Wisconsin’s Title V program is hereby updated to include these requested changes.

SUMMARY: The Environmental Protection Agency (EPA) is publishing a final rule to update the incorporation by reference of several voluntary consensus standards in the Agency’s formaldehyde standards for composite wood products regulations under the Toxic Substances Control Act (TSCA) that have since been updated, superseded, or withdrawn by the issuing organizations. In addition, EPA is taking final action to reflect its interpretation that remote inspections by third-party certifiers (TPCs) are allowed in certain circumstances in the event of unsafe conditions such as the on-going COVID-19 pandemic or other unsafe conditions such as natural disasters, outbreaks, political unrest, and epidemics. Finally, EPA is making certain technical corrections and conforming changes including updating standards within the definitions section, clarifying language as it relates to production, and creating greater flexibilities for the third-party certification process.

DATES: This final rule is effective on March 23, 2023. The incorporation by reference of certain material listed in the rule is approved by the Director of the Federal Register as of March 23, 2023. The incorporation by reference of certain other material listed in the rule was approved by the Director of the Federal Register on February 10, 2017, and February 7, 2018.

ADDRESSES: The docket for this action is identified by docket identification (ID) number EPA–HQ–OPPT–2017–0245; FRL–8452–01–OCSP. For general information contact: Jeffrey Putt, Existing Chemicals Risk Management Division (Mail Code 1404; email address: TSCA-Hotline@epa.gov). For technical information contact: The TSCA-Hotline, ABVI-Goodwill, 422 South Clinton Ave., Rochester, NY 14620; telephone number: (202) 554–1404; email address: TSCA-Hotline@epa.gov.

SUPPLEMENTARY INFORMATION:

A. Does this action apply to me?

You may be affected by this final rule if you manufacture (including import), sell, supply, or offer for sale in the United States any of the following: hardwood plywood, medium-density fiberboard, particleboard, and/or products containing these composite wood materials. You may also be affected by this final rule if you test or work with certification firms that certify such materials. The following list of North American Industrial Classification System (NAICS) codes is not intended to be exhaustive, but rather provides a guide to help readers determine whether this document applies to them. Potentially affected entities may include:

- Veneer, plywood, and engineered wood product manufacturing (NAICS code 32121).
- Manufactured home (mobile home) manufacturing (NAICS code 321911).
- Prefabricated wood building manufacturing (NAICS code 321992).
- Furniture and related product manufacturing (NAICS code 337).
- Furniture merchant wholesalers (NAICS code 42371).
- Lumber, plywood, millwork, and wood panel merchant wholesalers (NAICS code 42331).
- Other construction material merchant wholesalers (NAICS code 423390), e.g., merchant wholesale distributors of manufactured homes (i.e., mobile homes) and/or prefabricated buildings.

B. What is the Agency’s authority for taking this action?

EPA is publishing this final rule pursuant to the authority in section 601 of TSCA, 15 U.S.C. 2697 relating to formaldehyde emission standards for composite wood products.

C. What action is the Agency taking?

The Agency is issuing this final rule to take action on a recent notice of proposed rulemaking (87 FR 17963) issued on March 29, 2022, and a supplemental notice of proposed rulemaking (87 FR 57432) issued on September 20, 2022, including addressing the comments received on both proposals.

The Agency is taking final action on the following:

1. Update Incorporation-By-Reference (IBR) for Certain Voluntary Consensus Standards

EPA is finalizing an update to the IBR of certain voluntary consensus standards in 40 CFR 770.99 to reflect the most recent editions of those standards issued by the relevant standards organizations. The relevant standards organizations updated these standards.
after EPA incorporated them in 40 CFR 770.99. The final rule will require regulated entities to adhere to the updated editions of the voluntary consensus standards when complying with the requirements of 40 CFR part 770. EPA received three comments in support of updating these standards in the proposed rule in March and received one comment in support of updating the two additional standards in the supplemental proposed rule in September. These amendments are further explained in Unit II.B.

2. Conform Voluntary Consensus Standards in Scope and Definitions

As a result of the final list of updated standards in Unit II.B., EPA is finalizing an update to 40 CFR 770.1 and 770.3 to reflect the current standards that are incorporated by reference in 40 CFR 770.99. EPA received three comments in the proposed rule and one comment in the supplemental proposed rule in support of these updates to reflect current standards which are in use.

3. Increase Flexibility for TPC Certification Process

EPA is also finalizing revisions at 40 CFR 770.7, paragraphs (a)(5)(i)(A), (c)(1)(iii), (c)(2)(iv), and (c)(4)(i)(F). These changes add a reference to section 6.2.2 under ISO/IEC 17065:2012(E). The addition of section 6.2.2 under ISO/IEC 17065:2012(E) will allow TPCs to utilize external evaluation resources, such as contracting out inspections to a third party in order to complete the certification process in which TPCs certify that the products are TSCA Title VI compliant. Under ISO/IEC 17065:2012(E), the requirements for the certification process under section 6.2.2 are the same as section 6.2.1, which involves an internal certification process. Adding section 6.2.2 will give TPCs flexibility to choose to contract out inspections to a third party to satisfy the requirements in 40 CFR 770.7 to conduct inspections of composite wood products. EPA received three comments in support of the increase in flexibility for TPCs.

4. Address Remote Inspections in Limited Circumstances

Additionally, EPA is taking final action to reflect its interpretation that remote inspections by third-party certifiers are allowed in certain circumstances under paragraphs (c)(4)(i)(G) and (c)(4)(viii)(A)(3) under 40 CFR 770.7, as well as 40 CFR 770.15, paragraph (c)(1)(viii). During the COVID-19 pandemic, EPA provided its regulatory interpretation that TPCs could conduct remote inspections via video teleconference to satisfy the requirements of 40 CFR 770.7(c)(4)(i)(F) and 770.15(c)(1)(viii), and allowed TPCs to work with the panel producer quality control managers at the time of the remote inspection to select, package, sign, and ship the TPC panels/samples for the quarterly test according to 40 CFR 770.20(c). EPA received three comments in support of the remote inspection process and is finalizing an amendment to 40 CFR part 770 to reflect its regulatory interpretation that TPCs may conduct the required initial on-site inspection or quarterly inspections and sample collections remotely when in-person, on-site inspections are temporarily impossible because of unsafe conditions caused by natural disasters, health crises, or political unrest. These amendments are further explained in Unit II.B.3.

5. Improve Regulatory Consistency Through Technical Corrections

Furthermore, EPA is taking final action to clarify data requirements for emission standards under 40 CFR 770.17(c)(2) and 770.18(d)(2). Under these sections, EPA is including language that clarifies the requirements for testing data for no added formaldehyde-based resins (NAF) and ultra-low-emitting formaldehyde resins (ULEF). The clarification states that for NAF based exemptions 90 percent of the three months of routine quality control testing data and the results of the one primary or secondary method test must be shown to be no higher than 0.04 ppm. For ULEF based exemptions, the clarification states that 90 percent of six months of routine quality control testing data and the results of two quarterly primary or secondary method tests must be shown to be no higher than a ULEF target value of 0.04 ppm. This final action will fully align with the California Air Resource Board (CARB) quality control data under section 93120.3 of title 17 of the California Code of Regulations (the Airborne Toxic Control Measure to Reduce Formaldehyde Emissions from Composite Wood Products rule, or the ATCM) (Ref. 1) to create better consistency. EPA received three comments in support of the clarifying language for NAF and ULEF based exemptions to better conform with CARB requirements.

