

Third-Party Certifier Bulletin

Composite Wood Products Airborne Toxic Control Measure
Title 17, California Code of Regulations, Sections 93120-93120.12

This Bulletin, last revised in 2012, has been updated to provide additional guidance and clarifications to organizations approved by the California Air Resources Board (CARB) as third-party certifiers (TPCs) of composite wood product manufacturers (panel producers). This guidance may also be useful for TPC subcontractors. This information is intended to assist with the administration of composite wood product certification programs pursuant to the CARB Airborne Toxic Control Measure (ATCM) To Reduce Formaldehyde Emissions From Composite Wood Products (also referred to as the "CARB regulation").

General

1. **Pesticides in resins (new Jan. 2024)** - CARB has become aware that some manufacturers or resin suppliers add a pesticide (also referred to as a biocide) to their resin formulation to prevent bacterial growth. These pesticides may be included as a component of the resin formulation or an additive that is included at the time of composite wood panel production. All pesticides used in the United States or present in a product imported for sale in the United States must be registered for specific uses by the U.S. EPA. CARB has found that some of the pesticides used in resins have been approved by U.S. EPA for use in adhesives or in composite wood products. However, CARB has also found that some pesticides being used in adhesives or composite wood products have not been approved by U.S. EPA for that use. CARB suggests that TPCs inform the manufacturers they are working with that the manufacturer should verify with their resin supplier that any pesticides used in their resins are approved by U.S. EPA for this use. For more information, TPCs may direct manufacturers to the following website: www.epa.gov/pesticide-labels.
2. **Status of TPC Executive Order beyond expiration date** - Every two years, TPCs are required to apply to CARB to renew their Executive Order (EO). If the TPC submits an application to CARB before their EO expires, the most recent EO will remain effective until CARB either:
 - Approves the application and issues a new EO, or
 - Denies the application and revokes the EO after determining that the TPC no longer has the ability or qualifications to be a TPC.

3. TPC annual reports – As a reminder, the ATCM requires all TPCs to provide CARB with an annual report on or before March 1 of each year regarding certification work during the previous year. Appendix 3 of the ATCM lists the minimum requirements for the annual report. Failure to submit an annual report in a timely manner may result in revocation of a TPC's Executive Order.

Inspections of Composite Wood Panel Producers

4. Minimum frequency of inspections – If a TPC has certified a composite wood manufacturing mill and that mill has not produced CARB-certified products for a quarter (three months) or longer, CARB recommends that TPCs:
 - Allow the mill to remain certified, with the understanding that the mill is required to notify the TPC once production of CARB-certified products resumes;
 - Seek confirmation (e.g., a letter or email) from the mill that no CARB-certified products were produced during the quarter;
 - Conduct a mill inspection as soon as possible after being notified that the mill has resumed production of CARB-certified products; and
 - Conduct an inspection once every two quarters (at a minimum), regardless of whether the mill has notified the TPC that they have resumed production, to ensure that the mill is not producing CARB-certified products without being inspected.

Once a mill resumes routine production, quarterly inspections and quality control (QC) testing should be resumed as required by the CARB regulation.

5. No production at time of quarterly inspection – If a TPC arrives at a composite wood mill for a quarterly inspection and finds no composite wood products available for testing, CARB recommends that the TPC require the mill to notify the TPC of the earliest date at which the TPC can return to select samples for the quarterly tests. In this situation, the quarterly inspection and testing will be completed as soon as possible beyond the normally scheduled date of the quarterly inspection and testing.
6. Independent inspections – The ATCM requires TPCs to conduct independent inspections of composite wood manufacturers. Independent inspections cannot be conducted by anyone who is employed by or affiliated with a manufacturer. Inspections must be conducted by TPC employees or subcontractors trained by the TPC, as required by the TPC's accrediting body. TPCs that use subcontractors to conduct mill inspections must notify CARB to include the subcontractors on the TPC's Executive Order.
7. Unusual circumstances at time of quarterly mill inspection – In the event of unsafe conditions (e.g., civil unrest, political instability, natural disaster, pandemic, etc.) in the area of a composite wood manufacturing mill, it is reasonable for a TPC to conduct remote inspections using video/teleconference technology and have the mill send the

TPC the panels or samples for the quarterly tests. The mill and TPC should document occurrences of unsafe conditions for inspection purposes. While inspections are remote, the mill should inform the TPC of any changes or developments that might affect the certification of their products. Remote inspections are an exception and should not be the normal course of business while providing certification services. On-site inspections should be resumed when conditions are determined to be safe.

