

# **Small Entity Compliance Guide for Mills**

Formaldehyde Emissions Standards for  
Composite Wood Products  
Title VI of the Toxic Substances Control Act



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EPA -740-B-17-001



*This guide was prepared pursuant to section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996 , Pub. L. 104-121 as amended by Pub. L. Number 110-28. THIS DOCUMENT IS NOT INTENDED, NOR CAN IT BE RELIED UPON, TO CREATE ANY RIGHTS ENFORCEABLE BY ANY PARTY IN LITIGATION WITH THE UNITED STATES. The statements in this document are intended solely as guidance to aid you in complying with the formaldehyde emissions standards for composite wood products in Title VI of the Toxic Substances Control Act (TSCA) and the implementing regulations in 40 CFR part 770. EPA may decide to revise this guide without public notice to reflect changes in EPA's approach to implementing TSCA Title VI or to clarify information and update text.*

*To determine whether EPA has revised this guide and/or to obtain copies, contact EPA's Small Business Ombudsman Hotline at (800) 368-5888 or (202) 566-1970 in DC, or consult the EPA's formaldehyde website at <http://www.epa.gov/formaldehyde>. The full texts of TSCA Title VI and the implementing regulations are also available at this website.*

# Introduction

This document is published by EPA as the official compliance guide for small entities, as required by the Small Business Regulatory Enforcement Fairness Act of 1996. Before you begin using the guide you should know that the information in this guide was compiled and based on the Formaldehyde Emission Standards for Composite Wood Products regulation published on December 12, 2016. EPA is continually improving and upgrading its rules, policies, compliance programs, and outreach efforts. You can determine whether EPA has revised or supplemented the information in this guide by consulting EPA's formaldehyde website at <http://www.epa.gov/formaldehyde>.

## Contents

This guide is organized as follows:

- Introduction
- Regulation Summary and Compliance Timetable
- Who Must Comply
- How to Comply
- For More Information
- Appendix and Acronym List

## Terminology

Throughout this guide, when the term “composite wood product” is used, it refers to the three composite wood products generally regulated by TSCA Title VI—hardwood plywood, medium-density fiberboard (MDF) and particleboard.

Other key terminology are defined in the Appendix: Glossary of Environmental Terms.

**OTHER GUIDES TO CONSIDER: OTHER GUIDES TO CONSIDER:** *There are other separate small entity compliance guides available for different entities along the value chain, including:*

1. *Importers, Distributors and Retailers;*
2. *Fabricators and Laminated Product Producers; and*
3. *Accreditation Bodies (ABs) and Third-Party Certifiers (TPCs).*

*Each of these guides can be found at <https://www.epa.gov/formaldehyde/resources-and-guidance-materials-translations-formaldehyde-emission-standards-composite>.*

## Who Should Use this Guide?

This guide is for mills and other entities that are “panel producers” under the Formaldehyde Standards for Composite Wood Products Regulations. For example, many of the following types of businesses are likely to be covered by this guide: veneer, plywood, and engineered wood product manufacturing (NAICS code 3212).