Additionally, EPA is finalizing several technical corrections under 40 CFR 770.20. Under 40 CFR 770.20(a)(1), EPA is clarifying the period in which panels must be tested after their production. This clarification is consistent with language in 40 CFR 770.20(c)(3) and CARB section 93120.12 Appendix 3(d)(1) under the ATCM rule. Finally, under 40 CFR 770.20(d)(1)(iii), EPA is including equivalence determinations to align with CARB requirements under 93120.9(a)(2)(I)(B)(5) of the ATCM rule. EPA received three comments in support of the technical corrections. However, these commentors also expressed concern that the language that was proposed under 40 CFR 770.20(a)(1) was still confusing when it comes to timing. Based on this feedback, EPA has further clarified the language on testing timeline requirements in this final rule. These technical corrections are further explained in Unit II.B.

D. Why is the Agency taking this action?

The Agency is taking final action to adopt several voluntary consensus standards for incorporation by reference at 40 CFR 770.99. This rulemaking will update several voluntary consensus standards under 40 CFR 770.99 to their current editions to address outdated, superseded, and withdrawn standards that have been updated between 2019 and 2022. These new updates are needed because outdated versions have been replaced by these new standards. EPA is taking final action to update these voluntary consensus standards to reflect the current editions for use by regulated entities and industry stakeholders. EPA believes that this action is warranted to facilitate regulated entities using the most up to date voluntary consensus standards to comply with the regulation at 40 CFR part 770.

EPA is also taking final action to reflect its interpretation that remote inspections by third-party certifiers are allowed in certain circumstances because of unsafe conditions such as the on-going COVID–19 pandemic or other unsafe conditions such as natural disasters, outbreaks, political unrest, and epidemics. The remote inspections are designed to allow inspectors flexibility to comply with TSCA Title VI regulations and regional emergency declarations.

Furthermore, EPA is taking final action on several technical corrections to better align with CARB requirements. These technical corrections include the timing of panel testing after production, equivalency determinations, and the third-party certification process. Alignment with CARB allows EPA’s TSCA Title VI program and CARB’s ATCM program to work in tandem with one another in order to create an effective and efficient formaldehyde emissions regulatory system. These corrections also will result in less burden on industry working or seeking
to work in either or both the California and U.S. markets.

E. What are the incremental economic impacts?

EPA anticipates no additional costs to stakeholders associated with this final rule for updated standards. This is a routine action that updates voluntary consensus standards referenced in the incorporation by reference section of the regulation at 40 CFR part 770 to address updated, superseded, and withdrawn versions of the referenced standards. Additionally, regulatory language added to address remote inspections by TPCs and sample collections are also expected to result in no additional costs as this language is intended to codify the Agency’s existing interpretation of the regulation and reflect practices that are currently on-going, in part due to the COVID–19 pandemic.

II. Background

A. Regulatory Overview

1. Formaldehyde Emission Standards for Composite Wood Products

The Formaldehyde Standards for Composite Wood Products Act of 2010 (Pub. L. 111–199) created Title VI of TSCA (15 U.S.C. 2697), established emission standards for formaldehyde from composite wood products, and directed EPA to implement and enforce a number of provisions covering composite wood products. On December 12, 2016, EPA published a final rule (2016 final rule) (Ref. 2) to reduce exposure to formaldehyde emissions from certain wood products produced domestically or imported into the United States. EPA worked with CARB to align the 2016 final rule with the ATCM to the extent EPA deemed appropriate and practical considering TSCA Title VI. By including provisions for laminated products, product-testing requirements, labeling, recordkeeping, and import certification, the 2016 final rule requires that hardwood plywood, medium-density fiberboard, and particleboard products sold, supplied, offered for sale, imported to, or manufactured in the United States be in compliance with the emission standards. The 2016 final rule also established a third-party certification program for laboratory testing and oversight of formaldehyde emissions from manufactured and/or imported composite wood products.

2. 2018 Voluntary Consensus Standards Amendment

On February 7, 2018, EPA published a final rule (Ref. 3) to update several voluntary consensus standards incorporated by reference at 40 CFR 770.99. These updates applied to emission testing methods and regulated composite wood product construction characteristics. Several of those voluntary consensus standards (i.e., technical specifications for products or processes developed by standard-setting bodies) were updated, superseded, and/or withdrawn through the normal course of business by these bodies to take into account new information, technology, and methodologies.

3. 2019 Technical Issues Amendment

On August 21, 2019, EPA further amended 40 CFR part 770 (Ref. 4) (2019 final rule) to address certain technical issues. The 2019 final rule:

- Further aligned testing requirements with the CARB ATCM;
- Clarified provisions addressing non-complying lots and how those provisions apply to fabricators, importers, retailers, and distributors who are notified by panel producers that composite wood products they supplied are found to be non-compliant after those composite wood products have been further fabricated into component parts or finished goods;
- Clarified that regulated composite wood products and finished goods containing composite wood products must be labeled at the point of manufacture or fabrication, and if imported, the label must be applied to the products as a condition of importation;
- Addressed TSCA Title VI “manufactured-by” date issues; and
- Updated two voluntary consensus standards that were incorporated by reference in 40 CFR 770.99.

B. Final Rule Amendments

1. Voluntary Consensus Standards IBR Update

a. IBR Update

EPA is taking final action to update the IBR of certain voluntary consensus standards in 40 CFR 770.99 to reflect the most recent editions of the following standards assembled by the American National Standards Institute (ANSI), ASTM International (ASTMI), the British Standards Institute (BSI), the International Organization for Standardization (ISO), the Japanese International Standards (JIS), and the National Institute of Standards and Technology (NIST):

- American National Standard for Hardwood and Decorative Plywood (ANSI/HPVA HP–1–2020)

This standard was developed by the Hardwood Plywood and Veneer Association (HPVA) and approved through ANSI. The ANSI/HPVA standard details the specific requirements for all face, back, and inner ply grades of hardwood plywood as well as formaldehyde emission limits, moisture content, tolerances, sanding, and grade marking. ANSI/HPVA last updated this standard on August 17, 2020 (Ref. 5). EPA is taking final action to update the version of the standard incorporated by reference in 40 CFR 770.99 from ANSI–HPVA HP–1–2016 to ANSI–HPVA HP–1–2020.


This standard was issued by ASTM and identifies procedures for establishing, monitoring, and reevaluating structural capacities of prefabricated wood I-joists, such as shear, moment, and stiffness. The specification also provides procedures for establishing common details and items, and items design considerations specific to wood I-joists. The ASTM standard was last updated on March 1, 2019 with an editorial revision in January 2020 (Ref. 6). EPA is taking final action to update the version of the standard incorporated by reference in 40 CFR 770.99 from ASTM D5055–16 to ASTM D5055–19e1.


