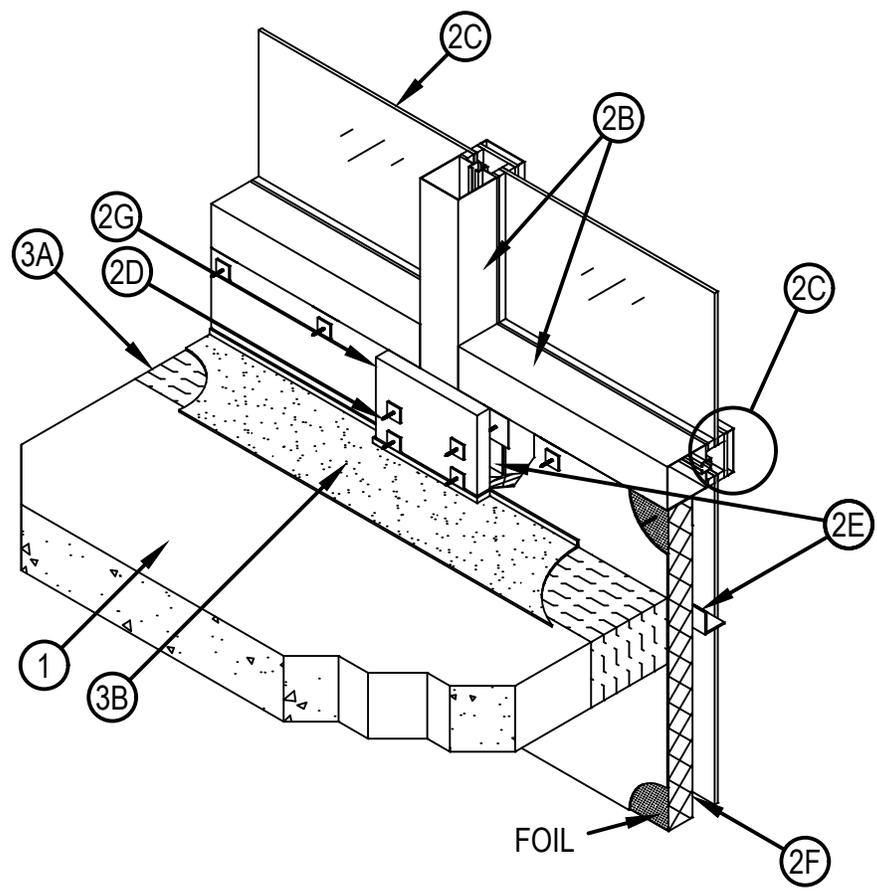


Design No. HI/BPF 120-17
PERIMETER FIRE BARRIER SYSTEM
Firestop Joint Spray CFS-SP WB
ASTM E 2307

Table 1.

	Firestop Joint Spray CFS-SP WB Silicone Joint Spray CFS-SP SIL
F-Rating	120 Minutes
T-Rating	60 Minutes
Cycling	NA

