

type that maintains protection against infiltration or penetration by air, moisture or vermin.

(d) Exterior surfaces shall be sealed to resist the entrance of rodents.

(e) Multi-section and attached manufactured homes (see subpart K of this part) are not required to comply with the factory installation of weather-resistant exterior finishes for those areas left open for field connection of the sections provided the following conditions are satisfied:

(1) Temporary weather protection for exposed, unprotected construction is provided in accordance with methods to be included in the approved design.

(2) Methods for on-site completion and finishing of these elements are included in the approved design.

(3) Complete installation instructions and the required materials for finishing these elements are provided.

[40 FR 58752, Dec. 18, 1975, as amended at 86 FR 2520, Jan. 12, 2021]

§ 3280.308 Formaldehyde emission controls for composite wood products

(a) *Definitions.* For purposes of this section, the definitions found in 40 CFR 770.3 apply.

(b) *Formaldehyde emission levels.* The following maximum formaldehyde emission standards apply whether the composite wood product is in the form of a panel or is incorporated into a component part or finished good:

(1) For hardwood plywood made with a veneer core or composite core, the maximum level is 0.05 parts per million (ppm) of formaldehyde;

(2) For medium density fiberboard, the maximum level is 0.11 ppm of formaldehyde;

(3) For thin medium density fiberboard, the maximum level is 0.13 ppm of formaldehyde; and

(4) For particleboard, the maximum level is 0.09 ppm of formaldehyde.

(c) *Product certification and continuing qualification.* Only certified composite wood products whether in the form of panels or incorporated into component parts or finished goods, are permitted to be used in manufactured homes sold, supplied, offered for sale, or manufactured in or imported into the United States, consistent with Environmental Protection Agency (EPA) product test-

ing requirements at 40 CFR 770.15. See § 3280.406 for testing requirements for product certification and testing requirements for continuing qualification of formaldehyde emission levels.

(d) *Panel label.* Manufactured homes must use panels or bundles of panels that are labeled by a panel producer consistent with the labeling requirements at 40 CFR 770.45.

(e) *Finished good certification label.* Each manufactured home must be provided with a finished good certification label indicating that the home has been produced with composite wood products, or finished goods that contain composite wood products, that comply with the formaldehyde emission requirements of this part and 40 CFR part 770, consistent with § 3280.5(i).

(f) *Non-complying lots.* Composite wood products from non-complying lots (*i.e.*, lots that exceed the applicable formaldehyde ppm) are not certified composite wood products and may not be used in manufactured homes except in accordance with 40 CFR 770.22.

(g) *Stockpiling.* The use of stockpiled inventory of composite wood products, whether in the form of panels or incorporated into component parts or finished goods, in manufactured homes, is prohibited in accordance with EPA regulations at 40 CFR 770.12(b) through (d).

(h) *Third party certification.* All composite wood products in paragraph (b) of this section must be certified by an agency or organization that has been recognized to participate in the EPA Toxic Substances Control Act (TSCA) Title VI Third Party Certification Program.

[85 FR 5566, Jan. 31, 2020]

Subpart E—Testing

§ 3280.401 Structural load tests.

Every structural assembly tested shall be capable of meeting the Proof Load Test or the Ultimate Load Test as follows:

(a) *Proof load tests.* Every structural assembly tested must be capable of sustaining its dead load plus superimposed live loads equal to 1.75 times the required live loads for a period of 12 hours without failure. Tests must be

conducted with loads applied and deflections recorded in $\frac{1}{4}$ design live load increments at 10-minute intervals until 1.25 times design live load plus dead load has been reached. Additional load shall then be applied continuously until 1.75 times design live load plus dead load has been reached. Assembly failure shall be considered as design live load deflection (or residual deflection measured 12 hours after live load removal) that is greater than the limits set in § 3280.305(d), rupture, fracture, or excessive yielding. Design live load deflection criteria do not apply when the structural assembly being evaluated does not include structural framing members. An assembly to be tested shall be of the minimum quality of materials and workmanship of the production. Each test assembly, component, or subassembly shall be identified as to type and quality or grade of material. All assemblies, components, or subassemblies qualifying under this test shall be subject to a continuing qualification testing program acceptable to HUD.

(b) *Ultimate load tests.* Ultimate load tests must be performed on a minimum of three assemblies or components to generally evaluate the structural design. Every structural assembly or component tested must be capable of sustaining its total dead load plus the design live load increased by a factor of safety of at least 2.5. A factor of safety greater than 2.5 shall be used when required by an applicable reference standard in § 3280.304(b)(1). Tests shall be conducted with loads applied and deflections recorded in $\frac{1}{4}$ design live load increments at 10-minute intervals until 1.25 times design live load plus dead load has been reached. Additional loading shall then be applied continuously until failure occurs, or the total of the factor of safety times the design live load plus the dead load is reached. Assembly failure shall be considered as design live load deflection greater than

the limits set in § 3280.305(d), rupture, fracture, or excessive yielding. Design live load deflection criteria do not apply when the structural assembly being evaluated does not include structural framing members. Assemblies to be tested shall be representative of average quality or materials and workmanship of the production. Each test assembly, component, or subassembly shall be identified as to type and quality or grade of material. All assemblies, components, or subassemblies qualifying under this test shall be subject to a periodic qualification testing program acceptable to HUD.

[40 FR 58752, Dec. 18, 1975. Redesignated at 44 FR 20679, Apr. 6, 1979, as amended at 58 FR 55007, Oct. 25, 1993; 70 FR 72045, Nov. 30, 2005]

§ 3280.402 Test procedures for roof trusses.

(a) *Roof load tests.* This section provides the roof truss test procedure for vertical loading conditions. Where roof trusses act as support for other members, have eave or cornice projections, or support concentrated loads, roof trusses must also be tested for those conditions. These test procedures are required for new truss designs in all three wind zones and for existing truss designs used in Wind Zones II and III.

(b) *General.* Trusses must be tested in a truss test fixture that replicates the design loads, and actual support points, and does not restrain horizontal movement. When tested singly or in groups of two or more trusses, trusses shall be mounted on supports and positioned as intended to be installed in the manufactured home in order to give the required clear span distance (L) and eave or cornice distance (Lo), if applicable, as specified in the design.

(1) When trusses are tested singly, trusses shall be positioned in a test fixture, with supports properly located and the roof loads evenly applied. See Figure 3280.402(b)(1).