This standard was issued by ASTM and describes initial qualification sampling, mechanical and physical tests, analysis, and design value assignments. The standard includes requirements for a quality-control program and cumulative evaluations to ensure maintenance of allowable design values for the product. The ASTM standard was last updated on February 1, 2021 with an editorial revision in June 2021 (Ref. 7). EPA is taking final action to update the version of the standard incorporated by reference in 40 CFR 770.99 from ASTM D5456–14b to ASTM D5456–21e1.


This standard was approved through ISO, the European Committee for Standardization (CEN), and BSI and describes a procedure for determination of accelerated formaldehyde release from wood-based panels. The standard was last updated on October 31, 2020 (Ref. 8). EPA is taking final action to

vii. Medium Density Fiberboard (MDF) for Interior Applications (ANSI A208.2–2022)

This standard was approved through the American National Standards Institute (ANSI) and describes the requirements and test methods for dimensional tolerances, physical and mechanical properties of formaldehyde emissions for MDF, along with methods of identifying products conforming to the standard. The ANSI standard was last updated in April 2022 (Ref. 11). EPA is taking final action to update the version of the standard incorporated by reference in 40 CFR 770.99 from ANSI A208.2–2016 to ANSI A208.2–2022.


This standard was approved through ISO and describes a procedure for determination of accelerated formaldehyde release from wood-based panels. The standard was last updated in October 2020 (Ref. 9). EPA is taking final action to include this new standard to incorporate by reference in 40 CFR 770.99 since ISO 12460–3:2020(E) is identical to BS EN ISO 12460–3:2020. To avoid potential confusion by regulated stakeholders, EPA is taking final action to include this ISO standard as well as the BS EN ISO 12460–3:2020 so that each manufacturer may choose which standard to use in each respective country.

vi. Particleboard (ANSI A208.1–2022)

This standard was approved through the American National Standards Institute (ANSI) and describes the requirements and test methods for dimensional tolerances, physical and mechanical properties and formaldehyde emissions for particleboard, along with methods of identifying products conforming to the standard. The ANSI standard was last updated in June 2022 (Ref. 10). EPA is taking final action to update the version of the standard incorporated by reference in 40 CFR 770.99 from ANSI A208.1–2016 to ANSI A208.1–2022.


This standard was approved through the Japanese Industrial Standards and describes a method for testing formaldehyde emissions from construction boards by measuring the concentration of formaldehyde absorbed in distilled or deionized water from samples of a specified surface area placed in a glass desiccator for 24 hours. The JIS standard was last updated in February 2021 and translated into English in November 2021 (Ref. 12). EPA is taking final action to update the version of the standard incorporated by reference in 40 CFR 770.99 from JIS A 1460:2015(E) to JIS A 1460:2021(E).

ix. Structural Plywood (PS–1–19)

This standard was issued by NIST and describes the principal types and grades of structural plywood, covering the wood species, veneer grading, adhesive bonds, panel construction and workmanship, dimensions and tolerances, marking, moisture content and packaging of structural plywood intended for construction and industrial uses. Test methods to determine compliance and a glossary of trade terms and definitions are included, as is a quality certification program involving inspection, sampling, and testing of products identified as complying with this standard by qualified testing agencies. The NIST standard was last updated on December 1, 2019 (Ref. 13). EPA is taking final action to update the version of the standard incorporated by reference in 40 CFR 770.99 from PS–1–09 to PS–1–19.

x. Performance Standard for Wood Structural Panels (PS–2–18)

This standard was issued by NIST and covers performance requirements, adhesive bond performance, panel construction and workmanship, dimensions and tolerances, marking, and moisture content of structural-use panels, such as plywood, waferboard, oriented strand board, structural particle board, and composite panels. The standard includes test methods, a glossary of trade terms and definitions, and a quality certification program involving inspection, sampling, and testing of products for qualification under the standard. The NIST standard was last updated in 2019 (Ref. 14). EPA is taking final action to update the version of the standard incorporated by reference in 40 CFR 770.99 from PS–2–10 to PS–2–18.

EPA will initiate additional notice-and-comment rulemaking when necessary to reflect any future changes to voluntary consensus standards incorporated by reference in 40 CFR 770.99.

b. Availability

Copies of the standards identified in this section for II.B.1.b SUPPLEMENTARY INFORMATION have been placed in the rulemaking docket for this action. Additionally, each of these standards is available for inspection at the OPPT Docket in the EPA Docket Center (EPA/DC) at Rm. 3334, EPA, West Bldg., 1301 Constitution Ave., NW, Washington, DC. The EPA/DC Public Reading Room hours of operation are 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number of the EPA/DC Public Reading Room is (202) 566–1744, and the telephone number for the OPPT Docket is (202) 566–0280. If you have a disability and the format of any material on an EPA web page interferes with your ability to access the information, please contact EPA’s Rehabilitation Act Section 508 (29 U.S.C. 794d) Program at https://www.epa.gov/accessibility/forms/contact-us-about-section-508-accessibility or via email at section508@epa.gov. To enable us to respond in a manner most helpful to you, please indicate the nature of the accessibility issue, the web address of the requested material, your preferred format in which you want to receive the material (electronic format (ASCII, etc.), standard print, large print, etc.), and your contact information.

i. ANSI/HPVA HP–1–2020

Copies of this standard may be obtained from the Decorative Hardwoods Association (formerly known as Hardwood Plywood and Veneer Association (HPVA)), 42777 Trade West Dr., Sterling, VA 20166, or by calling (703) 435–2900, or at https://www.decorativewoods.org. Relevant sections of HPVA’s standards referenced in this rule are also available for public review in read-only format in the Decorative Hardwood Association Reading Room at https://www.decorativewoods.org/sites/default/files/2022-01/ansi-hpva-hp-1-2020.pdf.

ii. ASTM D5055–19e1 and ASTM D5456–21e1

Copies of these materials may be obtained from ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959, or by
calling (877) 909–ASTM, or at https://www.astm.org. ASTM standards referenced in this rule are also available for public review in read-only format in the ASTM Reading Room at https://www.astm.org/epa.htm.

iii. BS EN ISO 12460–3:2020
Copies of these materials may be obtained from BSI, 12950 Worldgate Dr., Suite 800, Herndon, VA 20170, or by calling (800) 862–4977, or at https://www.bsigroup.com. This British Standard Institute standard is an adoption of EN ISO 12460–3:2020.

iv. ISO 12460–3:2020(E)
Copies of these materials may be obtained from the International Organization for Standardization, 1, ch. de la Voie-Creuse, CP 56, CH–1211, Geneva 20, Switzerland, or by calling +41–22–749–01–11, or at https://www.iso.org. ISO standards referenced in this rule are also available for public review in read-only format on the ANSI Standards Incorporated by Reference Portal at https://ibransi.org/.

