

Home Installation Standards in this chapter.

(iv) That ground anchors must be installed to their full depth, and stabilizer plates must be installed in accordance with the ground anchor listing or certification to provide required resistance to overturning and sliding.

(v) That anchoring equipment should be certified by a registered professional engineer or architect to resist these specified forces in accordance with testing procedures in ASTM D3953-97, Standard Specification for Strapping, Flat Steel and Seals (incorporated by reference, see § 3280.4).

(c) *Design criteria.* The provisions made for anchoring systems shall be based on the following design criteria for manufactured homes.

(1) The minimum number of ties provided per side of each home shall resist design wind loads required in § 3280.305(c)(1).

(2) Ties shall be as evenly spaced as practicable along the length of the manufactured home, with not more than two (2) feet open-end spacing on each end.

(3) Vertical ties or straps shall be positioned at studs. Where a vertical tie and a diagonal tie are located at the same place, both ties may be connected to a single anchor, provided that the anchor used is capable of carrying both loadings, simultaneously.

(4) Add-on sections of expandable manufactured homes shall have provisions for vertical ties at the exposed ends.

(d) *Requirements for ties.* Manufactured homes in Wind Zone I require only diagonal ties. These ties shall be placed along the main frame and below the outer side walls. All manufactured homes designed to be located in Wind Zones II and III shall have a vertical tie installed at each diagonal tie location.

(e) *Protection requirements.* Protection shall be provided at sharp corners where the anchoring system requires the use of external straps or cables. Protection shall also be provided to minimize damage to siding by the cable or strap.

(f) *Anchoring equipment—load resistance.* Anchoring equipment shall be capable of resisting an allowable working

load equal to or exceeding 3,150 pounds and shall be capable of withstanding a 50 percent overload (4,725 pounds total) without failure of either the anchoring equipment or the attachment point on the manufactured home.

(g) *Anchoring equipment—weatherization.* Anchoring equipment exposed to weathering shall have a resistance to weather deterioration at least equivalent to that provided by a coating of zinc on steel of not less than 0.30 ounces per square foot of surface coated, and in accordance with the following:

(1) Slit or cut edges of zinc-coated steel strapping do not need to be zinc coated.

(2) Type 1, Finish B, Grade 1 steel strapping, 1¼ inches wide and 0.035 inches in thickness, certified by a registered professional engineer or architect as conforming with ASTM D3953-97, Standard Specification for Strapping, Flat Steel and Seals (incorporated by reference, see § 3280.4).

[40 FR 58752, Dec. 18, 1975. Redesignated at 44 FR 20679, Apr. 6, 1979, as amended at 52 FR 4583, Feb. 12, 1987; 59 FR 2473, Jan. 14, 1994; 70 FR 72045, Nov. 30, 2005; 72 FR 59362, Oct. 19, 2007; 78 FR 73983, Dec. 9, 2013]

#### § 3280.307 Resistance to elements and use.

(a) Exterior coverings shall be of moisture and weather resistive materials attached with corrosion resistant fasteners to resist wind, snow and rain. Metal coverings and exposed metal structural members shall be of corrosion resistant materials or shall be protected to resist corrosion. All joints between portions of the exterior covering shall be designed, and assembled to protect against the infiltration of air and water, except for any designed ventilation of wall or roof cavity.

(b) Joints between dissimilar materials and joints between exterior coverings and frames of openings shall be protected with a compatible sealant suitable to resist infiltration of air or water.

(c) Where adjoining materials or assemblies of materials are of such nature that separation can occur due to expansion, contraction, wind loads or other loads induced by erection or transportation, sealants shall be of a

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