

COMPOSITE PANEL ASSOCIATION

ECO-CERTIFIED COMPOSITE (ECC) SUSTAINABILITY STANDARD CPA 4-11

**VOLUNTARY STANDARD
SPONSORED BY THE COMPOSITE PANEL ASSOCIATION**

**Approved by CPA Board of Directors
September 19, 2011
Effective October 3, 2011**



**CPA GRADEMARK CERTIFICATION PROGRAM
ECC CERTIFICATION PROGRAM
ECO-CERTIFIED COMPOSITE STANDARD CPA 4-11**

INTRODUCTION AND PURPOSE

The Composite Panel Association (CPA) Eco-Certified Composite (ECC) Grademark Program (the "Program") has been developed to provide independent certification of composite panel manufacturing plants that demonstrate compliance with environmentally responsible practices via the assessment of the following criteria; carbon storage, localized use of the renewable resource, recycled and/or recovered furnish, adherence to specific formaldehyde emission standards, wood furnish sustainability, and responsible wood fiber sourcing.

SCOPE

The Eco-Certified Composite Standard (ECCS) applies to all grades of particleboard, medium density fiberboard (MDF), hardboard and engineered wood siding and trim that have been manufactured for all applications. The ECCS is a voluntary standard sponsored by CPA. The ECCS defines the applicable composite panels, establishes maximum formaldehyde emission limits and defines five (5) environmental criteria for the manufacturing plant; of which at least three must be met to receive this third party certification.

STANDARD CRITERIA

The following requirements will be verified and documented by CPA Grademark representatives at least annually. Each qualifying plant shall sign a license agreement regarding the use of the ECC logo and associated responsibilities, with a requirement to notify CPA if compliance circumstances change. Demonstration of compliance with the criteria will be conducted on an individual plant basis. Certification granted to a mill shall only be applicable to CARB Phase 2 certified product, ULEF/NAF CARB exempted products (i.e., reduced testing requirements) or products exempted by product definition from the CARB regulation.

A prerequisite requirement is that only particleboard and MDF (>8mm) panel products that have been third party certified to CARB Phase 2 or obtain an ULEF/NAF exemption from third party certification can be labeled with the ECC logo. Thin MDF (≤ 8 mm) must be CARB Phase 1 until January 1, 2012 at which time Phase 2 or better will be required. Plants may produce and sell products above the Phase 2 emission limit; however, those products are not eligible to use the ECC logo. Hardboard/fiberboard and engineered wood siding and trim products not exempt, by product definition, from the CARB Rule shall be certified for formaldehyde emissions in accordance with ANSI A208.2-2009 Medium Density Fiberboard (MDF) for Interior Applications to the CARB MDF emission limit.

Although formaldehyde emission certification is a prerequisite to a plant's qualification under this program, this criterion does not earn a credit towards satisfying the requirement that at least 3 of the 5 criteria below are met.

CRITERIA

(1) Carbon Footprint. Demonstrate that the panel's carbon store offsets its carbon footprint cradle-to-gate as determined in kg-CO₂ equivalents of greenhouse gas (GHG) emissions. Each production facility will use the CPA supplied carbon calculator spreadsheet to determine if its panels perform as a carbon sink resulting in an overall net carbon storage.

(2) Local and Renewable Resource. At least 85% of wood fiber is sourced within 402 km (250 miles) from the panel manufacturer.

(3) Recycled/Recovered. Use of a minimum of 75% recycled or recovered wood fiber; OR at least 50% recycled or recovered wood fiber AND a minimum of 5% post-consumer wood fiber. Percentages are on a weight basis (bone dry tons).

(4) Sustainability. Plants must document that greater than 97% (on a weight basis) of its wood fiber furnish brought on-site to manufacture panels is either converted into panels or is re-utilized as a valued product. Non-valued products include wood residuals shipped to a landfill, material hauled away for a tipping fee as waste material or boiler ash waste.

(5) Wood Sourcing. To ensure that the plant's wood sourcing program is environmentally responsible, a plant must hold a valid assessment and certificate. This documentation must show conformity to either the Forest Stewardship Council (FSC -Controlled Wood Standard or Chain of Custody Standard) or the Sustainable Forest Initiative (SFI – Fiber

Sourcing Standard). These certifications must encompass assessment of 100 percent of the plant's wood fiber furnish.

DEFINITIONS

The definitions section of this Standard shall be updated via erratum reports when new or revised reference standards are published.

Basic 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:
 - (a) a phenolic resin, or
 - (b) a resin system in which there is no added formaldehyde as part of the resin cross-linking structure;
- (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 A135.4-2004, Basic Hardboard is currently under ANSI revision and is designated as BSR ANSI A135.4-20XX, Basic Hardboard.

Engineered Wood Siding and Trim

Engineered Wood Siding and 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 A135.6-2006 for Hardboard Siding is currently under ANSI revision and is designated as BRS A135.6-20XX Engineered Wood Siding. CPA is currently sponsoring the development of a new ANSI standard for trim and is designated as BSR ANSI A135.7-20XX, Engineered Wood Trim.

Prefinished Hardboard Paneling

This Standard covers requirements and methods of testing for the dimensions, squareness, edge straightness, and moisture content of prefinished hardboard paneling and for the finish of the paneling. The hardboard paneling substrate shall be 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. The finished product when tested shall have the properties of one of the classes listed in the American National Standard A135.4-2004 and shall have the physical properties specified therein when tested in accordance with the applicable test methods in Part B of ASTM D1037-99.