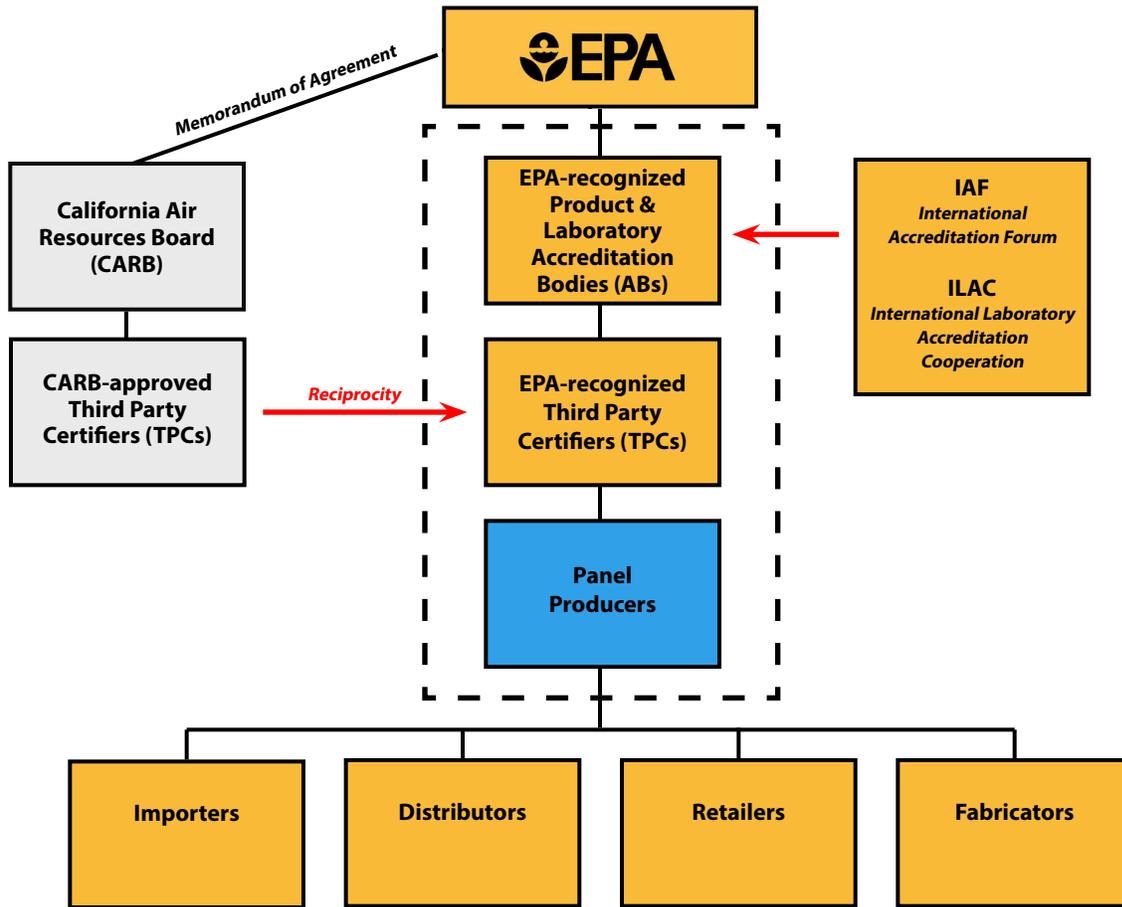
## What Does This Guide Cover?

This guide specifically covers the requirements for mills (panel producers) of regulated composite wood products under the Formaldehyde Standards for Composite Wood Products Act (TSCA Title VI) and the implementing regulations, found at 40 CFR part 770. Specifically, this guide defines key terms, discusses which entities are regulated as panel producers, and summarizes the emission standards, quality control testing, and third-party certification requirements.

This compliance guide explains your federal compliance obligations with respect to the formaldehyde regulations under TSCA Title VI. There may be other state or local requirements which apply to you that are different from, or more stringent than, the federal requirements. For more assistance in this area, contact your EPA regional office or state environmental agency.

Figure 1 outlines the structure of the TSCA Title VI program and shows the relationships between EPA and the various groups involved in implementation of the regulation. Mills and other entities that are “panel producers” are identified in blue with their relationship to the remainder of the TSCA Title VI program.

FIGURE 1 - TSCA TITLE VI PROGRAM



### How Do I Obtain a Complete Copy of This Rule?

A complete copy of the final rule and supporting documents can be found in Federal Register (Vol. 81, No. 81, p. 89674) at <https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0461-0001>.

A copy of the final rule and subsequent amendments can also be found at <https://www.epa.gov/formaldehyde/formaldehyde-emission-standards-composite-wood-products>. See section entitled "For More Information" of this compliance guide for additional information resources.

**NOTE:** *If your composite wood products are manufactured, sold or supplied in California, you must also comply with the California Air Resource Board's Airborne Toxic Control Measure (CARB ATCM) to control formaldehyde emissions from composite wood products. More information on the CARB ATCM can be found online at <http://www.arb.ca.gov/toxics/compwood/compwood.htm>.*

# Regulation Summary and Compliance Timetable

## Regulation Summary

TSCA Title VI establishes formaldehyde emission standards for three types of composite wood products: hardwood plywood, MDF, and particleboard. The purpose of TSCA Title VI and its implementing regulations is to reduce formaldehyde emissions from these composite wood products, which will reduce exposures to formaldehyde, resulting in benefits for human health.

