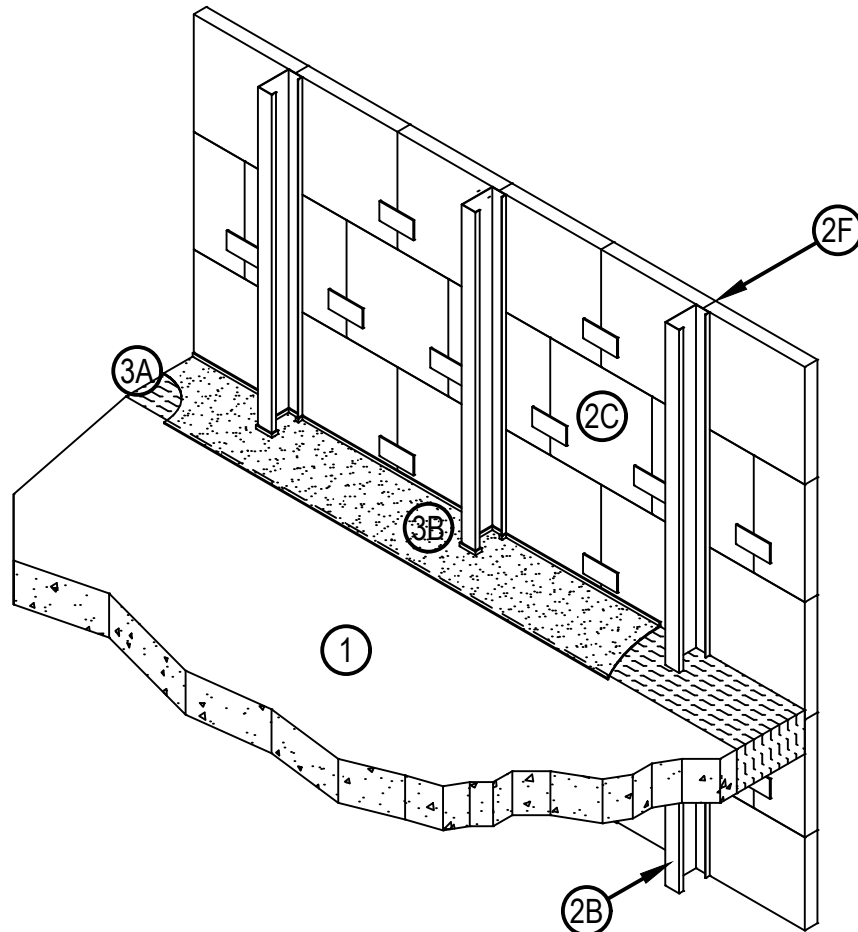


Hilti Corporation
 Design Number HI/BP 120-02
 Perimeter Fire Barrier System
 ASTM E2307
 Rating: See Table 1

HI/BP 120-02

TABLE 1. RATINGS

	FIRESTOP JOINT SPRAY CFS-SP WB	SILICONE JOINT SPRAY CFS-SP SIL
F-RATING	2-HR.	2-HR.
T-RATING	0-HR. OR 45-MIN. (SEE ITEM 2C)	0-HR. OR 1-HR. (SEE ITEM 2C)
APPLICATION THICKNESS	1/8" WET FILM (1/16" DRY)	2mm (0.079") WET FILM
CYCLING (%) HORIZONTAL VERTICAL SEE NOTE 1	±9.25 NONE	±7.5 NONE



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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 4-1/2 in. at the joint face.

Optional - Provided the 2 hour concrete floor assembly rating is not compromised, the overall slab thickness may vary to accommodate various blockout depths (longitudinal recesses) formed in the concrete, to house an optional architectural joint system. The blockout width may also vary without restriction.

2. CURTAIN WALL ASSEMBLY: The curtain wall assembly shall incorporate the following construction features:

A. MOUNTING ATTACHMENT: (Not shown) Attachment of the curtain wall framing to the structural framing shall be according to the curtain wall manufacturer's instructions. When required, the mounting attachments to the floor slab shall be connected to the joint face of the floor slab, according to the curtain wall manufacturer's instructions. Max. distance between mounting attachments shall be 10 ft.

