

year 2009, and \$1,500,000 for each of fiscal years 2010 through 2013, to remain available until expended.

(Pub. L. 94-469, title V, §505, as added Pub. L. 110-140, title IV, §461(a), Dec. 19, 2007, 121 Stat. 1642.)

#### SUBCHAPTER VI—FORMALDEHYDE STANDARDS FOR COMPOSITE WOOD PRODUCTS

##### § 2697. Formaldehyde standards

###### (a) Definitions

In this section:

###### (1) Finished good

###### (A) In general

The term “finished good” means any good or product (other than a panel) containing—

- (i) hardwood plywood;
- (ii) particleboard; or
- (iii) medium-density fiberboard.

###### (B) Exclusions

The term “finished good” does not include—

- (i) any component part or other part used in the assembly of a finished good; or
- (ii) any finished good that has previously been sold or supplied to an individual or entity that purchased or acquired the finished good in good faith for purposes other than resale, such as—
  - (I) an antique; or
  - (II) secondhand furniture.

###### (2) Hardboard

The term “hardboard” has such meaning as the Administrator shall establish, by regulation, pursuant to subsection (d).

###### (3) Hardwood plywood

###### (A) In general

The term “hardwood plywood” means a hardwood or decorative panel that is—

- (i) intended for interior use; and
- (ii) composed of (as determined under the standard numbered ANSI/HPVA HP-1-2009) an assembly of layers or plies of veneer, joined by an adhesive with—
  - (I) lumber core;
  - (II) particleboard core;
  - (III) medium-density fiberboard core;
  - (IV) hardboard core; or
  - (V) any other special core or special back material.

###### (B) Exclusions

The term “hardwood plywood” does not include—

- (i) military-specified plywood;
- (ii) curved plywood; or
- (iii) any other product specified in—
  - (I) the standard entitled “Voluntary Product Standard—Structural Plywood” and numbered PS 1-07; or
  - (II) the standard entitled “Voluntary Product Standard—Performance Standard for Wood-Based Structural-Use Panels” and numbered PS 2-04.

###### (C) Laminated products

###### (i) Rulemaking

###### (I) In general

The Administrator shall conduct a rulemaking process pursuant to sub-

section (d) that uses all available and relevant information from State authorities, industry, and other available sources of such information, and analyzes that information to determine, at the discretion of the Administrator, whether the definition of the term “hardwood plywood” should exempt engineered veneer or any laminated product.

###### (II) Modification

The Administrator may modify any aspect of the definition contained in clause (ii) before including that definition in the regulations promulgated pursuant to subclause (I).

###### (ii) Laminated product

The term “laminated product” means a product—

(I) in which a wood veneer is affixed to—

- (aa) a particleboard platform;
- (bb) a medium-density fiberboard platform; or
- (cc) a veneer-core platform; and

(II) that is—

- (aa) a component part;
- (bb) used in the construction or assembly of a finished good; and
- (cc) produced by the manufacturer or fabricator of the finished good in which the product is incorporated.

###### (4) Manufactured home

The term “manufactured home” has the meaning given the term in section 3280.2 of title 24, Code of Federal Regulations (as in effect on the date of promulgation of regulations pursuant to subsection (d)).

###### (5) Medium-density fiberboard

The term “medium-density fiberboard” means a panel composed of cellulosic fibers made by dry forming and pressing a resinated fiber mat (as determined under the standard numbered ANSI A208.2-2009).

###### (6) Modular home

The term “modular home” means a home that is constructed in a factory in 1 or more modules—

(A) each of which meet applicable State and local building codes of the area in which the home will be located; and

(B) that are transported to the home building site, installed on foundations, and completed.

###### (7) No-added formaldehyde-based resin

###### (A) In general

(i) The term “no-added formaldehyde-based resin” means a resin formulated with no added formaldehyde as part of the resin cross-linking structure in a composite wood product that meets the emission standards in subparagraph (C) as measured by—

(I) one test conducted pursuant to test method ASTM E-1333-96 (2002) or, subject to clause (ii), ASTM D-6007-02; and

(II) 3 months of routine quality control tests pursuant to ASTM D-6007-02 or

ASTM D-5582 or such other routine quality control test methods as may be established by the Administrator through rulemaking.