The regulations require the covered composite wood products to be tested to ensure compliance with the TSCA Title VI formaldehyde emission standards and certified by an EPA TSCA Title VI Third-Party Certifier (TPC). Limited testing and certification exemptions are available for products made with no-added formaldehyde-based (NAF) resins or ultra low-emitting formaldehyde (ULEF) resins. To ensure that only compliant products enter and move through the product supply chain, the regulations contain recordkeeping, reporting, and labeling requirements. The formaldehyde

emission standards are identical to the emission standards currently in place in California, and the regulations are as consistent as practical with the requirements currently in effect under the California Air Resource Board's Airborne Toxic Control Measure (CARB ATCM). CARB-approved TPCs are eligible for recognition under the EPA program through reciprocity with the CARB program.

## Compliance Timetable

Beginning June 1, 2018, all panel producers must comply with the regulations.

Table 1 provides a summary of the regulatory requirements and compliance dates. The "Who Must Comply" section of this guide provides more detail on the rule requirements for mills and other entities that are panel producers and what they must do to document compliance with the regulation.

**Table 1. Summary Requirement and Compliance Dates**

Requirement	Compliance Date
<b>Composite Wood Product Producers</b>	
Products must comply with emission standards: <ul style="list-style-type: none"> <li>Hardwood plywood (made with a veneer core or a composite core) = 0.05 parts per million (ppm)</li> <li>Particleboard = 0.09 ppm</li> <li>MDF = 0.11 ppm</li> <li>Thin MDF = 0.13 ppm (40 CFR §770.10)</li> </ul>	<i>June 1, 2018</i>
Products must be certified by an EPA TSCA Title VI TPC unless they are eligible for a limited exemption for products made with NAF-based or ULEF resins. (40 CFR §§ 770.15, 770.17, 770.18)	<i>June 1, 2018</i>
Products must undergo quarterly testing and routine quality control testing using specified methods. (40 CFR §770.20)	<i>June 1, 2018</i>
Regulated products certified as compliant with the CARB ATCM Phase II emission standards must be labeled as compliant with either the TSCA Title VI or the CARB ATCM Phase II emission standards (which are set at identical levels). (40 CFR §770.45)	<i>Until March 22, 2019</i>
Regulated products manufactured in or imported into the United States may not rely on the CARB reciprocity of 40 CFR 770.15(e) and must be certified and labeled as TSCA Title VI compliant by an EPA TSCA Title VI TPC with all of the required accreditations.	<i>After March 22, 2019</i>
Records, including testing, production, purchaser, transporter, and non-complying lot information, must be kept for 3 years. Records demonstrating initial eligibility for reduced testing or a limited third-party certification exemption for products made with NAF-based or ULEF resins must be kept for as long as exemption eligibility is claimed. (40 CFR §770.40)	<i>June 1, 2018</i>

# Who Must Comply

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## What Is a Composite Wood Product?

A “composite wood product” means hardwood plywood made with a veneer or composite core, MDF, and particleboard.

## What Entities Are Regulated as “Panel Producers?”

Panel producers are manufacturing plants or other facilities that manufacture composite wood products on the premises. Mills that produce hardwood plywood, MDF, and/or particleboard are panel producers. Entities that import hardwood plywood, MDF, and/or particleboard, but do not make those products themselves, are not panel producers. Nevertheless, these importers are required to take steps (through recordkeeping) to ensure that they are purchasing composite wood products or component parts that comply with the emission standards and to document these steps.

Some laminated product producers will be regulated as panel producers. A laminated product is a component part used in the construction or assembly of a finished good. In addition, a laminated product must be produced by either the fabricator of the finished good in which the product is incorporated or by a fabricator who uses the laminated product in the further construction or assembly of a component part. Laminated product producers that make laminated products by attaching a wood or woody grass veneer to a compliant core or platform with a phenol-formaldehyde (PF) resin or a resin formulated with NAF as part of the resin cross-linking structure are exempt from the definition of hardwood plywood, and thus they are not treated as hardwood plywood panel producers under the regulations. Laminated product producers whose products do not use a PF resin or resin formulated with NAF as part of the resin cross-linking structure will be subject to the testing and certification requirements for hardwood plywood after March 22, 2024. EPA has also included a petition process through which any person can petition the Agency to expand the exemption for laminated products from the definition of the term “hardwood plywood,” discussed later in this guide.

