

# Formaldehyde Emission Standards for Composite Wood Products

National Program Chemicals Division  
Office of Pollution Prevention and Toxics  
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# Presentation Overview



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# Background on TSCA Title VI



- On July 7, 2010, the Formaldehyde Standards for Composite Wood Products Act was signed into law to become Toxic Substances Control Act (TSCA) Title VI.
- TSCA Title VI establishes formaldehyde emission standards identical to the California Air Resources Board (CARB) limits.
- TSCA Title VI directs the implementation of regulations to ensure compliance with formaldehyde emission standards.
- The final rule is available in the Federal Register under 40 CFR Part 770 and posted online at <https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0461-0001>.
  - Became effective on May 22, 2017.
  - Beginning December 12, 2018, emission standards, certification, testing, recordkeeping and labeling provisions begin.\*
  - Beginning March 22, 2019, import certification begins.\*
  - Beginning March 22, 2024, non-exempt laminated products become hardwood plywood and must comply with panel producer requirements.\*

\* The final rule extending compliance dates will be published in the Federal Register soon, and will be effective 30 days after publication. Read a prepublication version of the final rule here: <https://www.epa.gov/formaldehyde/compliance-date-extension-formaldehyde-emission-standards-composite-wood-products-0>

# Regulation Summary



- TSCA Title VI requires that composite wood products be tested and certified, ensuring only compliant products enter the product supply chain.
- Composite wood products must be certified by an EPA-recognized third-party certifier (TPC), also called an EPA TSCA Title VI TPC.
- Composite wood products covered under TSCA Title VI:
  1. Hardwood Plywood;
  2. Medium-Density Fiberboard, including thin-MDF; and
  3. Particleboard.

\* There are limited testing and certification exemptions for no-added formaldehyde (NAF) resins or ultra-low emitting formaldehyde (ULEF) resins.
- The new regulation includes recordkeeping, reporting, and labeling requirements.
- All applications and notifications submitted to EPA under the final rule must be done through the EPA Central Data Exchange (CDX) at: <https://cdx.epa.gov>

# Product Exemptions



If you produce any other component parts or finished goods that contain *only* exempt products, you are not subject to the new regulation.

## Exemptions include the following products:

- 1) Hardboard
- 2) Structural plywood
- 3) Structural panels
- 4) Structural composite lumber
- 5) Military-specified plywood
- 6) Curved plywood
- 7) Oriented strand board
- 8) Glued laminated lumber
- 9) Prefabricated wood I-joists
- 10) Finger-jointed lumber
- 11) Wood packaging (e.g., pallets, crates, spools, dunnage)
- 11) Composite wood products used inside a new vehicle other than a recreational vehicle, such as:
  - Rail cars, boats, and aircraft
- 12) Windows that contain composite wood products if the windows contain less than 5% composite wood product by volume
- 13) Exterior doors and garage doors that contain composite wood products, if:
  - The doors are made from composite wood products manufactured with NAF or ULEF resins; or
  - The doors contain less than 3% composite wood product by volume
- 14) Refurbished or antique furniture
- 15) Finished goods previously sold/supplied to an end user who purchased or acquired the finished good in good faith for purposes other than resale are exempt

# Regulated Product Definitions



Regulated composite wood products under TSCA Title VI include:

