

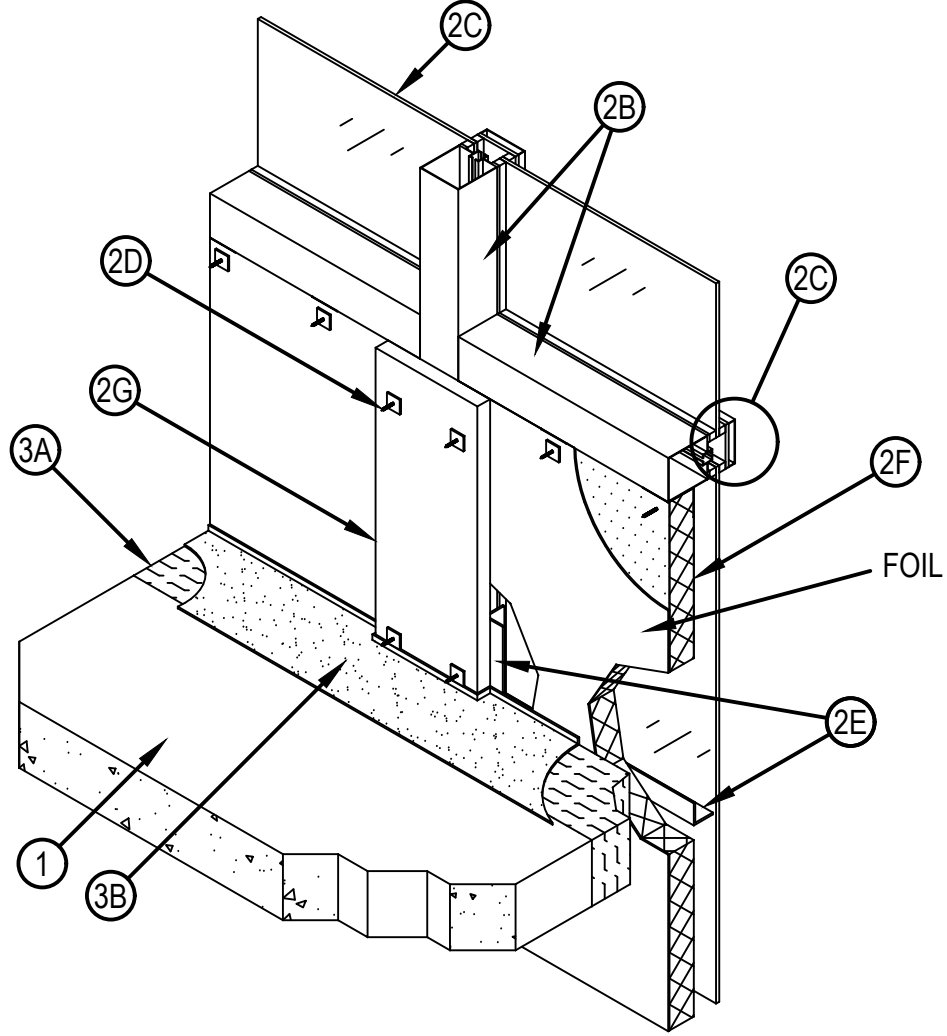
Design No. HI/JS 120-05
PERIMETER FIRE BARRIER SYSTEM

Hilti, Inc.
ASTM E 2307

Table 1

	FIRESTOP JOINT SPRAY CFS-SP WB	SILICONE JOINT SPRAY CFS-SP SIL
F-RATING	2-HR.	2-HR.
T-RATING	2-HR.	2-HR.
APPLICATION THICKNESS	1/8" WET FILM (1/16" DRY)	2mm (0.079") WET FILM
CYCLING (%) HORIZONTAL VERTICAL SEE ITEM 3A	NONE ±6.25 (25% COMPRESSION)	NONE ±6.25 (25% COMPRESSION)