## Are Any Mills Exempted or Not Covered as Panel Producers?

While there is a de minimis standard for some of the requirements for finished goods, there is no de minimis standard for panel producers making composite wood products. However, the regulations only apply to certain products. Use the “Glossary of Environmental Terms” included as an appendix to this guide to define the following terms, as needed. Answer the yes or no questions below to determine whether your mill is making regulated products.

1. Are your products “panels”? If yes, proceed to the next question. If no, the products are unregulated.
2. Are the products composite wood products (see glossary for full definitions)? If no, the products are unregulated. If yes, continue to next step.
  - Hardwood Plywood;
  - MDF; and
  - Particleboard.
3. Are your panels grandfathered in because they were manufactured (or imported) before June 1, 2018? If yes, those panels are unregulated. If no, continue to next step.
4. Are the panels subject to an exemption (see below)? If yes, the products are unregulated. If no, the products are regulated under TSCA Title VI. Note that some of the exemptions are for finished goods, not panels. You are only eligible for those exemptions if you are making the panel and also using the panel to make the finished good.
  - Hardboard;
  - Structural plywood, as specified in the standard entitled ‘Voluntary Product Standard—Structural Plywood’ and numbered PS-1–09;
  - Structural panels, as specified in the standard entitled ‘Voluntary Product Standard—Performance Standard for Wood-Based Structural-Use Panels’ and numbered PS-2–10;
  - Structural composite lumber, as specified in the standard entitled ‘Standard Specification for Evaluation of Structural Composite Lumber Products’

and numbered ASTM D5456–14b;

- Oriented strand board;
- Glued laminated lumber, as specified in the standard entitled ‘Structural Glued Laminated Timber’ and numbered ANSI A190.1–2017;
- Prefabricated wood I-joists, as specified in the standard entitled ‘Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists’ and numbered ASTM D5055–16;
- Finger-jointed lumber;
- Wood packaging (including pallets, crates, spools, and dunnage);
- Composite wood products used inside a new—
  - i. Vehicle (other than a recreational vehicle) constructed entirely from new parts that has never been—
    - b. The subject of a retail sale; or
    - c. Registered with the appropriate State agency or authority responsible for motor vehicles or with any foreign state, province, or country;
  - ii. Rail car;
  - iii. Boat;
  - iv. Aerospace craft; or
  - v. Aircraft;
- Windows that contain composite wood products, if the window product contains less than 5 percent by volume of hardwood plywood, particleboard, or MDF, combined, in relation to the total volume of the finished window product; or
- Exterior doors and garage doors that contain composite wood products, if— (A) the doors are made from composite wood products manufactured with NAF resins or ultra low-emitting formaldehyde (ULEF) resins; or (B) the doors contain less than 3 percent by volume of hardwood plywood, particleboard, or MDF, combined, in relation to the total volume of the finished exterior door or garage door.

## **Are There Any Incentives to Use NAF-based Resins or ULEF resins in my products?**

Yes, there are incentives in place. You can apply to your EPA TSCA Title VI TPC or to CARB for reduced testing or third-party certification exemptions for products made with NAF-based resins or ULEF resins. The applications must contain one test pursuant to test method ASTM E1333–14 or ASTM D6007–14 and at least three months of quality control testing results for products made with NAF-based resins and two tests pursuant to test method ASTM E1333–14 or ASTM D6007–14 and six months of quality control testing results for products made with ULEF resins. TPCs have 90 days to review the applications to make sure the emission standards and other requirements are met. These exemptions last for two years and can be renewed.

# How to Comply

The regulations are designed to ensure compliance with TSCA Title VI formaldehyde emission standards so that only compliant products are sold, supplied or offered for sale in the United States. In order to achieve this, panel producers are required to get their panels tested and certified. They are also required to label their products and follow the recordkeeping and reporting requirements.

## Emission Standards

Product	Emission Standard
Hardwood Plywood - Veneer Core	0.05 ppm of formaldehyde
Hardwood Plywood - Composite Core	0.05 ppm of formaldehyde
MDF	0.11 ppm of formaldehyde
Thin MDF	0.13 ppm of formaldehyde
Particleboard	0.09 ppm of formaldehyde

*\*Note: ppm refers to parts per million.*

The emission standards are based on test method ASTM E1333-14.

## Product Testing Requirements

The regulations require quality control testing and quarterly testing. Quality control testing is done on a regular basis and can be done at the facility if there is testing equipment on-site. The main purpose is to monitor the day-to-day operations of the facility's quality control program and ensure that changes in production do not result in non-complying lots. Quarterly testing is conducted by an EPA TSCA Title VI TPC and is necessary for the products to be certified.