(ii) Test results obtained under clause (i)(I) or (II) by any test method other than ASTM E-1333-96 (2002) must include a showing of equivalence by means established by the Administrator through rulemaking.

**(B) Inclusions**

The term “no-added formaldehyde-based resin” may include any resin made from—

- (i) soy;
- (ii) polyvinyl acetate; or
- (iii) methylene diisocyanate.

**(C) Emission standards**

The following are the emission standards for composite wood products made with no-added formaldehyde-based resins under this paragraph:

- (i) No higher than 0.04 parts per million of formaldehyde for 90 percent of the 3 months of routine quality control testing data required under subparagraph (A)(ii).
- (ii) No test result higher than 0.05 parts per million of formaldehyde for hardwood plywood and 0.06 parts per million for particleboard, medium-density fiberboard, and thin medium-density fiberboard.

**(8) Particleboard**

**(A) In general**

The term “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 the standard numbered ANSI A208.1-2009).

**(B) Exclusions**

The term “particleboard” does not include any product specified in the standard entitled “Voluntary Product Standard—Performance Standard for Wood-Based Structural-Use Panels” and numbered PS 2-04.

**(9) Recreational vehicle**

The term “recreational vehicle” has the meaning given the term in section 3282.8 of title 24, Code of Federal Regulations (as in effect on the date of promulgation of regulations pursuant to subsection (d)).

**(10) Ultra low-emitting formaldehyde resin**

**(A) In general**

(i) The term “ultra low-emitting formaldehyde resin” means a resin in a composite wood product that meets the emission standards in subparagraph (C) as measured by—

- (I) 2 quarterly tests conducted pursuant to test method ASTM E-1333-96 (2002) or, subject to clause (ii), ASTM D-6007-02; and
- (II) 6 months of routine quality control tests pursuant to ASTM D-6007-02 or ASTM D-5582 or such other routine quality control test methods as may be established by the Administrator through rulemaking.

(ii) Test results obtained under clause (i)(I) or (II) by any test method other than ASTM

E-1333-96 (2002) must include a showing of equivalence by means established by the Administrator through rulemaking.

**(B) Inclusions**

The term “ultra low-emitting formaldehyde resin” may include—

- (i) melamine-urea-formaldehyde resin;
- (ii) phenol formaldehyde resin; and
- (iii) resorcinol formaldehyde resin.

**(C) Emission standards**

(i) The Administrator may, pursuant to regulations issued under subsection (d), reduce the testing requirements for a manufacturer only if its product made with ultra low-emitting formaldehyde resin meets the following emission standards:

(I) For hardwood plywood, no higher than 0.05 parts per million of formaldehyde.

(II) For medium-density fiberboard—

(aa) no higher than 0.06 parts per million of formaldehyde for 90 percent of 6 months of routine quality control testing data required under subparagraph (A)(ii); and

(bb) no test result higher than 0.09 parts per million of formaldehyde.

(III) For particleboard—

(aa) no higher than 0.05 parts per million of formaldehyde for 90 percent of 6 months of routine quality control testing data required under subparagraph (A)(ii); and

(bb) no test result higher than 0.08 parts per million of formaldehyde.

(IV) For thin medium-density fiberboard—

(aa) no higher than 0.08 parts per million of formaldehyde for 90 percent of 6 months of routine quality control testing data required under subparagraph (A)(ii); and

(bb) no test result higher than 0.11 parts per million of formaldehyde.

(ii) The Administrator may not, pursuant to regulations issued under subsection (d), exempt a manufacturer from third party certification requirements unless its product made with ultra low-emitting formaldehyde resin meets the following emission standards:

(I) No higher than 0.04 parts per million of formaldehyde for 90 percent of 6 months of routine quality control testing data required under subparagraph (A)(ii).

(II) No test result higher than 0.05 parts per million of formaldehyde for hardwood plywood and 0.06 parts per million for particleboard, medium-density fiberboard, and thin medium-density fiberboard.

**(b) Requirement**

**(1) In general**

Except as provided in an applicable sell-through regulation promulgated pursuant to subsection (d), effective beginning on the date that is 180 days after the date of promulgation of those regulations, the emission standards

described in paragraph (2), shall apply to hardwood plywood, medium-density fiberboard, and particleboard sold, supplied, offered for sale, or manufactured in the United States.