B. STEEL-STUD FRAMING: Vertical framing members shall be a min. 3-5/8 in. by 1-5/8 in., 18 GA steel "C" studs secured in an 18 GA steel track top and bottom using min. #6 x 1.25 in. Bugle head SD PT screws. Vertical framing shall not exceed a spacing of 56 in. on center and shall be completely covered by the GFRC panels (Item 2C). Attachment of vertical framing shall be according to the curtain wall system manufacturer's guidelines.

C. GFRC PANELS: Glass fiber reinforced concrete panels shall be at least 1 in. thick and attached in accordance with the manufacturer's installation instructions. The system is a monolithic assembly without expansion or control joints. *NOTE:* T-Rating is 0-hours when min. 1 in. thick GFRC panels are used. T-Rating is 1 hour or 45 minutes when min. 2 in. thick GFRC panels are used.

D. IMPALING PINS: (Not Shown - Optional) When required by insulation manufacturer, use with insulation. The pins shall be located, sized and installed according to the curtain wall system manufacturer's guidelines.

E. CURTAIN WALL INSULATION: (Not Shown - Optional) Use only mineral wool or glass fiber batt insulations bearing an Intertek Certified Label and meeting the following minimum requirements. Curtain wall insulation is not required. However, it can be installed above or below the perimeter joint protection. When used, secure the insulation in accordance with the manufacturer's installation instructions.

F. GFRC PANEL JOINT: Vertical and horizontal concrete panel joints created between panels can be either flush type (butt joint) or key way type (tongue and groove). Concrete panel edges must be in contact with each other. If required, the surface of the panel joints can be sealed with gaskets or sealants.

G. FRAMING COVERS: (Not Shown - Optional) Use only mineral wool or fiberglass batt insulation bearing an Intertek Certified Label and meeting the following minimum requirements. Framing covers used over the mullions and transoms are optional. When used, the framing covers shall be located, sized and installed according to the curtain wall system manufacturer's guidelines. Framing covers do not pass through the perimeter joint treatment. They are butted to the top and bottom surfaces of the perimeter joint treatment without deforming it.



Hilti Firestop Systems

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3. **PERIMETER JOINT PROTECTION:** The perimeter joint (linear opening) shall not exceed a nominal joint width (joint width at installation) of 8 in. from the vertical face of the concrete floor assembly (Item 1) to the interior face of the steel studs (Item 2B), which results in a maximum nominal joint width of 11-5/8 in. to the interior face of the GFRC panels (Item 2C). The perimeter joint treatment shall incorporate the following construction features:

A. **PACKING MATERIAL:** Mineral Wool

CERTIFIED PRODUCT: Only Intertek Certified Manufacturer's product meeting the minimum requirements below.

Use a min. 4 in. thick, nominal 4 pcf density, mineral wool batt insulation installed with the fibers running parallel to the slab edge and curtain wall. The packing material shall be compressed 50% 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. Splices (butt joints) in the lengths of mineral wool batt insulation are to be tightly compressed together. Reference the Introduction to Fire Resistive Joint Systems Section of this Directory for more details on how to determine the cut width of the insulation to be installed in the nominal joint width, and how to determine the compressed percentage of a known insulation width installed in a known nominal joint width.

B. **FILL, VOID, OR CAVITY MATERIAL:** Joint Spray or Sealant

CERTIFIED PRODUCT: Hilti Corporation, Joint Spray or Sealant; Firestop Joint Spray CFS-SP WB or Silicone Joint Spray CFS-SP SIL. To be applied (sprayed, brushed, or painted) to cover the 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 the spraying process is stopped and the applied liquid cures to an elastomeric film before process is restarted, then overlap the edge of the cured material at least 1/8 in. with the spray. Reference Product Section of this Directory for more details about the Listed product.

C. **SUPPORT CLIPS:** (Not Shown - Optional) Use standard Z-shaped clips that are min. 20 GA galvanized steel with the following nom. dimensions: 1 in. wide by 3 in. high with a 2 in. upper leg and 3 in. lower leg Note 1 - Before testing, the spliced test specimen was cycled 500 times at 30 cpm according to ASTM E 1399 and ICBO ES AC 30 (Jan. 1997).