Quality control tests must be performed at a set frequency.

Product	Quality Control Testing Frequency
<ul style="list-style-type: none"> <li>Hardwood Plywood - Veneer Core</li> <li>Hardwood Plywood - Composite Core</li> </ul>	At least one test per week per product type if the weekly hardwood plywood production is >100,000 ft <sup>2</sup> and < 200,000 ft <sup>2</sup>
	At least two tests per week per product type if the weekly hardwood plywood production is ≥200,000 ft <sup>2</sup> and < 400,000 ft <sup>2</sup>
	At least four tests per week per product type if the weekly hardwood plywood production is ≥ 400,000 ft <sup>2</sup>
	If weekly production of hardwood plywood at the panel producer is 100,000 ft <sup>2</sup> or less, but more than 100,000 ft <sup>2</sup> is produced each month, at least one test per 100,000 ft <sup>2</sup> for each product type produced; or, if less than 100,000 ft <sup>2</sup> of a particular product type is produced, one quality control test of that product type every month that it is produced
MDF (including thin-MDF)	Once per shift (eight or twelve hours, plus or minus one hour of production) for each production line for each product type
Particleboard	

Additional quality control tests must be conducted when there is:

- A change in the resin formulation that increases formaldehyde to urea ratio;
- An increase by more than 10 percent in the amount of formaldehyde resin used by square foot or by panel;
- A change of more than 20 percent in the adhesive application rate;
- A decrease in designated press time by more than 20 percent, or
- If the quality control manager or employee believes the panel being produced may not meet the applicable standard.

The following test methods are approved for use as quality control test methods, with a showing of correlation to ASTM E 1333-14, or, the equivalent D6007 chamber under 770.20(d):

- ASTM D6007–14;
- ASTM D5582–14;
- BS EN ISO 12460-3:2015 (Gas Analysis Method);
- DMC (Dynamic Micro Chamber), 2007 Georgia Pacific User’s Manual;
- DMC (Dynamic Micro Chamber), 2012 Georgia Pacific User’s Manual;
- BS EN ISO 12460-5:2015 (Perforator Method); or
- JIS A 1460:2015 (24-hr Desiccator Method).

### Third-Party Certification Requirements

Panel producers must apply to an EPA TSCA Title VI TPC to have their products certified. The application requires:

- Contact information;
- The panel producer’s quality control manual;
- Contact information for the quality control manager;
- List of products and their resin systems;
- At least five formaldehyde tests results (conducted by a EPA TSCA Title VI TPC using a specified test method);
- The results of at least five quality control tests;
- Linear regression equation and correlation data (The correlation must be based on a minimum sample size of five data pairs and a simple linear regression where the dependent variable (Y-axis) is the quality control test value and the independent variable (X-axis) is the ASTM E1333-14 test value or, upon a showing of equivalence in accordance with 770.20(d), the equivalent ASTM D6007-14 test value. Data generated beginning December 12, 2016 from a panel producer’s quality control test method correlated to either an ASTM E1333-10 test chamber, or, upon showing equivalence, an ASTM D6007-02 test chamber, may be used to certify compliant composite wood until a new annual correlation is required. Either composite wood products or formaldehyde emissions reference materials can be used to establish the correlation); and
- Results of the initial onsite inspection by an EPA TSCA Title VI TPC.

EPA TSCA Title VI TPCs must act on a panel producer’s complete application within 90 calendar days of receipt. EPA TSCA Title VI TPCs will perform quarterly inspections of their panel producers and quarterly emission tests.

### EPA TSCA Title VI Third-Party Certifiers

For a complete list of all EPA TSCA Title VI TPCs, visit EPA’s webpage at <https://www.epa.gov/formaldehyde/recognized-third-party-certifiers-under-formaldehyde-emission-standards-composite-wood>.

For a list of all CARB-approved TPCs, visit CARB’s web page at <http://www.arb.ca.gov/toxics/compwood/listoftpcs.htm>.

When contracting with an EPA TSCA Title VI TPC, you may wish to consider such factors as geographic proximity, language of business operations, and the types of products that the EPA TSCA Title VI TPC has experience certifying.