v. ANSI A208.1–2022 and ANSI A208.2–2022
Copies of these materials may be obtained from the Composite Panel Association. 19465 Deerfield Avenue, Suite 306, Leesburg, VA 20176, or by calling (703) 724–1128, or at https://www.compositepanel.org.

vi. JIS A 1460:2021(E)
Copies of these materials may be obtained from the Japanese Industrial Standards, 1–24, Akasaka 4, Minatoku, Tokyo 107–8440, Japan, or by calling +81–3–3583–8000, or at https://www.jsa.or.jp/en/.

vii. PS 1–19 and PS 2–18
Electronic copies of these materials may be obtained from NIST at no cost at: https://www.nist.gov. You may purchase printed copies of these materials from NIST by calling (800) 553–6847. You must have an order number to purchase a NIST publication. Order numbers may be obtained from the Public Inquiries Unit at (301) 975–NIST. Mailing address: Public Inquiries Unit, NIST, 100 Bureau Dr., Stop 1070, Gaithersburg, MD 20899–1070. In addition, you may also purchase printed copies of NIST publications from the U.S. Government Publishing Office (GPO) if you have a GPO stock number. GPO orders may be mailed to: U.S. Government Publishing Office, P.O. Box 979050, St. Louis, MO 63197–9000, placed by telephone at (866) 512–1800 (DC Area only; [202] 512–1800), or faxed to [202] 512–2104.

2. Technical Correction(s)
   a. Conform Voluntary Consensus Standards in Scope and Definitions
      As a result of the finalized list of updated standards in section II.B.1. of SUPPLEMENTARY INFORMATION, EPA is updating 40 CFR 770.1 and 770.3 to reflect the current standards that are incorporated by reference in 40 CFR 770.99.
   
   b. Submission of Petitions Seeking the Initiation of a Rulemaking for Additional Exemptions for Laminated Products From the Definition of the Term “Hardwood Plywood”
      The final rule will update the address to which petitions and supporting materials, including any supporting materials that may contain confidential business information (CBI) or other controlled unclassified information, should be submitted.
   
   c. Timing of Panel Testing After Production
      EPA is finalizing a clarification under 40 CFR 770.20. Under 40 CFR 770.20(a)(1), EPA will clarify the time period in which panels must be tested after their production. Based on feedback from CARB and industry, the clarifying language states that all panels must be tested prior to the application of a topcoat or finish and that conditioning for testing must begin not later than 30 calendar days after the panels were produced. This clarification was needed based on confusion between regulated entities as to when the 30-day window began. This language fully aligns with 40 CFR 770.20(c)(3) as well as CARB section 93120.12 Appendix 3(d)(1) under the ATCM rule.
   
   d. Equivalency Determinations
      Under 40 CFR 770.20(d)(1)(iii), equivalence determination corrections are included to address previous omissions. During the last voluntary consensus update in 2018 which revised the formaldehyde standards for composite wood products regulations, the acceptable intermediate and upper determinations were not included. Under § 770.20(d)(1)(iii), the ASTM D6007–14 method (incorporated by reference, see 40 CFR 770.99) is considered equivalent to the ASTM E1333–14 method (incorporated by reference, see 40 CFR 770.99) if the following condition is met: $\frac{\text{C}}{0.885} \leq \text{C}$. While a lower value of 0.026 was included, the intermediate and upper values were inadvertently omitted. This final rule includes an intermediate value of 0.038 and an upper value of 0.052. These changes correct an omission and fully align with CARB requirements under section 93120.9(a)(2)(B)(5) of the ATCM rule.
   
   e. Clarify Language for NAF and ULEF Based Exemptions
      Under 40 CFR 770.17(c)(2) and 770.18(d)(2), EPA is clarifying data requirements for emission standards submitted by TPCs. Under these sections, EPA is taking the final action to add language that clarifies the requirements for testing data for no-added formaldehyde-based resins (NAF) and ultra-low-emitting formaldehyde resins (ULEF). The clarification states that for NAF based exemptions 90 percent of the three months of routine quality control testing data and the results of the one primary or secondary method test must be shown to be no higher than 0.04 ppm. For ULEF based exemptions, the clarification states that 90 percent of six months of routine quality control testing data and the results of two quarterly primary or secondary method tests must be shown to be no higher than a ULEF-target value of 0.04 ppm. This language will fully align with CARB quality control data under ATCM (Ref. 3) to create better consistency.

3. Remote Inspections
   During the COVID–19 global pandemic, some TPCs have been unable to travel to a composite wood product manufacturing panel producing facility to conduct on-site inspections and sample collections in-person. In response, EPA provided its regulatory interpretation that TPCs and panel producers can conduct these activities remotely (see https://www.epa.gov/coronavirus/event-unsafe-conditions-geographic-area-would-prevent-third-party-certifier-tpc-for-additional-information). These remote inspections are designed to allow inspectors flexibility to comply with TSCA Title VI regulations and regional emergency declarations, without jeopardizing the inspector’s health and wellbeing. The standard practice for a TPC providing certification services for composite wood panel producers remains that a TPC conducts in-person on-site inspections, which should resume as soon as possible when the unsafe conditions end.

   EPA is taking final action to amend 40 CFR 770.7 and 770.15(c) by adding an alternative to in-person, on-site inspections and sample collection for quarterly testing that will clarify that TPCs may perform these activities remotely via videoconference when it is otherwise temporarily impossible to do so on-site and in person because of
unsafe conditions caused by natural disasters, health crises, or political unrest. In addition to carrying out initial and quarterly inspections remotely via video teleconference, the final rule will allow TPCs to work with the panel producer’s quality control manager at the time of the remote inspection to select, package, sign, and ship the TPC panels/samples for the quarterly test according to 40 CFR 770.20(c). Under the final rule, when submitting the annual report required under 40 CFR 770.7(c)(4)(viii)(A), TPCs will also be required to identify each occurrence of an inspection that was performed remotely during each quarter and certify that a government entity identified the existence of unsafe conditions such as the on-going COVID–19 pandemic or other unsafe conditions such as natural disasters, outbreaks, political unrest, and epidemics at the time of each remote inspection.

4. Third Party Certification Process

Under 40 CFR 770.7(a)(5)(i)(A), (c)(1)(iii), (c)(2)(v), and (c)(4)(i)(F), EPA is adding a reference to section 6.2.2 of ISO/IEC 17065:2012(E). The addition of section 6.2.2 of ISO/IEC 17065:2012(E) will allow TPCs to utilize external evaluation resources, such as contracting out inspections to a third party, in order to complete the certification process. The requirements for the certification process under section 6.2.2 are the same as under section 6.2.1 of ISO/IEC 17065:2012(E) which involves an internal certification process conducted by the TPC. Adding section 6.2.2 will give TPCs flexibility to choose to contract out inspections to a third party to satisfy the requirements in 40 CFR 770.7 to conduct inspections of composite wood products.

C. Rationale for Rule Changes

1. Voluntary Consensus Standards Update

EPA is taking final action to update the incorporation by reference of certain voluntary consensus standards in 40 CFR 770.99 that have been updated, superseded, or withdrawn by the issuing organizations. These new standards are needed to reflect the most recent editions of those standards issued by the relevant standards organizations.