**(2) Emission standards**

The emission standards referred to in paragraph (1), based on test method ASTM E-1333-96 (2002), are as follows:

(A) For hardwood plywood with a veneer core, 0.05 parts per million of formaldehyde.

(B) For hardwood plywood with a composite core—

(i) 0.08 parts per million of formaldehyde for any period after the effective date described in paragraph (1) and before July 1, 2012; and

(ii) 0.05 parts per million of formaldehyde, effective on the later of the effective date described in paragraph (1) or July 1, 2012.

(C) For medium-density fiberboard—

(i) 0.21 parts per million of formaldehyde for any period after the effective date described in paragraph (1) and before July 1, 2011; and

(ii) 0.11 parts per million of formaldehyde, effective on the later of the effective date described in paragraph (1) or July 1, 2011.

(D) For thin medium-density fiberboard—

(i) 0.21 parts per million of formaldehyde for any period after the effective date described in paragraph (1) and before July 1, 2012; and

(ii) 0.13 parts per million of formaldehyde, effective on the later of the effective date described in paragraph (1) or July 1, 2012.

(E) For particleboard—

(i) 0.18 parts per million of formaldehyde for any period after the effective date described in paragraph (1) and before July 1, 2011; and

(ii) 0.09 parts per million of formaldehyde, effective on the later of the effective date described in paragraph (1) or July 1, 2011.

**(3) Compliance with emission standards**

(A) Compliance with the emission standards described in paragraph (2) shall be measured by—

(i) quarterly tests shall be<sup>1</sup> conducted pursuant to test method ASTM E-1333-96 (2002) or, subject to subparagraph (B), ASTM D-6007-02; and

(ii) quality control tests shall be<sup>1</sup> conducted pursuant to ASTM D-6007-02, ASTM D-5582, or such other test methods as may be established by the Administrator through rulemaking.

(B) Test results obtained under subparagraph (A)(i) or (ii) by any test method other than ASTM E-1333-96 (2002) must include a showing of equivalence by means established by the Administrator through rulemaking.

(C) Except where otherwise specified, the Administrator shall establish through rule-

making the number and frequency of tests required to demonstrate compliance with the emission standards.

**(4) Applicability**

The formaldehyde emission standard referred to in paragraph (1) shall apply regardless of whether an applicable hardwood plywood, medium-density fiberboard, or particleboard is—

(A) in the form of an unfinished panel; or

(B) incorporated into a finished good.

**(c) Exemptions**

The formaldehyde emission standard referred to in subsection (b)(1) shall not apply to—

(1) hardboard;

(2) structural plywood, as specified in the standard entitled “Voluntary Product Standard—Structural Plywood” and numbered PS 1-07;

(3) structural panels, as specified in the standard entitled “Voluntary Product Standard—Performance Standard for Wood-Based Structural-Use Panels” and numbered PS 2-04;

(4) structural composite lumber, as specified in the standard entitled “Standard Specification for Evaluation of Structural Composite Lumber Products” and numbered ASTM D 5456-06;

(5) oriented strand board;

(6) glued laminated lumber, as specified in the standard entitled “Structural Glued Laminated Timber” and numbered ANSI A190.1-2002;

(7) prefabricated wood I-joists, as specified in the standard entitled “Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists” and numbered ASTM D 5055-05;

(8) finger-jointed lumber;

(9) wood packaging (including pallets, crates, spools, and dunnage);

(10) composite wood products used inside a new—

(A) vehicle (other than a recreational vehicle) constructed entirely from new parts that has never been—

(i) the subject of a retail sale; or

(ii) registered with the appropriate State agency or authority responsible for motor vehicles or with any foreign state, province, or country;

(B) rail car;

(C) boat;

(D) aerospace craft; or

(E) aircraft;

(11) windows that contain composite wood products, if the window product contains less than 5 percent by volume of hardwood plywood, particleboard, or medium-density fiberboard, combined, in relation to the total volume of the finished window product; or

(12) exterior doors and garage doors that contain composite wood products, if—

(A) the doors are made from composite wood products manufactured with no-added formaldehyde-based resins or ultra low-emitting formaldehyde resins; or

(B) the doors contain less than 3 percent by volume of hardwood plywood,

<sup>1</sup> So in original.

particleboard, or medium-density fiberboard, combined, in relation to the total volume of the finished exterior door or garage door.

