

# TESTING & CERTIFICATION FOR DOORS & HARDWARE

## FIRE DOOR LISTING CATEGORIES

**Category A:** Doors: No Additional Edge Seal Required for Positive Pressure Rating. [Seal built into door design (concealed under edgeband or visible (dado) into edge) OR no seal required.]

**Category B:** Doors: Category G Applied Edge Sealing System Required – Applied to Door or Frame for Positive Pressure Rating. [The application of the edge-sealing system does not require any machining of the frame or door – no seal built into door.]

**Category C - Standard -** UL Subject 63 Type Standard Steel Frames

**Category C - Proprietary -** Other Frame Types (Wood, Aluminum, Composite, Light Gauge Steel)

**Category D:** Complete Door, Frame, & Hardware Assemblies.

**Category E:** Fire Rated Hardware – [Examples: Single Point Latches, Fire Exit Devices, Closers, Electric Strikes & Auxiliary Devices, Bolts, Thresholds, Door Bottoms, etc.]

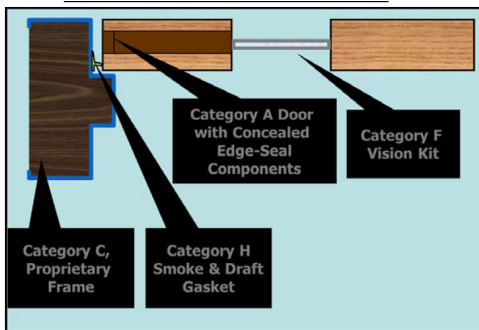
**Category F:** Fire Rated Glazing Systems – [Examples: Metal Vision Kit, Wood Bead Vision Kit, Composite Vision Kit, etc.]

**Category G:** Edge Seal System (UL 10C) – [Typically used with Cat. B Doors to meet positive pressure rating.]

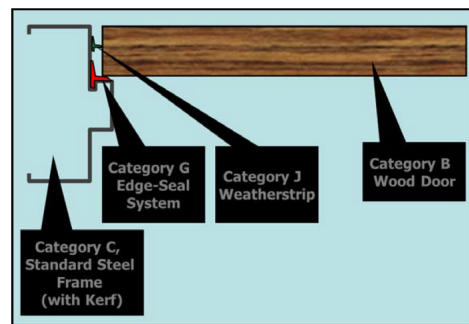
**Category H:** Smoke & Draft Gasketing (UL 10C & UL 1784) – [For Cat. A or Cat. B Doors – Not a substitute for Cat. G Edge Seal] Used to Validate ‘S’ Mark on Fire Door Label

**Category J:** Other Gasketing (UL 10C) – Acoustic Gasket, Weather Seal, Etc. [No Edge Seal or Smoke & Draft properties]

## CATEGORY USAGE GENERAL EXAMPLES



Positive Pressure fire door assembly using a Category A door meeting Smoke & Draft ('S' rated assembly) requirements (due to the incorporation of a Category H gasket). Concealed edge seal component limits the passage of flame around the perimeter of the door, while the Category H gasket applied to the frame limits the passage of smoke / air leakage around the perimeter of the door and frame.



Positive Pressure fire door assembly using a Category B door. Category G frame applied gasket limits the passage of flame around the perimeter of the door, while the Category J gasket applied to the frame limits environmental infiltration (water and air). Assembly does not provide smoke and draft control resistance required for 'S' rated assemblies; assembly would require a Category H gasket to meet smoke and draft control requirements

## CODE AND STANDARD INFORMATION

### FAQ's:

What is the difference between Category H 'Smoke and Draft Control Gasket' systems and Category G 'Edge-Sealing' systems?

- Smoke and draft control systems are designed to minimize the passage of smoke. Edge-sealing systems are designed to minimize the passage of flame.

How many labels are required for a Category D assembly?

- Only one label is required for a Category D assembly. Note: Certain jurisdictions may not accept using a single Category D label for the assembly. Please consult the local Authority Having Jurisdiction.

### IBC (2018) References:

- Chapter 7 – Fire and Smoke Prevention Features
- Section 716 – Opening Protectives

#### Section 716.2.1.1– Side Hinged or Pivoted Swinging Doors [Positive Pressure]

- “Fire door assemblies with side hinged or pivoted swinging doors shall be tested in accordance with NFPA 252 or UL 10C. After 5 minutes into the NFPA 252 test, the neutral pressure level in the furnace shall be established at 40 inches or less above the sill.”

#### Section 716.2.1.2 – Other Types of Assemblies [Neutral Pressure]

- “Fire door assemblies with other types of doors, including swinging elevator doors, horizontal sliding fire door assemblies, and fire shutter assemblies, bottom and side hinged chute intake doors, and top-hinged chute discharge doors, shall be tested in accordance with NFPA 252 or UL 10B. The pressure in the furnace shall be maintained as nearly equal to the atmospheric pressure as possible. Once established, the pressure shall be maintained during the entire test period.”

\*\*This general requirement of side hinged, or pivoted swinging doors being tested to positive pressure conditions and other types of assemblies being tested to neutral pressure conditions has been incorporated into the IBC since at least the 2000 version of the code.

### North American Fire Door Standards (Vertical Applications):

Standard	Current Version	Furnace Pressure	Code Reference	Door Type
UL 10B	2015	NEUTRAL	IBC	MULTIPLE
UL 10C	2016	POSITIVE	IBC	SWINGING DOOR ONLY
NFPA 252	2017	NEUTRAL OR POSITIVE	IBC	MULTIPLE
CAN/ULC S104	2015	NEUTRAL	NBC	MULTIPLE

\*Includes but not limited to swinging, rolling, sliding, elevator, and chute type doors.