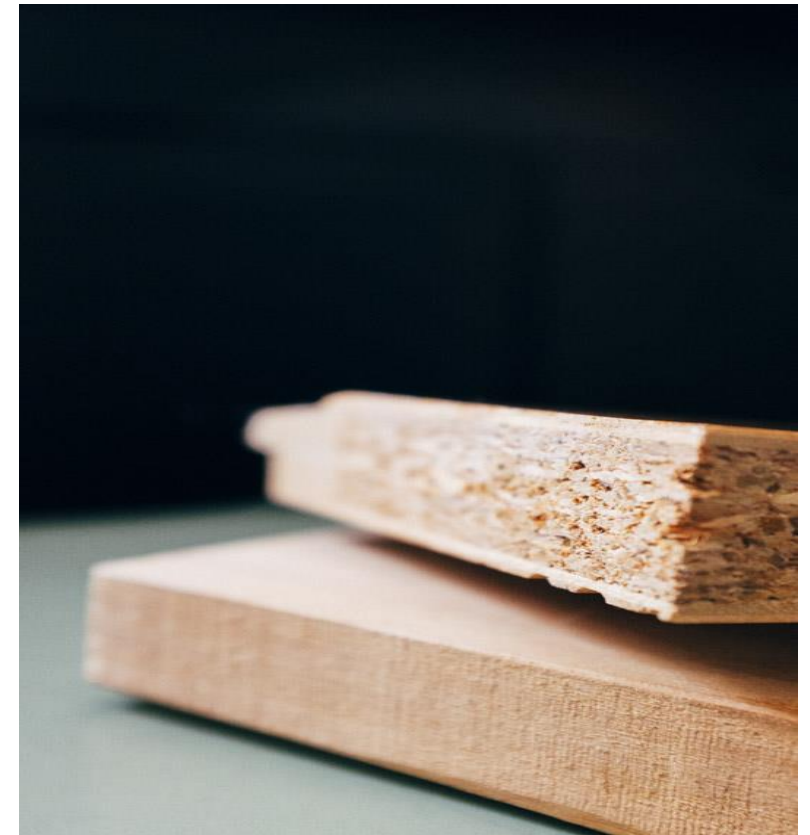
1. **Hardwood Plywood (HWPW):** Hardwood or decorative panel that is intended for interior use and composed of an assembly of layers or plies of veneer, joined by adhesive with a lumber core, a particleboard core, a medium-density fiberboard core, a hardboard core, a veneer core (or any other special core or special back).
2. **Medium-Density Fiberboard (MDF):** Panel composed of cellulosic fibers made by dry forming and pressing a resonated fiber mat.
3. **Particleboard (PB):** A panel composed of cellulosic material in the form of discrete particles (as distinguished from fibers, flakes, or strands) that are pressed together with resin.
4. **Laminated Product:** Product with wood, or woody grass veneer affixed to a composite wood platform by a fabricator as a finished product or a component part

# Emission Standards



Regulated products must meet the emission standards beginning December 12, 2018:

Product	Emission Standard
Hardwood Plywood – Veneer Core	0.05 ppm of formaldehyde
Hardwood Plywood – Composite Core	0.05 ppm of formaldehyde
Medium-Density Fiberboard	0.11 ppm of formaldehyde
Thin Medium-Density Fiberboard	0.13 ppm of formaldehyde
