pdf?\\_ga=2.130755851.526149977.1614029911-37474927.1611857444](https://ww3.arb.ca.gov/regact/2007/compwood07/fro-final.pdf?_ga=2.130755851.526149977.1614029911-37474927.1611857444)
7. CARB List of Approved TPCs: <https://ww2.arb.ca.gov/resources/documents/carb-approved-third-party-certifiers-executive-orders>
8. CARB List of Certified Manufacturers: <https://ww2.arb.ca.gov/our-work/programs/composite-wood-products-program>
9. CARB List of NAF/ULEF Exempt Manufacturers: <https://ww2.arb.ca.gov/our-work/programs/composite-wood-products-program>
10. CARB Frequently Asked Questions: <https://ww2.arb.ca.gov/resources/documents/frequently-asked-questions-regulated-community>
11. CARB Fact Sheets for Regulated Entities: <https://ww2.arb.ca.gov/resources/documents/compwood-publications>
12. US Consumer Product Safety Commission Updated on Formaldehyde: [https://www.cpsc.gov/s3fs-public/An-Update-On-Formaldehyde-725\\_1.pdf?O3CFjmPrIFt\\_ogVb7OhX4ZDPu7fyky8Q](https://www.cpsc.gov/s3fs-public/An-Update-On-Formaldehyde-725_1.pdf?O3CFjmPrIFt_ogVb7OhX4ZDPu7fyky8Q)
13. Canada Formaldehyde: <https://www.canada.ca/en/health-canada/services/chemical-substances/other-chemical-substances-interest/formaldehyde.html#a1>

# Thank You

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