2. Technical Correction(s) for Regulatory Consistency

a. Submission of Petitions Seeking the Initiation of a Rulemaking for Additional Exemptions for Laminated Products From the Definition of the Term “Hardwood Plywood”

This final amendment is intended to update the address and protect any CBI materials which may be submitted.

b. Timing of Panel Testing After Production

This final amendment is intended to reduce confusion between regulated entities as to when the 30-day window is to begin. The finalized changes reflect conversations between CARB and EPA, and fully aligns with 40 CFR 770.20(c)(3) as well as CARB section 93120.12 Appendix 3(d)(1) under the ATCM rule.

c. Equivalency Determinations

This final amendment is intended to address a previous omission during the last rulemaking which occurred in 2018. These changes correct an omission and fully align with CARB requirements under section 93120.9(a)(2)(B)(5) of the ATCM rule.

d. Emission Standards

This final amendment is intended to address industry confusion about the exact timing and nature of the emission standards under 40 CFR 770.17(c)(2) and 770.18(d)(2) for NAF and ULEF based exemptions. The final amendment includes additional language that clarifies the requirements for such an exemption and fully aligns with CARB quality control data under the ATCM.

3. Remote Inspections

This final amendment is intended to codify an Agency regulatory interpretation which was provided during the start of the COVID–19 global pandemic in early 2020 in order for inspectors to fulfill their obligations under TSCA Title VI regulations, while also remaining safe from infection (see https://www.epa.gov/coronavirus/event-unsafe-conditions-geographic-area-would-prevent-third-party-certifier-tpc for additional information).

4. Third-Party Certification Process

This final amendment is intended to increase flexibility for TPCs seeking to utilize external evaluation resources, such as contracting out inspections to a third party in order to complete the certification process. Because the requirements for the certification process under section 6.2.2 are the same as section 6.2.1 under ISO/IEC 17065:2012(E), which involves an internal certification process conducted by the TPC, EPA believes that such a change should be made.

III. Summary of Public Comments

EPA received numerous comments from six different public commenters in total during the initial 30-day public comment period for the proposed rule (87 FR 17963) and carefully considered each submission. One commenter (EPA–HQR–OPPT–2017–0235) did not raise a substantive issue relevant to the proposed rule. One commenter (EPA–HQR–OPPT–2017–0245–0039) stated that formaldehyde is a known, proven, and powerful carcinogen and it should be excluded from use in household products. EPA agrees that many common consumer products have the potential to emit formaldehyde and that formaldehyde can cause a variety of adverse health impacts. EPA further notes that Congress directed EPA, through TSCA Title VI, to develop regulations to ensure compliance with the emission standards for hardwood plywood, medium density fiberboard, and particleboard that Congress defined in statute. In the Formaldehyde Standards for Composite Wood Products Act, Congress established formaldehyde emission standards for composite wood products, but did not task EPA with eliminating the use of formaldehyde in household products altogether. Additionally, Congress by statute directly exempted certain windows, exterior doors, garage doors, and other materials that contain composite wood products that adhere to specified conditions, from meeting the formaldehyde emissions standards. As such, EPA published the December 12, 2016, Formaldehyde Emission Standards for Composite Wood Products final rule (81 FR 89674) finalizing the regulatory program to implement TSCA Title VI and regulate formaldehyde emissions from composite wood products.

EPA further notes that formaldehyde is separately undergoing risk evaluation under Title I of TSCA. In December 2019, EPA designated formaldehyde as a high-priority chemical substance to undergo risk evaluation. In August 2020, EPA published a final scope document outlining the hazards, exposures, conditions of use (including household products), and the potentially exposed or susceptible subpopulations the agency expects to consider in its risk evaluation currently underway. The Agency released the initial scope in April 2020 and took public comments that were incorporated into the August 2020 final scope. As
EPA continues to move through the risk evaluation process there will be additional opportunities for public comment, including a public comment period on the draft risk evaluation. Once the risk evaluation for formaldehyde is finalized, EPA will proceed to risk management to address any unreasonable risk identified in the risk evaluation.

The remaining four comments were directly relevant to the proposed rule. Three commenters (EPA–HQ–OPPT–2017–0245–0037; EPA–HQ–OPPT–2017–0245–0038; EPA–HQ–OPPT–2017–0245–0040) supported the proposed updates to the standards, the inclusion of the remote inspection language as a new amendment, and the technical updates to conform to CARB standards.

Three commenters (EPA–HQ–OPPT–2017–0245–0037; EPA–HQ–OPPT–2017–0245–0038; EPA–HQ–OPPT–2017–0245–0040) stated that the proposed revision to 40 CFR 770.20(b)(1) to include ISO 12460–2:2018 Wood-based panels—Determination of formaldehyde release—Part 2: Small-scale chamber method. While this standard is similar to and based on ASTM D6007–14 (see 40 CFR 770.99(b)(4)), EPA will not incorporate ISO 12460–2:2018 at this time. One of the primary goals of this final rule is to further harmonize EPA and CARB formaldehyde emission standards in order to create an effective and efficient program. Since CARB has not included this particular standard in their regulations, any inclusion by EPA without similar action by CARB would create an inconsistent program. CARB requirements under 93120.12 Appendix 2 of the ATCM rule states that additional, alternative small-scale tests must first be reviewed to show correlation to the primary or secondary test methods and approved by CARB’s Executive Officer. EPA is not opposed to including this standard in a future rulemaking and will work with the commenter to provide the necessary correlation data to CARB if necessary for any potential review.

One commenter (EPA–HQ–OPPT–2017–0245–0045) recommended the inclusion of two additional updates to standards already incorporated by reference in 40 CFR 770.99. The commenter recommended that EPA update ANSI A208.1–2016, Particleboard (§ 770.99(d)(5)] to ANSI A208.1–2022, Particleboard and ANSI A208.2–2016, Medium Density Fiberboard (MDF) for Interior Applications (§ 770.99(d)(6)] to ANSI A208.2–2022, Medium Density Fiberboard (MDF) for Interior Applications. Because neither of these standards was available as updated during the 30-day public comment period which began in March 2022, EPA published a supplemental proposed rule on September 20, 2022, to propose including updates to ANSI A208.1–2022 and ANSI A208.2–2022 in this final rule.

One commenter (EPA–HQ–OPPT–2017–0245–0036) stated that there is confusion regarding if softwood plywood, such as pine veneers for surface and veneer cores, are covered under the Formaldehyde Standards for Composite Wood Products Rule. EPA’s TSCA Title VI regulation defines formaldehyde emission standards in part, a hardwood or decorative panel that is intended for interior use and composed of (as determined under ANSI/HPVA HP–1–2020 [IBR approved for 40 CFR 770.3]) an assembly of layers or plies of veneer, joined by an adhesive with a lumen core, a particleboard core, a medium-density fiberboard core, a hardboard core, a veneer core, or any other special core or special back material. Under ANSI/HPVA HP–1–2020, the standard states that the species for face, back, and inner plies can be from any hardwood, softwood, or woody grass. ANSI/HPVA HP–1–2020 lists various softwood species for decorative uses, but other softwood species not listed may be utilized if such species otherwise fit the criteria for the standard. Therefore, softwood would be covered under the regulation for composite wood products when used for face, back, or inner plies under ANSI/HPVA HP–1–2020.