L-Rating <1.0 SCFM/LF



1. CONCRETE FLOOR ASSEMBLY: Min. 2 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 8 in. at the joint face.
 - A. CAST-IN INSERT (Not Shown) - When using mounting attachment described in Item 2A, Embed 14 in. long Hilti HAC-50 106/300 F anchor channel in the face of the concrete floor at each vertical mullion (not at false mullions). Center the anchor at each vertical mullion with a mounting attachment. Position bottom of the anchor channel min. 3 in. above the bottom of concrete floor. In addition, ensure that the placement of the anchor channel allows an in-joint mounting attachment (Item 2A or Item 2B) to be recessed a min. 1-1/2 in. from the top of the concrete floor. Install anchor channel in accordance with manufacturer's instructions.
 - B. CAST-IN INSERT (Optional, Not Shown) - In lieu of item 1A above, use any Hilti anchor channel approved by curtain wall manufacturer to accommodate the mounting attachment assembly. Use the same positioning requirements in Item 1A. Install anchor channel in accordance with manufacturer's instructions.
2. CURTAIN WALL ASSEMBLY: Incorporate the following features:
 - A. MOUNTING ATTACHMENT (Not Shown) - Use MIS-5725 Aluminum Anchor with 1/2 in. wide flanges, 5 in. height, 4-7/8 in. depth, and 14 in. length (at the face plate) at each vertical mullion. Secure mounting attachment to Hilti anchor channel (Item 1A) with Hilti HBC-C-N M16/80 bolt, washer, and nut on each side of the mounting attachment assembly (two bolts per vertical mullion). Use a 1/16 in. thick isolator pad installed between the mounting attachment assembly face plate and the Hilti Anchor Channel (Item 1A). Max. distance between mounting attachments is 10 ft. MOUNTING ATTACHMENT (Optional, Not Shown) - Use any steel mounting attachment or any aluminum mounting attachment having min. 1/2 in. thickness, approved by the curtain wall manufacturer. Attach the curtain wall framing to the structural framing in accordance to the curtain wall manufacturer's instructions. Secure the mounting attachments to the joint face of the concrete floor assembly (Item 1) using cast-in inserts (Items 1A and 1B) or to the top of the concrete floor assembly, 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 0.145 in. thick aluminum, with a min. 4 in. depth and a min. width of 2-1/2 in. for horizontal members and a min. width of 2-3/4 in. for vertical members. Overall depth of framing system including mullion and transom covers shall be a min. 5 in. Mullions are to be spaced a max. of 60 in. on center (oc) and spandrel transoms are to be spaced a min. 35 in. oc. The spandrel transoms are to be located at a min. height 16 in. above the top surface of the concrete floor assembly (as measured from the bottom of the transom).
 - C. GLASS PANELS AND SPANDREL PANELS - Size and install glass panels to curtain wall framing according to the curtain wall system manufacturer's guidelines. Use min. 1 in. total thickness glazing units, consisting of an outside and inside layer of 1/4 in. thick tempered glass and a 1/2 in. air space. Secure the panels with a thermal break (rubber extrusion) and aluminum compression plates. Alternatively, secure the glass panels with a thermal break (rubber extrusion) and structural sealant.
 - D. IMPALING PINS - Size and install min. 12 GA steel pins according to the curtain wall system manufacturer's guidelines. Ensure that the pin length is such that it extends beyond the uncompressed thickness of the curtain wall insulation to facilitate clip installation. Attach pins to clip angles with typical clip dimensions of nominal 2 in. x 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 one screw per clip angle. Space pins max. of 12 in. oc on the vertical framing members (mullions without mounting attachments or false mullions) and 12 in. oc on the horizontal framing members. At mullions with mounting attachments install a min. of two impaling pins located a max. 2 in. above the mounting attachment assembly and two impaling pins located a max. 2 in. below the mounting attachment assembly, with pins spaced a max. 8 in. oc. 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 8 in. longer than the span between the interior edges of the vertical framing members and form the angle so that it has a 4 in. vertical leg on each end. Secure the 4 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.



Hilti Firestop Systems

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F. CURTAIN WALL INSULATION - Install min. 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 nominal 4 in. wide pressure sensitive aluminum foil-faced tape centered over the junction so that approximately 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. Curtain wall insulation is to be cut to tightly contour around mounting attachments.

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

G. FRAMING COVERS - Install min. 2 in. thick, 11 in. wide x 8 in. high, 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 with a mounting attachment and secure 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 are nominal 2 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.

LISTED MANUFACTURER: 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 4 in. 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. At each vertical mullion with an in-joint mounting attachment, pack the mineral wool tightly to the max. extent possible to fill the voids within the mounting attachment assembly (Item 2A or Item 2B), flush with the top of the floor assembly, flush with the bottom of the mounting attachment, and extending a min. 4 in. beyond both ends of the mounting attachment.

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

B. CERTIFIED MANUFACTURER: Hilti Corporation

CERTIFIED PRODUCT: Joint Spray or Sealant

MODEL:

- Firestop Joint Spray CFS-SP WB
- 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 1/8 in. wet thickness 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.

4. KNEE WALL (Not Shown): Construct a knee wall over the top of the perimeter fire barrier using light GA steel stud framing and min. 1/8 in. thick aluminum top cover.



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