

COMPOSITE PANEL ASSOCIATION

ECO-CERTIFIED COMPOSITE (ECC) SUSTAINABILITY STANDARD CPA 4-19

VOLUNTARY STANDARD
SPONSORED BY
THE COMPOSITE PANEL ASSOCIATION (CPA)

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**COMPOSITE PANEL ASSOCIATION
ECO-CERTIFIED COMPOSITE STANDARD CPA 4-19
AND GRADEMARK CERTIFICATION PROGRAM**

INTRODUCTION AND PURPOSE

The Composite Panel Association (CPA) Eco-Certified Composite Standard ("ECCS") and corresponding Grademark Certification Program ("Program") have been developed to provide independent certification of composite panel manufacturing plants that demonstrate compliance with specific environmentally responsible practices.

Participant Categories and Eligibility

The ECCS applies to manufacturers of particleboard, medium density fiberboard (MDF), hardboard, prefinished hardboard paneling, engineered wood siding and engineered wood trim for all applications. It defines the applicable composite panels, establishes maximum formaldehyde emission limits and identifies the environmental criteria that must be met to qualify for ECC certification.

The following requirements shall be verified and documented by Program representatives at least annually for a composite panel manufacturing plant to be certified to produce ECC-compliant panels. Each qualifying manufacturing plant shall sign a license agreement regarding the use of the ECC logo and/or other identifying mark and associated responsibilities, with a requirement to notify CPA if compliance circumstances change. Compliance shall be demonstrated on an individual plant basis.

Panels made by ECC-compliant mills shall be certified to the California Air Resources Board (CARB) Airborne Toxic Control Measure (ATCM) 93120, and to EPA's TSCA Title VI "Formaldehyde Emission Standards for Composite Wood Products" 40 CFR Part 770 by CPA for formaldehyde emissions or be recognized by CARB and EPA as exempt from certification as Ultra Low Emitting Formaldehyde (ULEF) or No Added Formaldehyde (NAF) products. Hardboard, engineered wood siding and engineered wood trim products not exempt by product definition from the CARB and EPA regulations shall be certified for formaldehyde emissions in accordance with ANSI A208.2- 2016 Medium Density Fiberboard (MDF) for Interior Applications to the applicable CARB and EPA MDF emission limit based on panel thickness.

Except as noted below, plants that participate in the ECC Program must demonstrate through CPA's third-party certification program that they meet the emissions requirements for 100% of their panels 100% of the time for products regulated by CARB ATCM 93120 and EPA TSCA Title VI. Non-complying emission levels for specifically identified experimental short-term trial runs are allowed when permitted by CARB ATCM 93120 or EPA TSCA Title VI. Any production lot determined to be non-complying with CARB ATCM 93120 or EPA TSCA Title VI emission requirements may not be labeled ECC-certified.

Environmental Requirements

In addition to compliance with the CARB and EPA formaldehyde certification requirements, a manufacturing plant shall demonstrate compliance with at least three (3) of the five (5) following environmental requirements.

(1) Carbon Footprint. The plant shall demonstrate that the panel's carbon store offsets its cradle-to-gate carbon footprint as determined in kg-CO₂ equivalents of greenhouse gas (GHG) emissions. Each plant shall use the CPA Carbon Calculator to determine if a panel performs as a carbon sink resulting in overall net carbon storage.

(2) Local and Renewable Resource. At least 85% of total annual wood fiber used shall be sourced within 250 miles (402 km) of the manufacturing plant.

(3) Recycled/Recovered. Use a minimum of 75% recycled or recovered fiber; OR at least 50% recycled or recovered fiber AND a minimum of 5% post-consumer fiber. Percentages shall be calculated on a weight basis as measured in bone dry tons (bdt).

(4) Sustainability. The plant shall document that greater than 97% of its fiber furnish brought on-site to manufacture panels is either converted into panels or reutilized in other non-waste products. The percentage shall be calculated on a weight basis as measured in bone dry tons (bdt).

(5) Wood Sourcing. To ensure that its wood fiber sourcing program is environmentally responsible, the plant shall hold a valid assessment and certificate. This documentation shall conform to programs such as the Forest Stewardship Council (FSC-Requirements for Sourcing FSC Controlled Wood or Chain of Custody Certification) or the Sustainable Forest Initiative

(SFI – Fiber Sourcing Standard). A current list of acceptable programs is available from CPA. These certifications must encompass assessment of 100% of the plant’s wood fiber furnish.

Non-wood fiber is defined as a by-product of an agricultural crop where the cellulose is other than woody biomass and may be considered to meet requirements (1) through (4) above.