EPA also recognizes that softwood may be used in ways that fall outside of this coverage. Notably, EPA’s definition of hardwood plywood at 40 CFR 770.3 (as well as ANSI/HPVA HP–1–2020 itself) excludes, among other things, plywood specified in PS 1–19 (IBR approved for 40 CFR 770.3(c) and 770.3). PS 1–19 recognizes that softwood may be used under its terms in the production of structural plywood.

Finally, one commenter (EPA–HQ–OPPT–2017–0245–0036) stated that it can be difficult to distinguish between approved NHF TSCA Title VI products and unqualified high emission boards for markets outside of the United States especially for long supply chains across multiple countries and continents. EPA’s labeling requirements under TSCA Title VI appear at 40 CFR 770.45 and explain how panels or products for the United States’ market must be labeled. EPA notes that the regulation also allows panels or products made with NAF- or ULEF-based resins (in accordance with 40 CFR 770.17 or 770.18) to be labeled accordingly. See 40 CFR 770.45(a)(2) and (3) and (c)(3). Entities at various stages of the supply chain may wish to consider contractual arrangements that facilitate such entities’ choices about NAF or ULEF labeling.

On September 20, 2022, EPA published a supplemental notice of proposed rulemaking (87 FR 57432) to include two standards that were updated during or after the initial 30-day public comment period for the proposed rule (87 FR 17963). One comment (EPA–HQ–OPPT–2017–0245–0038) on the initial proposal supported including those standards in the final rule. EPA received two timely comments on the supplemental proposal. One commenter (EPA–HQ–OPPT–2017–0245–0044) did not raise a substantive issue relevant to the supplemental proposed rule. One commenter (EPA–HQ–OPPT–2017–0245–0045), who initially requested the addition of the updates to ANSI A208.1–2022 and ANSI A208.2–2022, was supportive of the proposal to incorporate by reference updates to these two standards.

EPA thanks all the submitters for their comments related to this final rule.

IV. References

The following is a list of the documents that are specifically referenced in this document. The docket includes these documents and other information considered by EPA, including documents that are referenced within the documents that are included in the docket, even if the referenced document is not physically located in the docket. For assistance in locating these other documents, please consult the technical person listed under FOR FURTHER INFORMATION CONTACT.

3. EPA. Voluntary Consensus Standards Update; Formaldehyde Emission Standards for Composite Wood Products.


7. ASTM. ASTM D5456–21e1, Evaluation of Structural Composite Lumber Products.


11. ANSI. ANSI A208.2–2022, Medium Density Fiberboard (MDF) for Interior Applications.


V. Statutory and Executive Order Reviews

Additional information about these statutes and Executive orders can be found at https://www.epa.gov/laws-regulations/laws-and-executive-orders.

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

This action is not a significant regulatory action under Executive Order 12866 (58 FR 51735, October 4, 1993) and was therefore not submitted to the Office of Management and Budget (OMB) for review under Executive Orders 12866 and 13563 (76 FR 3821, January 21, 2011).

B. Paperwork Reduction Act (PRA)

This action does not impose any new information collection burden under the PRA, 44 U.S.C. 3501 et seq. Burden is defined in 5 CFR 1320.3(b). This action does not create any new reporting or recordkeeping obligations, OMB previously approved the information collection activities contained in the existing regulations and assigned OMB control number 2070–0185 (EPA ICR No. 2446.03).

C. Regulatory Flexibility Act (RFA)

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA, 5 U.S.C. 601 et seq. In making this determination, EPA concludes that the impact of concern is any significant adverse economic impact on small entities, and the Agency is certifying that this rule will not have a significant economic impact on a substantial number of small entities because the final rule will update incorporation by reference of voluntary consensus standards in 40 CFR part 770 by adopting the most current versions of those standards. The updated versions of the standards are substantially similar to the previous versions. EPA expects that many small entities are already complying with the updated versions of the finalized standards listed in Unit II.B. This action will relieve these entities of the burden of having to also demonstrate compliance with outdated versions of these standards. This action also provides an amendment to the equivalence and correlation requirements at 40 CFR 770.20 that will reduce testing burdens without compromising the integrity of the data collected by panel producers and third-party certifiers to demonstrate compliance with the emission standards in the final rule. This action will reduce burden and allow greater flexibility for inspections of composite wood product producing mills. Additionally, this action provides clarifying language under 40 CFR 770.17 and 770.18 that will conform to current CARB language therefore easing the burden for regulated stakeholders in interpreting formaldehyde regulations. Finally, this action provides an amendment under ISO/IEC 17065:2012(E), section 6.2.2 which allows TPCs greater flexibility in conducting inspections in order to satisfy the requirements in 40 CFR 770.7. EPA believes this added flexibility will reduce burdens for TPCs during the inspection of composite wood products. These actions will relieve or have no net regulatory burden for directly regulated small entities.

D. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action does not impose a enforceable duty on any state, local or tribal governments. As discussed in Unit V.C., the final rule will relieve or otherwise will impose no net regulatory burdens on the private sector.

E. Executive Order 13132: Federalism

This action does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). It will not have substantial direct effects on the states, on the relationship between the National Government and the states, or on the distribution of power and responsibilities among the various levels of government.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

This action does not have tribal implications as specified in Executive Order 13175 (65 FR 67249, November 9, 2000). It will not have substantial direct effects on tribal governments, on the relationship between the Federal Government and the Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes. Thus, E.O. 13175 does not apply to this action.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

EPA interprets Executive Order 13045 (62 FR 19885, April 23, 1997), as applying only to those regulatory actions that concern environmental health or safety risks that the Agency has reason to believe may disproportionately affect children, per the definition of “significant regulatory action” in section 2–202 of the Executive order. This action is not subject to Executive Order 13045 because it does not concern an environmental health risk or safety risk.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a “significant energy action” as defined in Executive Order 13211 (66 FR 28355, May 22, 2001), because it is not likely to have a significant adverse effect on the supply, distribution or use of energy and has not otherwise been designated by the Administrator of the Office of Information and Regulatory Affairs as a significant energy action.

I. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR Part 51

This action involves voluntary standards under NTTAA section 12(d), 15 U.S.C. 272 note. EPA is adopting the use of ANSI–HPVA HP–1–2020, ANSI...
Toxic substances, Wood.

requirements, Third-party certification, reference, Reporting and recordkeeping

States. This action is not a "major rule"

Comptroller General of the United

each House of the Congress and to the

the EPA will submit a rule report to

will not materially alter the final rule as

incorporated by reference in the final

voluntary consensus standards

published and will update existing

will not materially alter the final rule as

health and environmental conditions

populations, and/or Indigenous peoples.

effects on people of color, low-income

Indigenous peoples) and low-income

policies, and activities on minority

environmental effects of their programs,

make environmental justice part of their

practicable and permitted by law, to

agencies, to the greatest extent

February 16, 1994) directs Federal

Executive Order 12898 (59 FR 7629,

The EPA believes that the human

health and environmental conditions

that exist prior to this action do not

result in disproportionate and adverse

effects on people of color, low-income

populations, and/or Indigenous peoples.