L-Rating <1.0 SCFM/LF



Hilti Firestop Systems

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1. CONCRETE FLOOR ASSEMBLY: Max. two-hour rated concrete floor assembly made from either lightweight or normal weight concrete with a density of 100-150 pcf, with a min. thickness of 4-1/2 in. at the joint face. Overall slab thickness may vary to accommodate various blockout depths (longitudinal recesses) formed in the concrete, to house the architectural cover plate. The blockout width may also vary without restriction.
2. CURTAIN WALL ASSEMBLY: Incorporate the following features:
 - A. Mounting Attachment: (Not shown) Attach the curtain wall framing to the structural framing in accordance to the curtain wall manufacturer's instructions. When required, connect the mounting attachments to the joint face of the floor slab, in accordance to the curtain wall manufacturer's instructions. Max. distance between mounting attachments is 10 ft.
 - B. Aluminum Framing: Size rectangular aluminum tubing mullions and transoms according to the curtain wall system manufacturer's guidelines. Min. overall dimensions of framing required is 0.100 in. thick aluminum with a min. 3-3/4 in. height and a min. of 2-1/2 in. width of the extrusion. Mullion and Transom covers are added to the external side of the framing, giving the framing system a total mullion depth of nom. 5-1/4 in. (with cover plate). Mullions are to be spaced a min. 60 in. on center (oc) and spandrel transoms are to be spaced a min. 45 in. oc. Spandrel transoms are to be located at a min. height 20 in. above the top surface of the concrete floor assembly (as measured from the bottom of the transom).
 - C. Glass Panels: Size and install glass panels to curtain wall framing according to the curtain wall system manufacturer's guidelines. Use min. 1/4 in. thick clear, heat-strengthened (HS) glass with a max. width and height less than the aluminum framing oc spacing, which allows the glass to be secured between the notched shoulder of the aluminum framing and pressure bar. Secure panels with a thermal break (rubber extrusion), pressure bar (aluminum extrusion), min. 1/4-20 x 5/8 in. long screws, and a snap face (aluminum extrusion).
 - D. Impaling Pins: Size and install min. 12 GA steel pins according to the curtain wall system manufacturer's guidelines, or be a min. 1/2 in. longer than the thickness of the curtain wall insulation. Attach pins to clip angles with typical clip dimensions of: nom. 2 in. by 2 in., constructed with 20 GA galvanized sheet steel. Secure the clips to the aluminum framing with No. 10 self-tapping sheet metal screws. Install a min. of 1 screw per clip angle. Space pins max. of 12 in. oc on the vertical framing members and a max. of 20 in. oc on the horizontal framing member above the slab. The interior face of the curtain wall insulation is to be installed so that it is flush with the interior face of the framing.
 - E. Reinforcing Angle: Mount a min. 1-1/2 in. x 1-1/2 in. x 20 GA galvanized steel angle to the inside of the vertical framing members so that the vertical leg serves as a backer to the exterior face of the curtain wall insulation and the horizontal leg extends away from the curtain wall insulation. Locate the reinforcing angle at the elevation of the centerline of the perimeter joint treatment. Size the angle 12 in. longer than the span between the interior edges of the vertical framing members and form the angle so that it has a 6 in. vertical leg on each end. Secure the 6 in. leg to the framing member on each side with three No. 10 steel self-tapping sheet metal screws placed in a triangular fashion with a max. spacing of 2 in. oc.
 - F. Curtain Wall Insulation: Install nom. 2 in. thick 8 pcf density mineral wool batt insulation faced on one side with aluminum foil scrim (vapor retarder), which is exposed to the room interior. Secure with angle clips and impaling pins (Item 2D). Seal all meeting edges of insulation with nom. 4 in. wide pressure sensitive aluminum foil faced tape centered over the junction so that approx. 2 in. of tape covers each edge of the adjacent insulation. The interior face of the batt insulation is, if required compressed, flush with the interior face of the curtain wall framing creating a min. 1 in. air space between the insulation and the glass.

Listed Manufacturer:
Only Intertek Certified Mineral Wool Manufacturer's product meeting the above min. requirements.
 - G. Framing Covers: Install nom. 1 in. thick, 8 in. wide strips of 8 pcf density mineral wool batt insulation faced on one side with aluminum foil scrim (vapor retarder), which is exposed to the room interior. Center framing covers over each vertical framing member and secured to the member with impaling pins and clips (Item 2D) spaced a min. 1 in. from both edges, and a max 12 in. oc Framing covers below the perimeter joint treatment are nom. 2 in. thick, and those above the perimeter joint treatment are nom. 1 in. thick. Framing covers do not pass through the perimeter joint treatment. They are butted to the top and bottom surfaces of the perimeter joint treatment.

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Only Intertek Certified Mineral Wool Manufacturer's product meeting the above min. requirements.

3. PERIMETER JOINT PROTECTION: The perimeter joint (linear opening) is not to exceed nom. 6 in. joint width (joint width at installation).

Incorporate the following construction features:

A. Packing Material: Install min. 4 in. thick, 4 pcf density, mineral wool batt insulation** with the fibers running parallel to the slab edge and curtain wall. Compress the packing material 25% in the nominal joint width. Compress the batt insulation into the perimeter joint such that the top surface of the batt insulation is flush with the top surface of the concrete floor slab and its mid depth is compressed against the interior surface of the curtain wall insulation (Item 2F) which is supported by the 20 GA steel reinforcing angle (Item 2E). Splices (butt joints) in the lengths of mineral wool batt insulation are to be tightly compressed together.

Listed Manufacturer:

Only Intertek Certified Mineral Wool Manufacturer's product meeting the above min. requirements.

B. CERTIFIED MANUFACTURER: Hilti, Inc.

CERTIFIED PRODUCT: Joint Spray or Sealant

MODEL: Firestop Joint Spray CFS-SP WB or Silicone Joint Spray CFS-SP SIL

Fill, Void or Cavity Material: To be applied (sprayed, brushed, or troweled) to cover the top exposed surface of the mineral wool installed in the perimeter joint. Apply at the thickness specified in Table 1 and overlap the material a min. 1/2 in. onto the adjacent curtain wall assembly and concrete floor slab assembly. If spraying process is stopped and the applied material cures to an elastomeric film before the process is restarted, then overlap the edge of the cured material at least 1/8 in. with the spray.

** Before testing, the test specimen was cycled 500 times at 30 cpm in accordance to ASTM E 1399.

