

no longer valid. In such a case, each stamp or label placed on the panels pursuant to paragraph (c) of this section must be obliterated. In addition, the treated panels may be recertified and reidentified in accordance with paragraphs (b) and (c) of this section.

[49 FR 32011, Aug. 9, 1984]

§ 3280.309 Health Notice on formaldehyde emissions.

(a) Each manufactured home shall have a Health Notice on formaldehyde emissions prominently displayed in a temporary manner in the kitchen (i.e., countertop or exposed cabinet face). The Notice shall read as follows:

IMPORTANT HEALTH NOTICE

Some of the building materials used in this home emit formaldehyde. Eye, nose, and throat irritation, headache, nausea, and a variety of asthma-like symptoms, including shortness of breath, have been reported as a result of formaldehyde exposure. Elderly persons and young children, as well as anyone with a history of asthma, allergies, or lung problems, may be at greater risk. Research is continuing on the possible long-term effects of exposure to formaldehyde.

Reduced ventilation resulting from energy efficiency standards may allow formaldehyde and other contaminants to accumulate in the indoor air. Additional ventilation to dilute the indoor air may be obtained from a passive or mechanical ventilation system offered by the manufacturer. Consult your dealer for information about the ventilation options offered with this home.

High indoor temperatures and humidity raise formaldehyde levels. When a home is to be located in areas subject to extreme summer temperatures, an air-conditioning system can be used to control indoor temperature levels. Check the comfort cooling certificate to determine if this home has been equipped or designed for the installation of an air-conditioning system.

If you have any questions regarding the health effects of formaldehyde, consult your doctor or local health department.

(b) The Notice shall be legible and typed using letters at least ¼ inch in size. The title shall be typed using letters at least ¾ inch in size.

(c) The Notice shall not be removed by any party until the entire sales transaction has been completed (refer to part 3282—Manufactured Home Procedural and Enforcement Regulations for provisions regarding a sales transaction).

(d) A copy of the Notice shall be included in the Consumer Manual (refer to part 3283—Manufactured Home Consumer Manual Requirements).

[49 FR 32012, Aug. 9, 1984, as amended at 54 FR 46049, Nov. 1, 1989; 58 FR 55007, Oct. 25, 1993]

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 ¼ 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

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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 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 procedure for roof trusses.

(a) *Roof load tests.* The following is an acceptable test procedure, consistent with the provisions of §3280.401, for roof trusses that are supported at the ends and support design loads. Where roof trusses act as support for other members, act as cantilevers, or support concentrated loads, they shall be tested accordingly.

(b) *General.* Trusses may be tested in pairs or singly in a suitable test facility. When tested singly, simulated lateral support of the test assembly may be provided, but in no case shall this lateral support exceed that which is specified for the completed manufactured home. When tested in pairs, the

trusses shall be spaced at the design spacing and shall be mounted on solid support accurately positioned to give the required clear span distance (L) as specified in the design. The top and bottom chords shall be braced and covered with the material, with connections or method of attachment, as specified by the completed manufactured home.

(1) As an alternate test procedure, the top chord may be sheathed with 1/4 inch by 12 inch plywood strips. The plywood strips shall be at least long enough to cover the top chords of the trusses at the designated design truss spacing. Adjacent plywood strips must be separated by at least 1/8 inch. The plywood strip shall be nailed with 4d nails or equivalent staples not closer than 8 inches on center along the top chord. The bottom chords of the adjacent trusses may be either:

- (i) Unbraced,
- (ii) Laterally braced together (not cross braced) with 1"x2" stripping not closer than 24 inches on center nailed with only one 6d nail at each truss, or
- (iii) Covered with the material, with connections or methods of attachment, as specified for the completed manufactured home.

(2) Truss deflections will be measured relative to a taut wire running over the support and weighted at the end to insure constant tension or other approved methods. Deflections will be measured at the two quarter points and at midspan. Loading shall be applied to the top chord through a suitable hydraulic, pneumatic, or mechanical system, masonry units, or weights to simulate design loads. Load units for uniformly distributed loads shall be separated so that arch action does not occur, and shall be spaced not greater than 12 inches on center so as to simulate uniform loading.

(c) *Nondestructive test procedure—(1) Dead load plus live load.* (i) Noting figure A-1, measure and record initial elevation of the truss in test position at no load.