

Please note the ICC-ES language excerpt on the left and the corresponding IAPMO language excerpt on the right. The text highlighted in red indicates identical text and the text highlighted in yellow indicates synonymous text that has the same meaning or identical text that has been moved around.

ICC-ES ESR-2448

4.3 Fire Resistance: Roof and floor panels, 5 inches to 12 inches (127 mm to 305 mm) thick, have a four-hour fire-resistance rating in a restrained or nonrestrained design. The 4-inch-thick (102 mm) slab panels are limited to a one-hour fire-resistance rating in a restrained or nonrestrained design. Steel joint reinforcement must be minimum No. 3, Grade 60, deformed reinforcement bars, complying with ASTM A615 or an equivalent, set in minimum 3,000 psi (20.7 MPa) specified-compressive-strength, normal-weight concrete.

For restrained assemblies, a ring-beam, surrounding the floor and roof panels, is required. Ring-beams must be constructed with minimum 3,000 psi (20.7 MPa) specified-compressive-strength, normal-weight concrete, reinforced with a minimum of two No. 4, Grade 60, deformed reinforcement bars complying with ASTM A615 (or an equivalent), one placed a distance from the top equal to one-fourth the ring-beam depth, and the other placed a distance from the top equal to three-fourths the ring-beam depth. This reinforcement must be centered in the ring-beam width and spliced in accordance with Section 1907 of the IBC. The ring-beam depth must equal the panel thickness, and the minimum ring-beam width is 3 inches (75 mm). Structural design of the ring-beam for resistance to loads induced by thermal expansion must comply with Section 703.2 and Chapter 19 of the IBC.

IAPMO ER-400

4.3 Fire Resistance of Roof and Floor Panels: Roof and floor panels between 5 inches and 12 inches (127 mm to 305 mm) thick have a four-hour fire-resistance rating in either a restrained or non-restrained design. Four-inch-thick (102 mm) panels are have a one-hour fire-resistance rating in either a restrained or non-restrained design. Steel reinforcement in the joints shall be minimum No. 3, Grade 60, deformed reinforcement bars, complying with ASTM A615 or equivalent, set in minimum 3,000 psi (20.7 MPa) specified-compressive-strength, normal-weight concrete.

For restrained assemblies, a ring-beam, surrounding the floor and roof panels, is required. Ring-beams shall be constructed with minimum 3,000 psi (20.7 MPa) specified-compressive-strength, normal-weight concrete, reinforced with a minimum of two No. 4, Grade 60, deformed reinforcement bars complying with ASTM A615, or equivalent. The reinforcement bars shall be placed at one-fourth the ring-beam depth and at three-fourths the ring-beam depth and shall be centered in the ring-beam width. This reinforcement shall be spliced in accordance with Section 1907 of the IBC. Ring-beam depth shall be equal to the panel thickness, with a minimum ring-beam width of 3 inches (75 mm). Structural design of the ring-beam for resistance to loads induced by thermal expansion shall be in accordance with Section 703.2 and Chapter 19 of the IBC.