

## NFPA 105

### 3.3 General Definitions

**3.3.3 Smoke Door.** The door component of a smoke door assembly

**3.3.4 Smoke Door Assembly.** Any combination of a door, frame, hardware, and any other accessories that together restrict smoke movement through door openings by limiting the amount of air that can pass through the assembly.

### 4.1 Testing and Installation

**4.1.1** Fire door assemblies that are intended for use as smoke door assemblies shall also comply with NFPA 80.

**4.2.2** For the air leakage test, fire door assemblies shall be installed in accordance with NFPA 80.

**4.2.4** Specimens of door assemblies shall be tested as they are intended to be installed.

### 4.3 Air Leakage Test.

**4.3.1** Smoke door assemblies shall have an air leakage rating not greater than 3 ft<sup>3</sup>/min/ft<sup>2</sup> (0.9 m<sup>3</sup>/min/m<sup>2</sup>) of door opening when tested in accordance with UL 1784.

**4.3.2** Smoke door assemblies intended to be installed where pressurization is provided to control smoke movement shall not have an artificial bottom seal installed during the test.

**4.4 Labeling.** Smoke door assemblies shall bear an "S" label indicating a maximum air leakage rate of 3 ft<sup>3</sup>/min/ft<sup>2</sup> (0.9 m<sup>3</sup>/min/m<sup>2</sup>) and the tested pressure differential of 0.1, 0.2, or 0.3 in. of water (25, 50, Or 75 Pa).

### 4.5 Installation.

**4.5.1** Smoke doors shall be self-closing or automatic closing in accordance with NFPA 80.

**4.5.6** The opening between the bottom edge of the smoke door and the sill when the door is in the closed position shall not be required to be provided with a means to seal the opening.

**4.5.6.1** Smoke door assemblies installed where pressurization is provided to restrict smoke movement shall be required to have a bottom seal.

## 5 Maintenance

**5.1.1 Removal of Smoke Doors.** Where a door or opening is no longer in use, the opening shall be filled with construction equivalent to that of the wall.

**5.1.2 Operability.** Doors shall be operable at all times.

**5.1.2.1** The doors shall be kept closed or arranged for automatic closing.

**5.1.2.2** Where required, the doors shall be latched.

### 5.2 Specific Requirements

#### 5.2.1 Inspections.

**5.2.1.1** Smoke door assemblies shall be inspected annually.

**5.2.1.2** Door shall be operated to confirm full closure.

**5.2.1.3** Hardware and gaskets shall be inspected annually, and any parts found to be damaged or inoperative shall be replaced.

**5.2.1.5** A written record shall be maintained and shall be made available to the authority having jurisdiction.

**5.2.1.6** Records shall be maintained for not less than 3 years.

## Reference Publications

- NFPA 80** Standard for Fire Doors and Fire Windows  
(2007 edition is Standard for Fire Doors and Other Opening Protectives)
- NFPA 92A** Recommended Practice for Smoke-Control Systems
- NFPA 92B** Guide for Smoke Management Systems in Malls, Atria, and Large Areas
- NFPA 101** Code for Safety to Life from Fire in Buildings and Structures  
(2006 edition is Life Safety Code)
- NFPA 105** Recommended Practice for the Installation of Smoke-Control Door Assemblies  
(2007 edition is Standard for the Installation of Smoke Door Assemblies and Other Opening Protectives)  
Chapter 5 Section 5.2.1 requires annual inspections and written records
- NFPA 252** Standard Methods of Fire Tests of Door Assemblies
- NFPA 257** Standard on Fire Tests for Window and Glass Block Assemblies
- UL10B** Standard for Fire Tests of Door Assemblies
- UL10C** Standard for Positive Pressure Fire Tests of Door Assemblies
- UL1784** Standard for Air Leakage Tests of Door Assemblies

## Publications Referenced

- IBC 2000** References NFPA 80-99, NFPA 13, NFPA 252-99, NFPA 257, UL10B-97, UL10C, **UL1784-95**
- IBC 2003** References NFPA 80-99, NFPA 101-00, NFPA 252-99, NFPA 257-00, UL10B-97, UL10C-01, **UL1784-95**
- IBC 2006** References NFPA 80-99, NFPA 101-03, **NFPA 105-03**, NFPA 252-03, NFPA 257-00, UL10B-01, UL10C-01, **UL1784-95**
- NFPA 80** References NFPA 101-97, **NFPA 105-99**, NFPA 252-95, NFPA 257-96, UL10B-93
- NFPA 101-00** Mandatory References NFPA 80-99, NFPA 252-99, NFPA 257-00
- NFPA 101-03** References NFPA 80-99, NFPA 252-99, NFPA 257-00, UL1784-01
- NFPA 101-06** References NFPA 80-99, NFPA 105-03, NFPA 252-03, NFPA 257-00, UL10B-97, UL10C-98, UL1784-01
- NFPA 105-07** References NFPA 72-07, NFPA 80-07, NFPA 92A-06, NFPA 92B-05, UL 1784-01
- NFPA 252-99** References NFPA 80-99
- UL 1784-95** References NFPA 80, NFPA 105 (latest edition)