As addressed in Unit II.A., this action

will not materially alter the final rule as

published and will update existing

voluntary consensus standards

incorporated by reference in the final

rule and proposes other technical

amendments.

K. Congressional Review Act (CRA)

This action is subject to the CRA, and

the EPA will submit a rule report to

each House of the Congress and to the

Comptroller General of the United

States. This action is not a "major rule"
as defined by 5 U.S.C. 804(2).

List of Subjects in 40 CFR Part 770

Environmental protection, Formaldehyde, Incorporation by reference, Reporting and recordkeeping requirements, Third-party certification, Toxic substances, Wood.


Michal Freedhoff,
Assistant Administrator, Office of Chemical Safety and Pollution Prevention.

Therefore, for the reasons set forth in the preamble, 40 CFR part 770 is amended as follows:

PART 770—FORMALDEHYDE STANDARDS FOR COMPOSITE WOOD PRODUCTS

■ 1. The authority citation for part 770 continues to read as follows:


■ 2. In § 770.1, revise paragraphs (c)(3) through (5) and (8) to read as follows:

§ 770.1 Scope and applicability.

■ (c) * * * * * * * * * * *

(3) Structural plywood, as specified in PS 1–19 (incorporated by reference, see § 770.99).

(4) Structural panels, as specified in PS 2–18 (incorporated by reference, see § 770.99).

(5) Structural composite lumber, as specified in ASTM D5456–21e1 (incorporated by reference, see § 770.99).

* * * * *

(8) Prefabricated wood I-joists, as specified in ASTM D5055–19e1 (incorporated by reference, see § 770.99).

* * * * *

■ 3. In § 770.3, revise the definitions for "Hardwood plywood", "Medium-density fiberboard", and "Particleboard" to read as follows:

§ 770.3 Definitions.

■ * * * * *

Hardwood plywood means a hardwood or decorative panel that is intended for interior use and composed of (as determined under ANSI/HPVA HP–1–2020 (incorporated by reference, see § 770.99)) an assembly of layers or plies of veneer, joined by an 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 material. Hardwood plywood does not include military-specified plywood, curved plywood, or any plywood specified in PS 1–19 (incorporated by reference, see § 770.99), or PS 2–18 (incorporated by reference, see § 770.99). In addition, hardwood plywood includes laminated products except as provided at § 770.4.

■ * * * * *

Medium-density fiberboard means a panel composed of cellulosic fibers made by dry forming and pressing a resinated fiber mat (as determined under ANSI A208.2–2022 (incorporated by reference, see § 770.99)).

* * * * *

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 A208.1–2022 (incorporated by reference, see § 770.99)). Particleboard does not include any product specified in PS 2–18 (incorporated by reference, see § 770.99).

* * * * *

■ 4. In § 770.4 revise paragraph (b)(2) to read as follows:

§ 770.4 Exemption from the hardwood plywood definition for certain laminated products.

* * * * *

(b) * * *

(2) Each petition should provide all available and relevant information, including studies conducted and formaldehyde emissions data. Submit petitions to: TSCA Confidential Business Information Center (7407M), WJC East; Room 6428; Attn: TSCA Title VI Program, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue NW, Washington, DC 20460–0001.

* * * * *

■ 5. In § 770.7:

■ a. Revise paragraph (a)(5)(i)(A) introductory text, (c)(1)(iii), (c)(2)(v), and (c)(4)(ii)(F);

■ b. Add paragraph (c)(4)(i)(G); and


The revisions and addition read as follows:

§ 770.7 Third-party certification.

(a) * * *

(5) * * *

(i) * * *

(A) An on-site assessment by the EPA TSCA Title VI Product AB to determine whether the TPC meets the requirements of ISO/IEC 17065:2012(E), is in conformance with ISO/IEC 17020:2012(E) as required under ISO/IEC 17065:2012(E) section 6.2.1 and section 6.2.2 (incorporated by reference, see § 770.99) and the EPA TSCA Title VI TPC requirements under this part. In performing the on-site assessment, the EPA TSCA Title VI Product AB must:

* * * * *

(c) * * *

(1) * * *

(iii) Have the ability to conduct inspections of composite wood products


and properly train and supervise inspectors to inspect composite wood products in conformance with ISO/IEC 17020:2012(E) as required under ISO/IEC 17065:2012(E) section 6.2.1 and section 6.2.2 (incorporated by reference, see § 770.99); * * * * *(2) * * *
(v) An affirmation of the TPC’s ability to conduct inspections of composite wood products and properly train and supervise inspectors to inspect composite wood products in conformance with ISO/IEC 17020:2012(E) as required under ISO/IEC 17065:2012(E) section 6.2.1 and section 6.2.2 (incorporated by reference, see § 770.99); * * * * *(4) * * *
(i) * * *
(F) Inspect each panel producer, its products, and its records at least quarterly in conformance with ISO/IEC 17020:2012(E) as required under ISO/IEC 17065:2012(E) section 6.2.1 and section 6.2.2 (incorporated by reference, see § 770.99).

(G) In the event a government entity has identified the existence of unsafe conditions (e.g., natural disasters, outbreaks, political unrest, epidemics, and pandemics) in the area of a composite wood product manufacturing panel producer that would prevent the required quarterly inspections from being conducted in-person on-site, a TPC may opt to perform a remote quarterly inspection in lieu of the in-person on-site inspection. Such a remote inspection may occur only during the period of the unsafe conditions. For such a remote inspection during the period of the unsafe conditions, the TPC must conduct a remote quarterly inspection via live remote technology (e.g., video/teleconference) operating as directed by the TPC to satisfy the requirements of paragraph (c)(4)(i)(F) of this section, and work with the panel producer quality control manager at that time to select, package, sign, and ship the TPC panels/samples for the quarterly test according to § 770.20(c). TPCs and panel producers must remain in close communication with each other to ensure any changes or developments that might affect the panel producer or product type certification are managed according to the TSCA Title VI regulations in this part. The standard practice for a TPC providing certification services for composite wood panel producers remains that a TPC conducts in-person quarterly inspections and sample collection, packaging, signature, and shipping for quality control testing. * * * * *(viii) * * *
(A) The following information for each panel producer making composite wood products certified by the EPA TSCA Title VI TPC:

§ 770.20 Testing requirements.

(a) * * *
(1) All panels must be tested prior to the application of a finishing or topcoat. Conditioning of panels for testing must start as soon as possible after panel production, but no later than 30 calendar days after the panels were produced.

§ 770.15 Composite wood product certification.