### CARB and TSCA Title VI

If a product is certified by a CARB-approved TPC that is also recognized as an EPA TSCA Title VI TPC, it will be considered certified under TSCA Title VI until March 22, 2019. CARB TPCs must be recognized by EPA to certify products under TSCA Title VI, however, CARB TPCs have until March 22, 2019 to become fully accredited pursuant to the EPA final rule.

### Non-complying Lots

It is a violation of the regulations to sell, supply, or offer for sale a non-complying lot. If this occurs, it is important to take steps to minimize the impact of the violation. You are required to notify the recipients of the lot within 72 hours of becoming aware of the failing test results for that lot. You will have to either recall the non-complying lot or work with the recipients to treat, retest and certify the non-complying lot. The notification of a non-complying lot should include a statement that the composite wood products belonging to the non-complying lot should be isolated from other composite wood products and must not be further distributed in commerce. You should also include a description of how you plan to either recall the non-complying lot or how you will treat, retest, and certify the lot. You also will have to notify your EPA TSCA Title VI TPC about the disposition of the non-complying lot.

The non-complying lots provision in 40 CFR § 770.22 only refers to composite wood products in the form of panels, meaning that only affected panels are subject to the requirements of that section. The non-complying lot

provisions do not apply beyond when non-complying panels have been incorporated into component parts or finished goods.

## Provisions for Small Entities

There are no small entity exemptions and there is no de minimis standard based on the size of smaller panel producers.

## Reporting Requirements for Panel Producers

In addition to the information in an application to have a product certified, a panel producer must provide certain information to its EPA TSCA Title VI TPC, and direct purchasers of its products. Below is a list of reporting requirements.

What is the notification/report?	Who do you notify/report to?	When do you send the notification/report?
Change in quality control manager	Your TPC	Within 10 calendar days of change
Significant changes to production that could affect formaldehyde emissions	Your TPC	Within 72 hours
Notification of shipment of non-complying lot	Fabricators, importers, distributors, and retailers that received the lot	With 72 hours of receiving non-complying test result
Information on the disposition of non-complying lots	Your TPC	Within 7 calendar days
Product data reports	Your TPC	Monthly
Records on quarterly emission testing	Direct Purchasers	If they request this information, provide it prior to sale

## Developing a Quality Control Manual

The quality control manual provides facility-specific information needed to ensure consistent production of compliant composite wood products. Your EPA TSCA Title VI

TPC will need to approve your quality control manual and may wish to collaborate with you in producing the manual.

At a minimum, the manual will need to include:

- The organizational structure of the quality control department (including key employee names and titles);
- Sampling procedures;
- Method of handling samples, including a specific maximum time period for analyzing quality control samples;
- Frequency of quality control testing;
- Procedures used to identify changes in formaldehyde emissions resulting from production changes;
- Provisions for additional testing;
- Recordkeeping procedures;
- Labeling procedures;
- Average percentage of resin and press time for each product type;
- Product types, and if applicable, a description of product variables covered under each product type;
- Procedures for reduced quality control testing, if applicable; and
- Procedures for handling non-complying lots.

## Generating Monthly Product Data Reports

Monthly product data reports must contain a data sheet for each product type with emissions test and production information, and a quality control graph containing the quality control limit, the shipping quality control limit (if applicable), the results of quality control tests and any retest values.

## Recordkeeping Requirements for Panel Producers

Panel producers must keep the following records for three years:

- Records of quarterly emission tests;
- Records of quality control tests;
- Production records, including a description of the composite wood product(s), the date of manufacture,

lot numbers, and tracking information allowing each product to be traced to a specific lot produced;

- Records of changes in production, including changes of more than 10 percent in the resin use percentage, changes in resin composition that result in a higher ratio of formaldehyde to other resin components, and changes in the process, such as changes in press time by more than 20 percent;
- Purchaser information;
- Transporter information;
- Information on the disposition of non-complying lots; and
- Representative copies of labels used.

For panel producers taking advantage of the reduced testing or reduced third-party certification provisions, the records demonstrating eligibility for those provisions must be kept for as long as the panel producer is taking advantage of those provisions.

## Product Labeling

You have two labeling options: label each panel separately, or label bundles of a panels. Should panels become separated from the bundle, you will need a method to link them to their proper bundle, such as color-coded edge marking. The label can be a stamp, tag, or sticker.