Certification of Composite Wood Products

8. Certification of products that are not subject to the CARB regulation - Composite wood products that are not subject to the CARB regulation (e.g., structural plywood) cannot be third-party certified or labeled as certified product that complies with the CARB emission standards. A TPC may independently test and report emissions of non-regulated products so that a manufacturer or fabricator can verify the emissions of the products. However, non-regulated products cannot be certified or labeled as a certified product under the ATCM. Composite wood products that are exempt because they cannot be certified under the CARB regulation should not be confused with no-added formaldehyde (NAF) or ultra-low emitting formaldehyde (ULEF) products that can be exempt from third-party certification.
9. Lumber core, special core, or two-ply HWPW - Hardwood plywood (HWPW) with lumber core or special core material and two-ply HWPW are not subject to the ATCM and cannot be third-party certified or labeled as certified product. The ATCM includes emission standards for HWPW with two core types: veneer core and composite core. HWPW with veneer core (HWPW-VC) consists of a face veneer (hardwood or decorative softwood species), a back veneer or special back material (e.g., resin impregnated paper), and a core of one or more layers of wood veneer. HWPW with a composite core (HWPW-CC) has a core made of particleboard (PB) and/or medium density fiberboard (MDF), or combination core (which consists of layers of veneer and PB or MDF). Composite core does not include lumber core or special core material. Two-ply HWPW does not have a core.
10. Molded products - Products made in molds (e.g., school desk chairs and toilet seats) using wood flour, wood particles, or wood fibers are not subject to the ATCM and cannot be third-party certified or labeled as certified products.
11. Certification of products, not manufacturers - A TPC's certification of composite wood manufacturers should be specific to the products being certified at a particular manufacturer. The certification should not be of a manufacturing mill without referring to the products being certified to comply with section 93120.2(a) of the ATCM. As an example, a TPC should issue a certification to a mill for specific products (e.g., a range of thicknesses of particleboard) and should not issue a certification to the mill itself. Certification of a mill's HWPW should specify whether HWPW-VC and/or HWPW-CC are being certified, not just HWPW. Likewise, certification of a mill's MDF should distinguish between MDF and thin MDF.

12. Mills that switch TPCs – If a composite wood manufacturing mill switches to a new TPC, the certification of the mill's composite wood products does not need to lapse. Since the mill's products had been previously certified by a TPC, the mill has demonstrated the ability to comply with all aspects of the CARB regulation, including the required initial qualification emissions testing and inspection. Thus, the mill may not need to duplicate any initial qualification testing if the new TPC is satisfied that the mill's products meet the emission standards. To support the certification of a mill that is switching TPCs, CARB recommends that the new TPC conduct an initial inspection and enough emissions testing to establish a correlation between the mill's QC test method and the primary and/or secondary test method of the new TPC. This allows the new TPC to establish QC limits for the mill's products. The prior TPC and the new TPC should notify CARB of a change in a client mill certification service provider, so that CARB can update our list of certified mills.
13. Long-term certifications by TPCs – CARB understands that some TPCs issue certifications to composite wood manufacturing mills that are valid for 1-2 years. This is acceptable; however, TPCs should be aware that these certifications can be invalidated. Nonconformance during a quarterly inspection or test will, at the least, temporarily invalidate the 1-2 year certification. TPCs are required to inform CARB immediately if a mill has an invalidated certification.