**(d) Regulations**

**(1) In general**

Not later than January 1, 2013, the Administrator shall promulgate regulations to implement the standards required under subsection (b) in a manner that ensures compliance with the emission standards described in subsection (b)(2).

**(2) Inclusions**

The regulations promulgated pursuant to paragraph (1) shall include provisions relating to—

- (A) labeling;
- (B) chain of custody requirements;
- (C) sell-through provisions;
- (D) ultra low-emitting formaldehyde resins;
- (E) no-added formaldehyde-based resins;
- (F) finished goods;
- (G) third-party testing and certification;
- (H) auditing and reporting of third-party certifiers;
- (I) recordkeeping;
- (J) enforcement;
- (K) laminated products; and
- (L) exceptions from the requirements of regulations promulgated pursuant to this subsection for products and components containing de minimis amounts of composite wood products.

The Administrator shall not provide under subparagraph (L) exceptions to the formaldehyde emission standard requirements in subsection (b).

**(3) Sell-through provisions**

**(A) In general**

Sell-through provisions established by the Administrator under this subsection, with respect to composite wood products and finished goods containing regulated composite wood products (including recreational vehicles, manufactured homes, and modular homes), shall—

- (i) be based on a designated date of manufacture (which shall be no earlier than the date 180 days following the promulgation of the regulations pursuant to this subsection) of the composite wood product or finished good, rather than date of sale of the composite wood product or finished good; and
- (ii) provide that any inventory of composite wood products or finished goods containing regulated composite wood products, manufactured before the designated date of manufacture of the composite wood products or finished goods, shall not be subject to the formaldehyde emission standard requirements under subsection (b)(1).

**(B) Implementing regulations**

The regulations promulgated under this subsection shall—

- (i) prohibit the stockpiling of inventory to be sold after the designated date of manufacture; and

- (ii) not require any labeling or testing of composite wood products or finished goods containing regulated composite wood products manufactured before the designated date of manufacture.

**(C) Definition**

For purposes of this paragraph, the term “stockpiling” means manufacturing or purchasing a composite wood product or finished good containing a regulated composite wood product between July 7, 2010, and the date 180 days following the promulgation of the regulations pursuant to this subsection at a rate which is significantly greater (as determined by the Administrator) than the rate at which such product or good was manufactured or purchased during a base period (as determined by the Administrator) ending before July 7, 2010.

**(4) Import regulations**

Not later than July 1, 2013, the Administrator, in coordination with the Commissioner of Customs and Border Protection and other appropriate Federal departments and agencies, shall revise regulations promulgated pursuant to section 2612 of this title as the Administrator determines to be necessary to ensure compliance with this section.

**(5) Successor standards and test methods**

The Administrator may, after public notice and opportunity for comment, substitute an industry standard or test method referenced in this section with its successor version.

**(e) Prohibited acts**

An individual or entity that violates any requirement under this section (including any regulation promulgated pursuant to subsection (d)) shall be considered to have committed a prohibited act under section 2614 of this title.

(Pub. L. 94-469, title VI, §601, as added Pub. L. 111-199, §2(a), July 7, 2010, 124 Stat. 1359.)

MODIFICATION OF REGULATION

Pub. L. 111-199, §4, July 7, 2010, 124 Stat. 1367, provided that: “Not later than 180 days after the date of promulgation of regulations pursuant to section 601(d) of the Toxic Substances Control Act [15 U.S.C. 2697(d)] (as amended by section 2), the Secretary of Housing and Urban Development shall update the regulation contained in section 3280.308 of title 24, Code of Federal Regulations (as in effect on the date of enactment of this Act [July 7, 2010]), to ensure that the regulation reflects the standards established by section 601 of the Toxic Substances Control Act [15 U.S.C. 2697].”

**CHAPTER 54—AUTOMOTIVE PROPULSION RESEARCH AND DEVELOPMENT**

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