

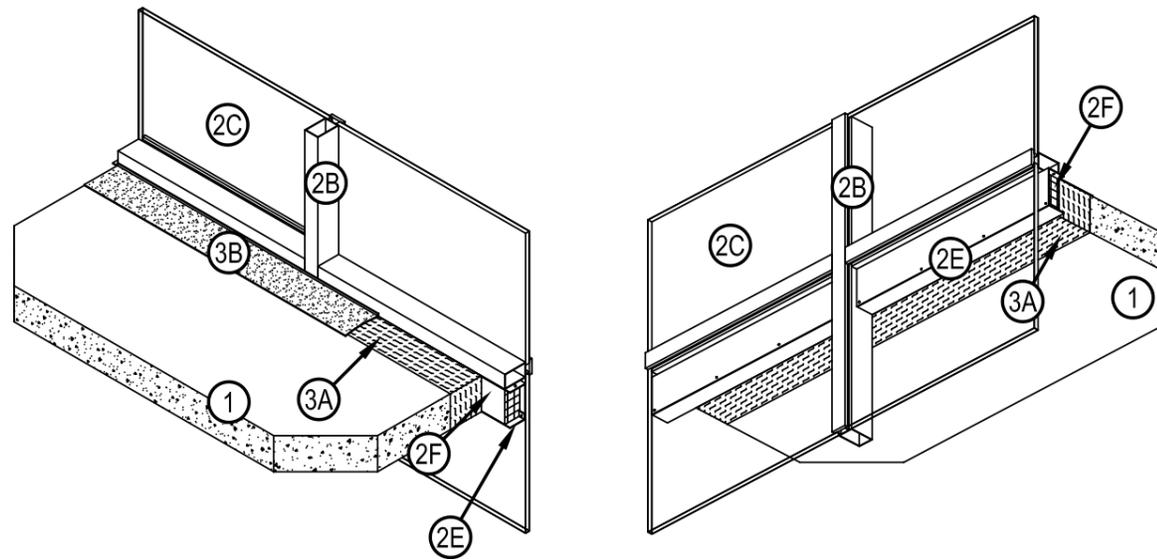
Design No. HI/BPF 120-11
PERIMETER FIRE BARRIERS
Firestop Joint Spray CFS-SP WB
ASTM E 2307

HI/BPF 120-11

Table 1.

	Firestop Joint Spray CFS-SP WB	Silicone Joint Spray CFS-SP SIL
F-Rating	2 Hour	2 Hour
T-Rating	45 Minute	45 Minute
Application Thickness	1/8 in. wet film (1/16 in. dry)	2 mm (0.08 in.) wet film
Cycling (%)		
Horizontal	±12.5%	±12.5%
Vertical	±12.5%	±12.5%

UL 2079
L-Rating <1.0 SCFM/LF



Hilti Firestop Systems

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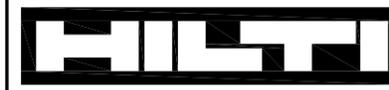


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- CONCRETE FLOOR ASSEMBLY:** 2 hour rated concrete floor assembly made from either lightweight or normal weight concrete with a density of 100 to 150 pcf, having a min. thickness of 6 in. at the joint face. When a longitudinal recess (blockout) is required to contain an architectural joint system, increase concrete floor assembly thickness to maintain a min. thickness of 6 in. and accommodate depth of blockout formed in the concrete: blockout width unrestricted.
- CURTAIN WALL ASSEMBLY:** The curtain wall assembly shall incorporate the following construction features:
 - Mounting Attachment (Not shown):** Attach aluminum framing (Item 2B) to the structural framing according to the curtain wall manufacturer's instructions. Connect the mounting attachments to the joint face of the concrete floor assembly (Item 1) according to the curtain wall manufacturer's instructions.
 - Aluminum Framing:** Use hollow rectangular aluminum extruded tubing with min. overall dimensions of 0.100 in. thick, 4 in. high and 2-1/2 in. wide. Locate mullions (vertical aluminum framing) min. 60 in. oc. Locate the transom (horizontal aluminum framing) such that the bottom surface of the transom is at the same height as the top surface of the floor assembly.
 - Glass Panels:** Sized and installed into aluminum framing (Item 2B) in accordance with the curtain wall manufacturer's instructions. Use min. 1/4 in. thick, clear, heat strengthened (HS) or tempered glass with a max. width and height less than the aluminum framing (Item 2B) oc spacing. OC spacing shall allow glass to be secured to the aluminum framing (Item 2B) between the notched shoulders. Secure glass panels with a thermal break (rubber extrusion), pressure bar (aluminum extrusion), min. 1/4-20 by 5/8 in. long screws, and a snap face (aluminum extrusion).
 - Aluminum Anchor Brackets (Not shown):** Use min. 1/2 in. thick aluminum anchor brackets to serve as part of the mounting attachment (Item 2A) rigidly secured to the aluminum framing (Item 2B) and the concrete floor assembly (Item 1).
 - Galvanized Sheet Metal Pan:** Attach 18 GA galvanized steel composed of two L-shaped sections to the aluminum framing with No. 10 self-drilling sheet metal screws at 12 in. oc. The first galvanized steel angle that is attached to the aluminum framing shall be formed such that it has a 3 in. leg and a 6 in. leg. The 3 in. leg is attached to the aluminum framing with No. 10 self-drilling sheet metal screws spaced 12 in. oc. The second, 1 in. x 3 in. angle is attached to the first with the 1 in. leg secured to the 6 in. leg of the first angle with No. 10 self-drilling sheet metal screws spaced 12 in. oc to create a cavity that is 3 in. deep and 6 in. tall underneath the aluminum member to house the curtain wall insulation (Item 2F). The 3 in. portion of the 3 in. x 1 in. angle is to be sized such that a 6 in. leg can be bent and formed into a vertical leg at the ends to secure the angle to the vertical framing members on each side with No. 10 self-drilling sheet metal screws (two installed at the top and two at the bottom). Install a bead of Hilti CFS-S SIL GG Firestop Silicone on the underside of the horizontal member prior to installation of the 3 in. x 6 in. 18 GA steel angle.
 - Curtain Wall Insulation:** Fill the cavity of the metal pan (Item 2E) with nominal 3 in. thick, min. 6 in. tall, 8 pcf density, mineral wool batt insulation. Tightly fit, compress at least 1/8 in. in all directions. Use only Intertek certified products meeting the above min. requirements.
- PERIMETER JOINT PROTECTION:** Do not exceed a 4 in. nominal joint width (joint width at installation). Incorporate the following construction features for the perimeter joint protection (also known as perimeter fire barrier system):
 - Packing Material:** Use only mineral wool bearing an Intertek certified product label and meeting the following min. requirements. Use min. 6 in. tall, 4-pcf density, mineral wool batt insulation and cut packing material width to achieve 25% compression when installed in the nominal joint width and use no more than two adjacent strips. Install insulation with the fibers running parallel to the edge of concrete floor assembly (Item 1) and curtain wall assembly (Item 2A). Tightly compress together splices (butt joints) in the lengths of packing material by using min. 1/4 in. compression per piece of packing material. Locate the top surface of the packing material flush with the top surface of the concrete floor assembly (Item 1).
 - CERTIFIED MANUFACTURER:** Hilti Corporation
CERTIFIED PRODUCT: Firestop Joint Spray CFS-SP WB or Silicone Joint Spray CFS-SP SIL
Fill, Void, or Cavity Material: Apply over the packing material (Item 3A) as discussed below.
 Apply at the thickness specified in Table 1 and overlap the material 1/2 in. onto the adjacent curtain wall assembly and concrete floor slab assembly. When the spraying process is stopped and the applied liquid cures to an elastomeric film before application is restarted, overlap the edge of the cured material at least 1/8 in. with the spray. Reference Product Section of the Intertek Directory for more details on the Listed product.