Reference: ANSI A135.5-2004, Prefinished Hardboard Paneling is currently under ANSI revision and is designated as BSR ANSI A135.5-20XX, Prefinished Hardboard Paneling.

Medium Density Fiberboard

"A composite panel products 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 A208.2-2009.

Valued and Non-Valued By-Products

For Criteria No. 4, Sustainability, examples of valued by-products include, but are not limited to, packaging material, dunnage, fuel for energy, mulch or compost.

Non-valued by-products are defined as wood fiber residuals shipped to a landfill, material hauled away for a tipping fee as waste material or boiler ash waste.

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 A208.1-2009.

EXPLANATION OF COMPLIANCE TO CRITERIA

Criteria (1) Carbon Footprint.

CPA will supply participating plants with an electronic carbon calculator spreadsheet that provides outputs in units of Carbon Equivalent (CO₂e) Balance and mass balance Carbon Balance, from cradle to gate, 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 plant must demonstrate that its Carbon Balance results in net carbon emissions that are negative.

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Criteria (2) Local and Renewable Resource.

Bill of lading or similar documentation must be produced and verified that validates that at least 85% of wood fiber is sourced within a 250 mile radius from the plant.

Criteria (3) Recycled/Recovered.

The ECCS recognizes the environmental benefits of utilizing the variety of fiber source opportunities available today, which include both wood based and non-wood based cellulose fiber, and follows the U.S. Government guidelines on the classification of raw materials used in the manufacturing sector. Specifically, the Federal Trade Commission (FTC) has defined recycled materials as follows:

“Materials that have been recovered or otherwise diverted from the solid waste stream, either during the manufacturing process (pre-consumer), or after consumer use (post-consumer). To the extent the source of recycled content includes pre-consumer material, the manufacturer or advertiser must have substantiation for concluding that the pre-consumer material would otherwise have entered the solid waste stream. In asserting a recycled content claim, distinctions may be made between pre-consumer and post-consumer materials. Where such distinctions are asserted, any express or implied claim about the specific pre-consumer or post-consumer content of a product or package must be substantiated.” Reference: Federal Register 16 CFR Part 260.

Further, the U.S. Environmental Protection Agency (EPA) defines recovered materials as follows:

“Waste materials and by-products which have been recovered or diverted from solid waste, but does not include those materials and by-products generated from, and commonly reused within, an original manufacturing process.” Reference: 42 U.S.C. 6903 (19).

Based on these definitions, the following fiber classifications represent the acceptable fiber types covered by this ECCS used in the manufacture of composite panel products to qualify for the recycled/recovered requirement:

Recycled Fiber

Pre-Consumer Recycled includes fiber, such as scrap, trimmings and cuttings, generated as a waste from manufacturing and converting processes for primary wood products and that have been diverted from the solid waste stream. This material must have undergone processing before becoming a waste to be included in this category. Examples of this category include planer shavings, plytrim, 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.

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 other cereal/grain operations.

Fiber omitted from this Standard 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.

Criteria (4) Sustainability.

See definition of valued and non-valued by-products in the definition section.

A plant must account for all wood fiber (on a weight basis) brought on-site as furnish to manufacture panels as well as the total amount of wood fiber (on a weight basis) classified as “non-valued by-product residual wood fiber” and determine a percentage of wood fiber classified as valued products and by-products.

Criteria (5) Wood Sourcing.

A plant must produce a valid assessment and certificate, showing conformity to either the Forest Stewardship Council (FSC -Controlled Wood Standard FSC-STD-40-005 (V2-1) EN (approved January 2008) or Chain of Custody Standard FSC-STD-40-004 (V2-0) EN (approved January 2008) or the Sustainable Forest Initiative (SFI – Fiber Sourcing requirements: Section 2-SFI 2010-2014 Standard; Objectives 8-20 (approved March 2011) for wood fiber used as panel furnish.

ADDITIONAL INFORMATION

Carbon Calculator Development and Resources:

CPA contracted with Bowyer & Associates, Inc. to develop the carbon calculator for North American composite plants. The lead consultant was Dr. Jim Bowyer. Bowyer is Professor Emeritus and former department head, University of Minnesota Department of Bioproducts and Biosystems Engineering, and is an Elected Fellow of the International Academy of Wood Science. Past leadership in the profession includes service 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).

Dr. Bowyer has earned degrees in Forest Management (BS) from Oklahoma State University, Forest Products (MS) from Michigan State University, and Wood Science in Technology (PhD) from the University of Minnesota.

Calculations in the Carbon Calculator Model are based on a number of sources, including:

- The Consortium for Research on Renewable Industrial Materials (CORRIM)
- U.S. Environmental Protection Agency (USEPA) – eGridweb

- (<http://cfpub.epa.gov/egridweb/ghg.cfm>)
- US Energy Information Administration (EIA) , Voluntary Reporting of Greenhouse Gases Program:
(<http://www.eia.doe.gov/oiaf/1605/coefficients.html>)
 - Environment Canada, GreenHouse Gas Emissions Quantification Guidance
(<http://www.ec.gc.ca/ges-ghg/default.asp?lang=En&n=AC2B7641-1>)
 - Canada Electricity Association, Electricity Generation in Canada by Province and Fuel Type, Statistics Canada, Survey 2151, 2009.
 - National Center for Air and Stream Improvement (NCASI), Forest Industry Carbon Assessment Tool (FICAT)

Federal Trade Commission (FTC):

This ECC Standard was approved with consideration given by the FTC proposed Guides on the Use of Environmental Marketing Claims, 16 CFR Part 260, 75 63552 et seq. (Oct. 15, 2010).