Testing Suggestions

14. Test methods ASTM E1333-22 and D6007-22 (new Jan. 2024) – In 2022, the large chamber (ASTM E1333) and small chamber (ASTM D6007) test methods referenced in the CARB regulation were reviewed by an ASTM committee and re-approved. CARB staff reviewed the renewed test methods. It is acceptable for TPCs to refer to the renewed versions of these test methods rather than the versions referenced in the ATCM.
15. Conditioning time prior to testing samples (new Jan. 2024) – CARB emphasizes that a conditioning time of two hours is not appropriate when using a small chamber as a secondary test method for certification of composite wood products. The conditioning time specified in ASTM E1333 (the large chamber test method) prior to testing samples is seven days. The conditioning time specified in ASTM D6007 (the small chamber test method) had been two hours, but has been increased to seven days in the 2022 revised version of the small chamber method (ASTM D6007-22). The revised method states that a shorter conditioning time (e.g., two hours) may be used as long as there is documentation of the conditioning time. Section 93120.9(a)(2)(A) of the ATCM states that the conditioning time for the secondary test method (small chamber established as providing equivalent results to a large chamber) shall be the conditioning time used to establish equivalence.
16. Late arriving quarterly samples – Conditioning of quarterly samples prior to primary or secondary method testing should begin within 30 days of production. TPCs should

reject samples received more than 30 days after the production date and obtain new samples for testing.

17. Particleboard door core – TPCs should be aware that the loading rate and flow/area ratio for emissions testing of particleboard door core in the large chamber (ASTM E1333) and small chamber (ASTM D6007) test methods differ from industrial particleboard. Please reference the test methods for the proper loading rates.
18. Alternative small scale QC test methods – The CARB regulation lists two small scale QC test methods for use by composite wood product manufacturers in conducting their QC testing: ASTM D 5582 (desiccator) and ASTM D 6007 (small chamber). CARB has approved of five alternative QC test methods. These methods are listed on the CARB composite wood products website and include: the updated Georgia Pacific Dynamic Microchamber (GP™ DMC), the original DMC, ISO 12460-3 (gas analysis), ISO 12460-5 (perforator), and JIS A 1460 (Japanese desiccator).
(See www.arb.ca.gov/toxics/compwood/outreach/testmethods.htm.)
19. Minimize time between production and obtaining QC testing results – TPCs should make composite wood manufacturers aware of the importance of minimizing the time between the production and obtaining QC testing results of composite wood products. The QC test results should be reviewed before CARB-certified product is shipped from the manufacturing mill so the mill can avoid selling non-complying products.
20. QC testing requirements for mills with inconsistent production – When a composite wood mill does not produce CARB-certified products routinely, the mill must conduct QC testing to represent the minimum amount of QC testing for the production period. For certification of a NAF product, three months of data (e.g., at least 13 samples per quarter) are required. For certification of a ULEF product, 6 months of data (e.g., at least 26 samples per two quarters) are required. For certification of HWPW product, the minimum number of QC tests are specified in Appendix 2, subsection (g)(4)(C) of the ATCM.
21. Minimum QC testing for NAF/ULEF exemption – Composite wood manufacturers are required to work with TPCs to collect QC testing data prior to being exempt from third-party certification for NAF and ULEF products. For NAF products, three months of routine QC testing data (e.g., at least 13 samples per quarter) are required; for ULEF products, six months of QC testing data (e.g., at least 26 samples per two quarters) are required.
22. Background formaldehyde in conditioning room and laboratory – When testing low-emitting composite wood products (e.g., Phase 2 HWPW, NAF, and ULEF products), additional measures may be needed to remove background formaldehyde from the air in the conditioning room, laboratory, and testing chambers. The ASTM methods require background formaldehyde for conditioning to not exceed 0.10 parts per million (ppm). However, a concentration that high may affect the test results for low-emitting

products. The ASTM methods require that the formaldehyde concentration in make-up air for testing chambers to be no higher than 0.02 ppm. If either of these background concentrations of formaldehyde are exceeded, additional purification of the background air may be necessary to prevent interference with testing.

For More Information

For questions related to this bulletin, please contact CARB staff at compwood@arb.ca.gov.