DEFINITIONS

The following section shall be updated by erratum reports when new or revised reference standards are published.

Hardboard

Hardboard is a panel manufactured primarily from inter-felted lignocellulosic fibers consolidated under heat and pressure in a hot press to a density of 500 kg/m³ (31 lbs/ft³) or greater by:

- (A) a wet process; or
- (B) a dry process that uses
 - (1) a phenolic resin, or
 - (2) a resin system in which there is no added formaldehyde as part of the resin cross-linking structure;or
- (C) a wet formed/dry pressed process.

Other materials may be added to improve certain properties, such as stiffness, hardness, finishing properties, resistance to abrasion and moisture, as well as to increase strength, durability and utility.

Reference: ANSI A135.4-2012 (Approved June 8, 2012), Basic Hardboard.

Engineered Wood Siding and Engineered Wood Trim

Engineered Wood Siding and Engineered Wood Trim are categories of composite panels that have been designed and manufactured to perform in interior and exterior exposure applications with the appearance of traditional wood.

Reference: ANSI A135.6-2012 (Approved June 5, 2012) Engineered Wood Siding and ANSI A135.7-2012 (Approved July 17, 2012) Engineered Wood Trim.

Prefinished Hardboard Paneling

Prefinished Hardboard Paneling is manufactured primarily of interfelted lignocellulosic fibers which are consolidated under heat and pressure in a hot-press to a density of 500kg/m³ (31 pounds per cubic foot) or greater. Panels are intended for interior wall panel applications and have a factory applied finish that comply with Class I or Class II requirements specified in the Standard.

Reference: ANSI A135.5-2012 (Approved March 29, 2012), Prefinished Hardboard Paneling.

Medium Density Fiberboard

"A composite panel product composed primarily of cellulosic fibers and a bonding system cured under heat and pressure. MDF density is typically between 500 kg/m³ (31 lbs/ft³) and 1000 kg/m³ (62 lbs/ft³)."

Reference: ANSI A208.2- 2016 (Approved May 12, 2016) Medium Density Fiberboard (MDF) for Interior Applications.

Reutilized Materials and Disposed Materials

For Criterion No. 4, Sustainability, examples of reutilized materials include, but are not limited to, packaging material, dunnage, fuel for energy, mulch or compost. Disposed materials are defined as fiber residuals shipped to a landfill, material hauled away for a tipping fee as waste or boiler ash waste not sold.

Particleboard

"A generic term for a composite panel primarily composed of cellulosic materials (usually wood), generally in a form of discrete pieces or particles, as distinguished from fibers, bonded together with a bonding system, and which may contain additives."

Reference: ANSI A208.1- 2016 (Approved May 12, 2016) Particleboard.

COMPLIANCE EXPLANATIONS

The following is intended to explain and clarify certain compliance requirements.

Carbon Footprint

Plants shall complete the CPA Carbon Calculator. The Calculator shows outputs in units of Carbon Equivalent (CO₂e) of cradle to gate greenhouse gas emissions, for each of the following units: fossil carbon emissions, biogenic carbon emissions, carbon stored in panels and net carbon emissions. To earn the Carbon Footprint credit, a manufacturing plant must demonstrate that its carbon balance results in negative net carbon emissions.

Local and Renewable Resource

Bills of lading or similar documentation shall be produced to verify that at least 85% of the total wood fiber is sourced within a 250-mile (402 km) radius from the plant.

Recycled/Recovered

Use of a minimum of 75% recycled or recovered fiber; OR at least 50% recycled or recovered fiber AND a minimum of 5% post-consumer fiber. The ECCS recognizes the environmental benefits of utilizing the variety of fiber sources available, which include both wood and non-wood based cellulose fiber.

The following fiber classifications represent the acceptable fiber types covered by the ECCS as used in the manufacture of composite panel products seeking to qualify for the recycled/recovered requirement:

(1) Recycled Fiber

Pre-Consumer Recycled includes fiber, such as scrap, trimmings and cuttings, generated as a by-product from manufacturing and converting processes of primary wood products. Examples of this category include planer shavings, ply trim, sawdust, fines, chips and bagasse.

Post-Consumer Recycled includes fiber from products that have completed their life as a consumer item and have been diverted or

recovered from the solid waste stream after having been used and/or disposed of by the consumer following their intended use. Examples of this category include used pallets, recycled furniture and cabinet waste, construction waste and demolition waste.

(2) Recovered Fiber

Fiber in this category has been recovered as a by-product of an agricultural crop or public/private tree maintenance program where the fiber generated is used on a secondary basis not related to the original agricultural or ornamental function. For definitional purposes, this fiber has been sub-categorized as wood and non-wood.