The labels must have the panel producer's name, the lot number, the identification number of the EPA TSCA Title VI TPC, and a statement that the products are TSCA Title VI certified. You can use an identification number instead of the panel producer name, but your customers must have enough information to link your panels back to you. If you are taking advantage of the reduced testing or third-party certification provisions for NAF-based resins or ULEF formaldehyde resins, you may label your panels as being made with these resins, but you are not required to do so.

## How Is My Compliance Determined, and What Happens if the Agency Discovers a Violation?

To maximize compliance, EPA implements a balanced program of compliance assistance, compliance incentives, and traditional law enforcement. EPA knows that small businesses that must comply with complicated new statutes or rules want to do the right thing, but may lack the requisite knowledge, resources, or skills. Compliance assistance information and technical advice helps small businesses to understand and meet their environmental obligations. Compliance incentives, such as EPA's Small Business Policy, apply to businesses with 100 or fewer employees and encourage persons to voluntarily discover, disclose, and correct violations before they are identified by the government (more information about EPA's Small Business Policy is available at <https://www.epa.gov/enforcement/small-businesses-and-enforcement>). EPA's enforcement program is aimed at protecting the public by targeting persons or entities who neither comply nor cooperate to address their legal obligations.

EPA uses a variety of methods to determine whether businesses are complying, including facility inspections, reviewing records and reports, coordinating with U.S. Customs and Border Protection on importing, and responding to citizen tips and complaints. Under TSCA, EPA may file an enforcement action against violators seeking penalties of up to \$37,500 per violation, per day. The proposed penalty in a given case will depend on many factors, including the number, length, and severity of the violations, the economic benefit obtained by the violator, and its ability to pay. EPA has policies in place to ensure penalties are calculated fairly. These policies are available to the public. In addition, any company charged with a violation has the right to contest EPA's allegations and proposed penalty before an impartial judge or jury.

EPA encourages small businesses to work with the Agency to discover, disclose, and correct violations. The Agency has developed self-disclosure, small business, and

small community policies to modify penalties for small and large entities that cooperate with EPA to address compliance problems. For more information on compliance assistance and other EPA programs for small businesses, please contact EPA's Small Business Ombudsman at (202) 566-2075.

## For More Information

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Get additional information at <http://www.epa.gov/formaldehyde>.

The regulations can be found in the Federal Register (Vol. 81, No. 81, p. 89674) at <https://www.regulations.gov/document?D=EPA-HQ-OPPT-2016-0461-0001>.

A copy of the final rule and subsequent amendments can also be found at <https://www.epa.gov/formaldehyde/formaldehyde-emission-standards-composite-wood-products>. See section entitled "For More Information" of this compliance guide for additional information resources.

### Where Can I Go If I Have Questions or Need Further Assistance?

Please contact EPA's TSCA Hotline with questions by telephone at (202) 554-1404, by fax at (585) 232-3111 or by email at [tsc hotline@epa.gov](mailto:tsc hotline@epa.gov).

# Appendix

## Acronym List

ATCM	Airborne Toxic Control Measure
CARB	California Air Resources Board
FR	Federal Register
MDF	Medium-Density Fiberboard
NAF	No-Added Formaldehyde
TPC	Third-Party Certifier
TSCA	Toxic Substances Control Act
ULEF	Ultra Low-Emitting Formaldehyde

## Glossary of Environmental Terms

**Accreditation Body** or **AB** means an organization that provides an impartial verification of the competency of conformity assessment bodies or TPCs.

**Bundle** means more than one composite wood product, component part, or finished good fastened together for transportation or sale.

**Component part** means an object other than a panel that contains one or more composite wood products and is used in the construction or assembly of finished goods. Component parts that are sold directly to consumers are considered finished goods.

**Composite core** means a platform for making hardwood plywood or laminated products that consists of particleboard and/or MDF, or combination core.

**Finished good** means any good or product, other than a panel, that contains hardwood plywood (with a veneer or composite core), particleboard, or MDF and that is not a component part or other part used in the assembly of a finished good. Site-built buildings or other site-built real property improvements are not considered finished goods.

