

711.5 Openings. Windows shall be sealed to resist the free passage of smoke or be automatic-closing upon detection of smoke. Doors in smoke partitions shall comply with this section.

711.5.1 Louvers. Doors in smoke partitions shall not include louvers.

711.5.2 Smoke and draft control doors. Where required elsewhere in the code, doors in smoke partitions shall meet the requirements for a smoke and draft control door assembly tested in accordance with UL 1784. The air leakage rate of the door assembly shall not exceed 3.0 cubic feet per minute per square foot [$0.015424 \text{ m}^3/(\text{s} \cdot \text{m}^2)$] of door opening at 0.10 inch (24.9 Pa) of water for both the ambient temperature test and the elevated temperature exposure test. Installation of smoke doors shall be in accordance with NFPA 105.

711.5.3 Self- or automatic-closing doors. Where required elsewhere in the code, doors in smoke partitions shall be self- or automatic-closing by smoke detection in accordance with Section 715.4.8.3.

711.6 Penetrations and joints. The space around penetrating items and in joints shall be filled with an *approved* material to limit the free passage of smoke.

711.7 Ducts and air transfer openings. The space around a duct penetrating a smoke partition shall be filled with an *approved* material to limit the free passage of smoke. Air transfer openings in smoke partitions shall be provided with a *smoke damper* complying with Section 716.3.2.2.

Exception: Where the installation of a *smoke damper* will interfere with the operation of a required smoke control system in accordance with Section 909, *approved* alternative protection shall be utilized.

SECTION 712 HORIZONTAL ASSEMBLIES

712.1 General. Floor and roof assemblies required to have a *fire-resistance rating* shall comply with this section. Nonfire-resistance-rated floor and roof assemblies shall comply with Section 713.4.2.

712.2 Materials. The floor and roof assemblies shall be of materials permitted by the building type of construction.

712.3 Fire-resistance rating. The *fire-resistance rating* of floor and roof assemblies shall not be less than that required by the building type of construction. Where the floor assembly separates mixed occupancies, the assembly shall have a *fire-resistance rating* of not less than that required by Section 508.4 based on the occupancies being separated. Where the floor assembly separates a single occupancy into different *fire areas*, the assembly shall have a *fire-resistance rating* of not less than that required by Section 707.3.9. *Horizontal assemblies* separating *dwelling units* in the same building and *horizontal assemblies* separating *sleeping units* in the same building shall be a minimum of 1-hour fire-resistance-rated construction.

Exception: *Dwelling unit* and *sleeping unit* separations in buildings of Type IIB, IIIB and VB construction shall have *fire-resistance ratings* of not less than $1/2$ hour in buildings