* * * * *(c) * * *
(1) * * *
(viii) Results of an initial, on-site inspection by the TPC of the panel producer. In the event a government entity has identified the existence of unsafe conditions as outlined in § 770.7(c)(4)(i)(G) and in order to conduct the required initial, on-site inspection associated with new certification activities, the TPC may conduct a virtual inspection via on-site video/teleconference technology (operating as directed by the TPC) and that aligns with the standard operating procedure the TPC would normally employ during an in-person inspection to satisfy the requirements of this paragraph (c)(1)(viii).

§ 770.17 No-added formaldehyde-based resins.

* * * * *(c) * * *
(2) Ninety percent of the three months of routine quality control testing data and the results of the one primary or secondary method test (required under paragraphs (a)(3) and (4) of this section) must be shown to be no higher than 0.04 ppm.

§ 770.18 Ultra low-emitting formaldehyde resins.

* * * * *(d) * * *
(2) Ninety percent of six months of routine quality control testing data and the results of two quarterly primary or secondary method tests (required under paragraphs (a)(3) and (4) of this section) must be shown to be no higher than an ultra-low-emitting formaldehyde resins (ULEF)-target value of 0.04 ppm. * * * * 

§ 770.20 Testing requirements.

(b) * * *
(1) * * *

* * * * *(vii) JIS A 1460:2021(E) (24-hr Desiccator Method) (incorporated by reference, see § 770.99).

* * * * *(d) * * *
(1) * * *
(iii) Equivalence determination. The ASTM D6007–14 method (incorporated by reference, see § 770.99) is considered equivalent to the ASTM E1333–14 method (incorporated by reference, see § 770.99) if the following condition is met:

\[
|X| \leq 0.88S
\]

Where C is equal to:

- 0.026 for the lower range;
- 0.038 for the intermediate range; and
- 0.052 for the upper range.

* * * * 

§ 770.99 Incorporation by reference.

Certain material is incorporated by reference into this part with the approval of the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To enforce any edition other than that specified in this section, the Environmental Protection Agency (EPA) must publish a document in the Federal Register and the material must be available to the public. All approved incorporation by reference (IBR) material is available for inspection at the EPA and at the National Archives and Records Administration (NARA). Contact EPA at: OPPDocket in the Environmental Protection Agency Docket Center (EPA/DC), West William Jefferson Clinton


(2) [Reserved] 

(b) ASTM. ASTM International, 100 Barr Harbor Dr., P.O. Box C700, West Conshohocken, PA 19428–2959; (877) 909–ASTM; www.astm.org.

(1) ASTM D5055–19e1, Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists, Approved March 1, 2019; IBR approved for § 770.1(c).

(2) ASTM D5456–21e1, Standard Specification for Evaluation of Structural Composite Lumber Products, Approved February 1, 2021; IBR approved for § 770.1(c).

(3) ASTM D5555–19e1, Standard Test Method for Determining Formaldehyde Levels from Wood Products Using a Desiccator, Approved August 1, 2014; IBR approved for § 770.20(b).

(4) ASTM D6007–14, Standard Test Method for Determining Formaldehyde Concentrations in Air from Wood Products Using a Small-Scale Chamber, Approved October 1, 2014; IBR approved for §§ 770.3; 770.7(a) through (c); 770.15(c); 770.17(a); 770.18(a); 770.20(b) through (d).

(5) ASTM E1333–14, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates from Wood Products Using a Large Chamber, Approved October 1, 2014; IBR approved for §§ 770.3; 770.7(a) through (c); 770.10(b); 770.15(c); 770.17(a); 770.18(a); 770.20(c) and (d).

(c) BSI. British Standards Institute, 12950 Worldgate Dr., Suite 800, Herndon, VA 20170; (800) 862–4977; www.bsigroup.com.


(2) BS EN ISO 12460–5:2015 E, Wood based panels.—Determination of formaldehyde release—Part 5: Extraction method (called the perforator method), December 2015; IBR approved for § 770.20(b).


(1) ANSI A135.4–2012, Basic Hardboard, Approved June 8, 2012; IBR approved for § 770.3.

(2) ANSI A135.5–2012, Prefinished Hardboard Paneling, Approved March 29, 2012; IBR approved for § 770.3.

(3) ANSI A135.6–2012, Engineered Wood Siding, Approved June 5, 2012; IBR approved for § 770.3.

(4) ANSI A135.7–2012, Engineered Wood Trim, Approved July 17, 2012; IBR approved for § 770.3.

(5) ANSI A208.1–2022, Particleboard, Approved June 22, 2022; IBR approved for § 770.3.

(6) ANSI A208.2–2022, Medium Density Fiberboard (MDF) for Interior Applications, Approved April 14, 2022; IBR approved for § 770.3.

(e) Georgia Pacific. Georgia-Pacific Chemicals LLC, 735 Peachtree Street, Atlanta, GA 30303; (877) 377–2737; www gp.com.


(f) HPVA. Decorative Hardwoods Association (formerly known as Hardwood Plywood and Veneer Association [HPVA]), 42777 Trade West Dr., Sterling, VA 20166; (703) 435–2990; www.decorativehardwoods.org.

(1) ANSI/HPVA HP–1–2020, American National Standard for Hardwood and Decorative Plywood, Approved August 17, 2020; IBR approved for § 770.3.

(2) [Reserved]


(2) ISO/IEC 17011:2017(E) Conformity assessments—Requirements for accreditation bodies accrediting conformity assessments bodies (Second Edition), November 2017; IBR approved for §§ 770.3; 770.7(a) and (b).

(3) ISO/IEC 17020:2012(E), Conformity assessment—Requirements for the operation of various bodies performing inspection, Second edition, 2012–03–01; IBR approved for §§ 770.3; 770.7(a) through (c).

(4) ISO/IEC 17025:2017(E), General requirements for the competence of testing and calibration laboratories (Third Edition), November 2017; IBR approved for §§ 770.3; 770.7(a) through (c).

(5) ISO/IEC 17065:2012(E), Conformity assessment—Requirements for bodies certifying products, processes and services, First edition, 2012–09–15; IBR approved for §§ 770.3; 770.7(a) and (c).


(i) JIS A 1460:2021(E), Determination of the emission of formaldehyde from building boards—Desiccator method, First English edition, November 2021; IBR approved for § 770.20(b).

(2) [Reserved]

(i) NIST. National Institute of Standards and Technology, Public Inquiries Unit, NIST, 100 Bureau Dr., Stop 1070, Gaithersburg, MD 20899–1070; (301) 975–NIST or (800) 553–6847; www.nist.gov.

(1) PS 1–19, Structural Plywood, Effective December 1, 2019; IBR approved for §§ 770.1(c); 770.3.

(2) PS 2–18, Performance Standard for Wood Structural Panels, March 2019; IBR approved for §§ 770.1(c); 770.3.

Note 1 to Paragraph (i): To purchase paper copies from NIST, call (301) 975–NIST for an order number. To purchase paper copies from GPO (with a stock number), mail: U.S. Government Publishing Office, P.O. Box 979050, St. Louis, MO 63197–9000; call: (866) 512–1800 or (DC Area only: (202) 512–1800); fax (202) 512–2104.

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