Particleboard	0.09 ppm of formaldehyde





## ***Composite Wood Product Manufactured-by date: Beginning December 12, 2018.***

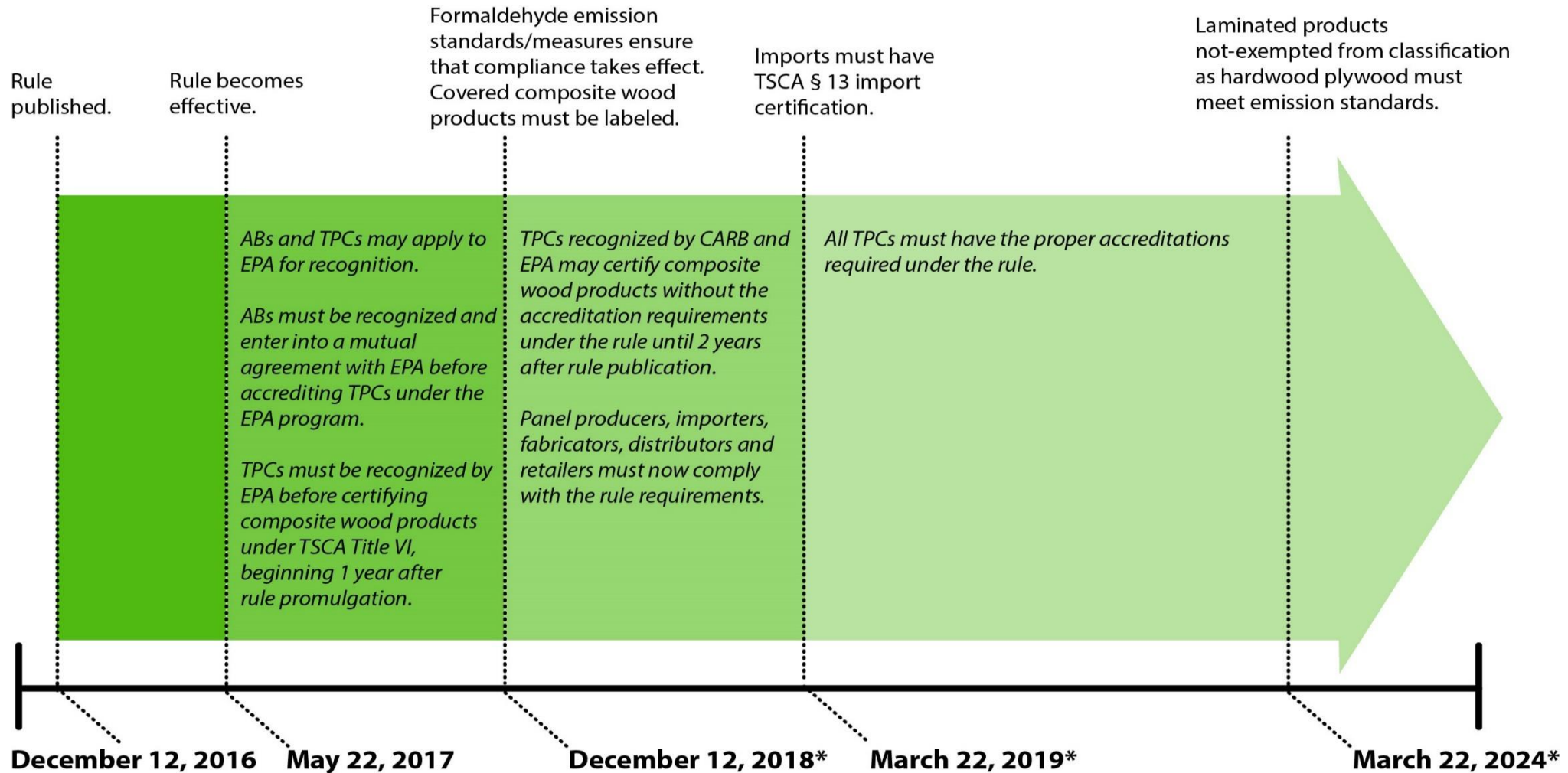
- Composite wood products and finished goods containing these composite wood products that are sold, supplied, offered for sale, or manufactured must comply with the rule starting on the manufactured-by date.
- Under TSCA, the definition of manufacture includes imports. Therefore the manufactured-by date also includes the imported-by date for imported composite wood products or finished goods containing them.
- Composite wood products or finished goods manufactured/imported before the specified manufactured-by date are not subject to the rule.
  - They can be incorporated into finished goods at any time. Retailers, fabricators, and distributors are permitted to continue to buy and sell these composite wood products and laminated products, as well as finished goods that incorporate these products.
  - Composite wood products must have associated records documenting panels or finished good containing regulated composite wood was in the inventory or imported prior to the manufactured-by date.