Wood Fiber is generated from the removal of woody biomass from both urban and non-urban sources as part of a management prescription, maintenance or hazard tree program, pre-commercial thinning or salvage operation where the removal of such fiber does not adversely affect soil nutrient or structure. Examples of this category include fruit tree prunings, park tree removal, logging slash and culled timber.

Non-Wood Fiber is generated as a by-product of an agricultural crop where the cellulose is other than woody biomass. Removal of this fiber must not adversely affect soil nutrients or structure. Examples of this category include straw from wheat, rice, barley or from other cereal/grain operations.

Furnish ineligible for consideration as recycled or recovered for this ECCS includes fiber generated from the harvest of commercial timber for the sole purpose of converting that timber into chips, shavings or sawdust to then be used in the manufacture of composite panel products. Commercial timber is defined as timber that can be used to produce lumber or plywood. This restriction only applies to the main bole of the tree and does not include the slash or other recoverable by-product resulting from timber harvesting.

Sustainability

A manufacturing plant shall account for the weight of all wood fiber that is brought on-site and determine the percentage by weight that is utilized as furnish to manufacture panels or other reutilized materials as defined in CPA-ECC-QAM-2019. Weight shall be measured in bone dry tons (bdt). See also definitions of reutilized materials and disposed materials.

These percentage calculations shall be used to determine the plant's compliance with the sustainability requirement - i.e., by weight, 97% or greater of the fiber furnish brought on-site to manufacture panels shall be either converted into panels or reutilized materials.

Wood Sourcing

A manufacturing plant shall produce a valid assessment and certificate showing conformity to programs such as the Forest Stewardship Council (FSC-STD-40-005 V3-1 EN Requirements for Sourcing FSC Controlled Wood or FSC-STD-40-004 (V3-0) EN Chain of Custody Certification), or Sustainable Forest Initiative (SFI 2015-2019 – Fiber Sourcing Standard: Section 3; Objectives 1-13 for wood fiber used as panel furnish. A current list of acceptable programs is available from CPA. These certifications must encompass assessment of 100% of the plant's wood fiber furnish.

ECCS HISTORY

- CPA 4-11 Approved September 19, 2011; effective October 3, 2011
- CPA 4-11 Amended April 30, 2012; effective May 1, 2012
- CPA 4-11 Re-issued October 1, 2012 to supersede all previous versions
- CPA 4-19 Revises 4-11 by requiring EPA TSCA Title VI formaldehyde compliance by CPA as the third-party certifier (no later than March 22, 2019) in addition to CARB ATCM 93120, requires the producing plant to certify 100 percent of its production 100 percent of the time, removes PART B – Finished Products (including components and laminated panels), and updates references.

Appendix A (Informative Appendix)

Development of CPA Carbon Calculator

CPA contracted with Bowyer & Associates, Inc., in 2010 to develop the CPA Carbon Calculator used in the ECCS for North American composite panel manufacturing plants. The lead consultant was Dr. Jim Bowyer, Professor Emeritus and former department head, University of Minnesota Department of Bioproducts and Biosystems Engineering, and an Elected Fellow of the International Academy of Wood Science. Dr. Bowyer has also served as President of the Forest Products Society; President of the Society of Wood Science and Technology; Chairman of the Tropical Forest Foundation; and Vice President of the Consortium for Research on Renewable Industrial Materials (CORRIM). He has degrees in Forest Management (BS) from Oklahoma State University, Forest Products (MS) from Michigan State University, and Wood Science and Technology (PhD) from the University of Minnesota.

In October 2018 the carbon calculator was reviewed and updated by Dr. Maureen Puettmann, lead researcher of the life cycle analysis (LCA) reports for North American particleboard, MDF and hardboard. Version 3.0 of the calculator contains updated composite panel life cycle inventory values, emissions factors, electricity generation values and energy grids for several South American countries that have been added to the calculator. Dr. Puettmann is an LCA consultant at the WoodLife Environmental Consultants, LLC and is the Director of Operations for CORRIM - The Consortium for Research on Renewable Industrial Materials.

Calculations used in the Carbon Calculator model are derived from a variety of sources, including the following:

- The Consortium for Research on Renewable Industrial Materials (CORRIM)
- U.S. Environmental Protection Agency (USEPA) eGridweb
- US Energy Information Administration (EIA), Voluntary Reporting of Greenhouse Gases Program
- Environment Canada, GreenHouse Gas Emissions Quantification Guidance

National Center for Air and Stream Improvement (NCASI), Forest Industry Carbon Assessment Tool (FICAT).