**Hardwood plywood** means a hardwood or decorative panel that is intended for interior use and composed of (as determined under ANSI/HPVA HP-1-2016 (incorporated by reference, see 40 CFR §770.99)) an assembly of layers or plies of veneer, joined by an adhesive with a lumber core, a particleboard core, a MDF core, a hardboard core, a veneer core, or any other special core or special back material. Hardwood plywood does not include military-specified plywood, curved plywood, or any plywood specified in PS-1-09, Voluntary Product Standard—Structural Plywood (incorporated by reference, see 40 CFR §770.99), or PS-2-10, Voluntary Product Standard—Performance Standard for Wood-Based Structural-Use Panels (incorporated by reference, see 40 CFR §770.99). In addition, hardwood plywood includes laminated products except as provided at 40 CFR §770.4.

**Laminated product** means a product in which a wood or woody grass veneer is affixed to a particleboard core or platform, a MDF core or platform, or a veneer core or platform. A laminated product is a component part used in the construction or assembly of a finished good. In addition, a laminated product is produced by either the fabricator of the finished good in which the product is incorporated or a fabricator who uses the laminated product in the further construction or assembly of a component part.

**Laminated product producer** means a manufacturing plant or other facility that manufactures (excluding facilities that solely import products) laminated products on the premises. Laminated product producers are fabricators and, beginning March 22, 2024, laminated product producers are also hardwood plywood panel producers except as provided at 40 CFR §770.4.

**Lot** means the panels produced from the beginning of production of a product type until the first quality control test; between one quality control test and the next; or from the last quality control test to the end of production for a particular product type.

**Medium-density fiberboard** or **MDF** means a panel composed of cellulosic fibers made by dry forming and pressing a resinated fiber mat (as determined under ANSI A208.2–2016 (incorporated by reference, see 40 CFR §770.99).

**No-added formaldehyde-based** or **NAF resin** means a resin formulated with no added formaldehyde as part of the resin crosslinking structure in a composite wood product that meets the emission standards in 40 CFR §770.17(c).

**Non-complying lot** means any lot of composite wood product represented by a quarterly test value or quality control test result that indicates that the lot exceeds the applicable standard for the particular composite wood product in 40 CFR §770.10(b). A quality control test result that exceeds the quality control limit is considered a test result that indicates that the lot exceeds the applicable standard. Future production of the product type(s) represented by a failed quarterly test are not considered certified and must be treated as a non-complying lot until the product type(s) are re-qualified through a successful quarterly test. The non-complying lots provision in 40 CFR § 770.22 only refers to composite wood products in the form of panels, meaning that only affected panels are subject to the requirements of that section. The non-complying lot provisions do not apply beyond when non-complying panels have been incorporated into component parts or finished goods.

**Panel** means a thin (usually less than two inches thick), flat, usually rectangular piece of particleboard, MDF or hardwood plywood. Embossing or imparting of an irregular surface on the composite wood products by the original panel producer during pressing does not remove the product from this definition. Cutting a panel into smaller pieces, without additional fabrication, does not make the panel into a component part or finished good. This does not include items made for the purpose of research and development, provided such items are not sold, supplied, or offered for sale.

**Panel producer** means a manufacturing plant or other facility that manufactures (excluding facilities that solely import products) composite wood products on the premises.

**Particleboard** means 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 (as determined under ANSI A208.1–2016 (incorporated by reference, see 40 CFR §770.99). Particleboard does not include any product specified in PS–2–10, Performance Standard for Wood-Based Structural-Use Panels (incorporated by reference, see 40 CFR §770.99).

**Production line** means a set of operations and physical industrial or mechanical equipment used to produce a composite wood product in one facility utilizing the same or similar equipment and quality assurance and quality control procedures.

**Resin system** means type of resin used, including but not limited to urea-formaldehyde, soy, phenol-formaldehyde, or melamine-urea-formaldehyde.

**Thin medium-density fiberboard** or **thin MDF** means medium-density fiberboard that has a thickness less than or equal to 8 millimeters or 0.315 inches.

**Third-party certifier** or **TPC** means a conformity assessment body that provides both product certification services and laboratory testing services (either directly or through contracted services).

**Ultra low-emitting formaldehyde** or **ULEF resin** means a resin in a composite wood product that meets the emission standards in 40 CFR §770.18(c).

**Veneer** means a sheet of wood or woody grass with a maximum thickness of 6.4 millimeters (1/4 inch) that is rotary cut, sliced, or sawed from a log, bolt, flitch, block, or culm; including engineered veneer.

**Veneer core** means a platform for making hardwood plywood or laminated products that consists of veneer.

**Woody grass** means a plant of the family Poaceae (formerly Gramineae) with hard lignified tissues or woody parts.