***Laminated Product Manufactured-by date:  
Beginning March 22, 2024.***

- Before this date all laminated product producers must comply with the general requirements for fabricators.
- Beginning on this date, laminated products must either be made using a no-added formaldehyde, phenol-formaldehyde, or EPA approved resin through the petition process to attach the wood or woody grass veneer to the compliant platform to be exempt from the definition of HWPW (see 40 CFR 770.4(a) - (b)) or comply with the testing, certification, and recordkeeping requirements for HWPW producer in addition to requirements for fabricators.
- Producers of HWPW exempt laminated products must maintain records that demonstrate eligibility for the exemption in order to claim the exemption.

# Compliance Timeline



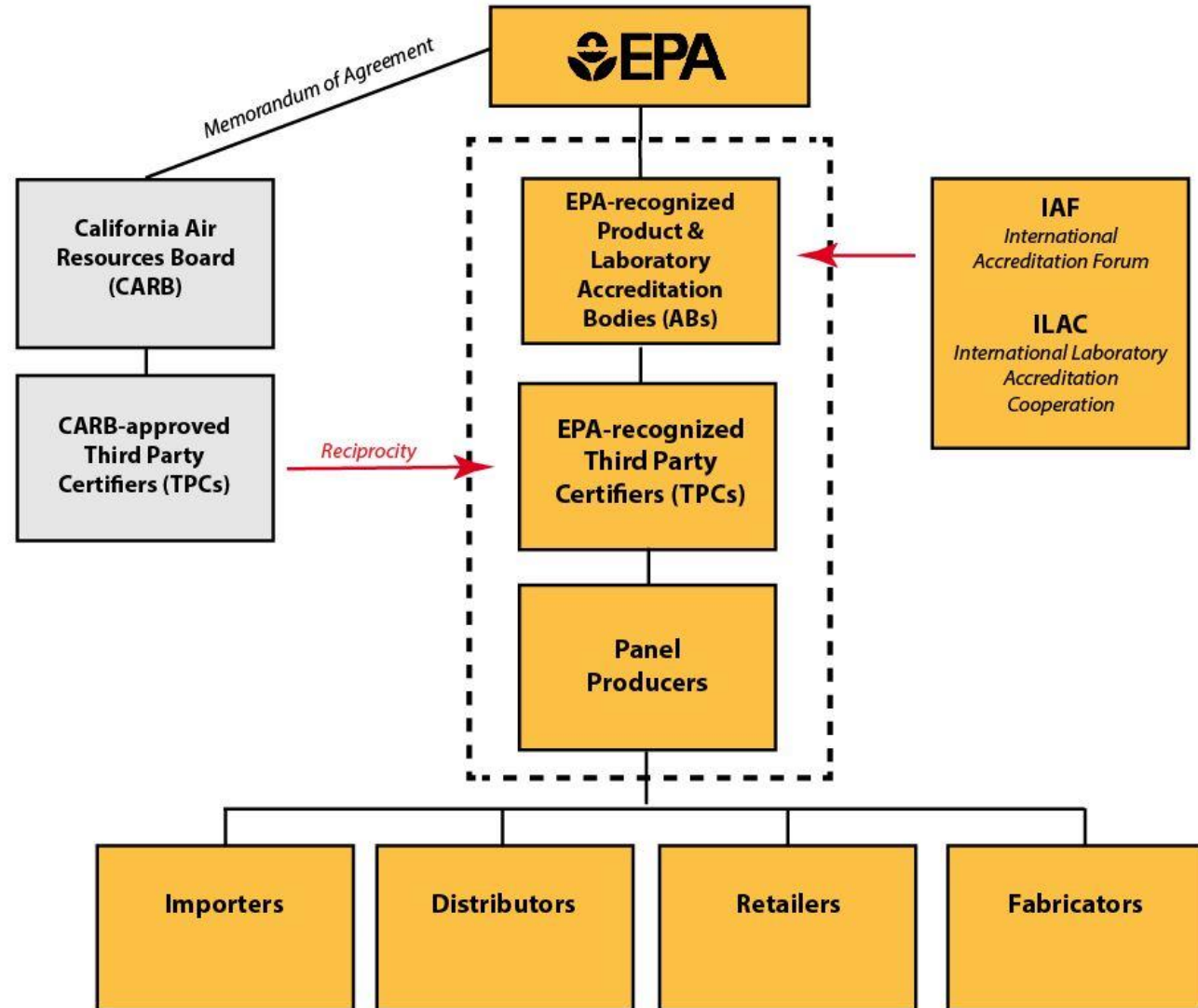
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# Rule Framework and Impacted Entities



Each entity must fulfill certain requirements to ensure that only compliant composite wood products enter the supply chain.

*The dotted line represents the EPA's third-party certification program.*



# Responsibilities Under TSCA Title VI

Under TSCA Title VI, there are two categories of **accreditation bodies (ABs)**, Laboratory ABs and Product ABs – which are responsible for the following:

1. Ensuring third-party certifiers (TPCs) and/or their laboratories meet international voluntary consensus standards by determining the accreditation eligibility and accreditation of TPCs and/or laboratories.
2. Providing notifications to EPA for specific events pertaining to status change of TPCs or change to AB information.
3. Maintaining records and submitting annual reports to document TPC compliance with requirements for assessment, reassessment, and surveillance on-site assessments
4. Identifying an “agent for service” located in the U.S. if not a domestic entity.
5. Acting impartially in accordance with their accreditation when performing activities under the EPA program by taking steps to address any conflicts of interest.
6. Laboratory ABs must also verify the participation of proficiency testing programs.

Additionally ABs must apply to and be recognized by EPA after entering in a recognition agreement with the Agency.



# Responsibilities Under TSCA Title VI

Under TSCA Title VI, **third-party certifiers (TPCs)** are responsible for the following:

1. Certifying that composite wood products are produced in accordance with 40 CFR Part 770 and comply with ISO/IEC 17065:2012(E);
2. Providing notifications to EPA about status changes for panel producers and TPCs;
3. Maintaining records and submitting annual reports to document panel producers' compliance with quality assurance and quality control standards;
4. Using laboratories that have been accredited to ISO/IEC 17025:2005(E) by an EPA-Recognized Laboratory AB;
5. Identifying an “agent for service” located in the U.S. if not a domestic entity; and
6. Acting impartially in accordance with their accreditation when performing activities under the EPA program by taking steps to address any conflicts of interest.





# Responsibilities Under TSCA Title VI

- Additionally TPCs must apply to and be recognized by EPA before certifying any composite wood products.
  - During two-year reciprocity transitional period (ending on March 22, 2019), CARB TPCs may certify composite wood products after being recognized by EPA without yet having received accreditation from an EPA-recognized AB.
  - After March 22, 2019, CARB TPCs must be accredited by an EPA-recognized AB and have the required additional ISO accreditations issued by the EPA-recognized AB to retain EPA recognition as a TSCA Title VI TPC under reciprocity.



# Responsibilities Under TSCA Title VI

Under TSCA Title VI, **panel producers** are responsible for the following:

1. Applying for and receiving third-party certification of regulated products by an EPA-recognized TPC;
2. Conducting quality control tests on a regular basis to ensure regulated composite wood products meet emission standards:
  - For particleboard and MDF, at least *once per 8- or 12-hour shift plus or minus one hour for production* for each product line for each production type (unless reduced testing has been approved); and
  - For HWPW, varies (x times per week or month) by square feet of product produced.
3. Meeting reporting and recordkeeping requirements, and ensuring that all quality control requirements are met; and
4. Labeling products they produce either separately or by the bundle.





# Responsibilities Under TSCA Title VI

*Fabricators and Laminated  
Product Producers*



Under TSCA Title VI, **fabricators** are responsible for the following:

1. Ensuring they purchase only compliant composite wood products, whether unfinished panels or incorporated into component parts or finished goods;
2. Keeping records documenting supplier's information if they purchase products directly from a wood product mill; and
3. Labeling any finished goods they produce or every box/bundle containing finished goods they produce.





# Responsibilities Under TSCA Title VI

*Fabricators and Laminated  
Product Producers*



- Fabricators may also be laminated product producers.
- A laminated product producer is:
  - A manufacturing plant or other facility that manufactures (excluding facilities that solely import products) laminated products on the premises.
- A laminated product is:
  - A product in which a wood or woody-grass veneer affixed to a regulated composite wood product platform under TSCA Title VI; or
  - A component part used in the construction or assembly of a finished good.
- *Non-exempt* laminated products made with formaldehyde-based resins (other than phenol-formaldehyde (PF)) to attach a veneer to composite wood products must be tested and certified to meet the HWPW emission standard beginning March 22, 2024.
- *Exempt* laminated products are those products that are made with PF resin or NAF resin to attach a veneer to an already compliant platform.
  - Any person may petition the agency to initiate a rulemaking for additional exemptions for laminated products from the term “hardwood plywood” if using alternative resins.



# Responsibilities Under TSCA Title VI

Importers, Distributors,  
and Retailers



Under TSCA Title VI, **importers**, **distributors**, and **retailers** are responsible for recordkeeping and labeling requirements, including:

1. Ensuring they purchase only compliant composite wood products, whether unfinished panels or incorporated into component parts or finished goods;
2. Ensuring labels stay intact on individual items **or** on file if items were purchased by the bundle and sold separately (label information must be made available to potential customers upon request);
3. Using a method sufficient to identify the supplier of the panel or finished good, and linking the information on the label to the product; and
4. Importers must *also* provide an import certification for all imports two years after publication of the final rule.



- Regulated entities are not permitted to sell any composite wood products or finished goods containing composite wood products if they have been stockpiled.
- Products are stockpiled when:
  - Between July 7, 2010 and June 12, 2017 you have purchased at least 20% greater than your average rate of purchase during the 2009 calendar year; and
  - You purchased the products at a higher rate specifically to circumvent emission standards.
- Products are not stockpiled when:
  - Composite wood products are manufactured or purchased for legitimate business reasons at a higher rate, because of increased demand, natural disaster, planned business expansion, etc.

# Partial Third-Party Certification Exemptions and Reduced Testing



- Panel producers may seek reduced testing or partial third-party certification exemption for the use of NAF or ULEF resins.
- CARB-approved or EPA-recognized TPCs must review and approve applications.
- After the initial two year exemption, panel producers must reapply every two years to continue to qualify for the NAF and ULEF exemptions.
- TPCs may also approve reduced quality control testing for particleboard and MDF.

# Petition for Additional Product Exemption



- Laminated products that use PF or NAF resins to attach a veneer to an already compliant platform are exempt from the definition of HWPW and the testing and certification requirements that become effective beginning March 22, 2024.
- Any person may petition the Agency to expand the exemption for laminated products from the definition of the term “hardwood plywood.”
  - Petitions should include all available and relevant information, including but not limited to studies conducted and emissions data to support the petition.
- EPA will review each submitted petition and, where appropriate, publish a proposed rule in the Federal Register based on the petition with a public comment period of generally 30 days before taking a final action to expand the exemption for laminated products to include additional resin formulations.

# For More Information



Contact your EPA regional office for specific local requirements.



Erik Winchester, Chief  
Fibers and Organics Branch  
202-564-6450  
[Winchester.Erik@epa.gov](mailto:Winchester.Erik@epa.gov)

Toiya Goodlow, Associate Chief  
Program Assessment and Outreach Branch  
202-566-2305  
[Goodlow.Toiya@epa.gov](mailto:Goodlow.Toiya@epa.gov)



Visit EPA's website for updates: <http://www.epa.gov/formaldehyde>.