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Classified by
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to ASTM E2307

System No. CW-D-1001

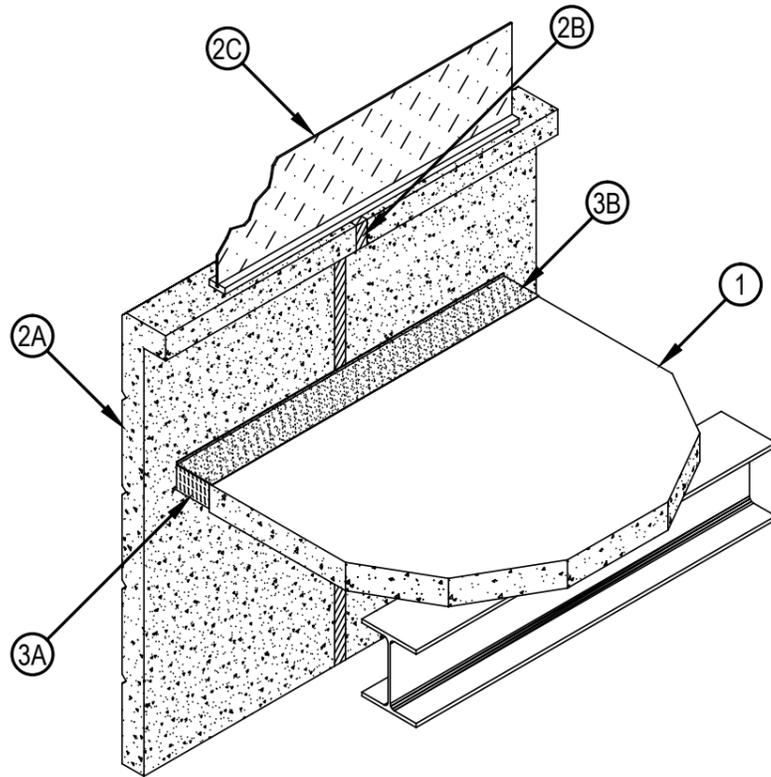
F Rating — 2 Hr

T Rating — 1/4 Hr

Linear Opening Width - 6 In. Max

Class II Movement Capabilities - 5% Vertical Shear (See Item 3)

CWD 1001



1. Floor Assembly — Min 4-1/2 in. (114 mm) thick steel-reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete. Floor assembly to be supported at perimeter edges by spandrel beams having a Restrained or Unrestrained Beam Rating of 2 hr.

2. Curtain Wall Assembly — The curtain wall assembly shall incorporate the following construction features:

A. Spandrel Panels — Min 36 in. (914 mm) high by min 4 in. (102 mm) thick steel-reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete spandrel panels. Wall may also consist of min 4 in. (102 mm) thick steel-reinforced lightweight or normal weight concrete tilt-up panels with a min 36 in. (914 mm) vertical separation between window openings. Panels provided with steel dead load anchors welded to steel reinforcing bars embedded in the concrete for attachment to the steel columns and spandrel beams. Panels also provided with steel lateral anchors or braces. The dead load anchors which are located in the linear gap between the concrete floor slab and the spandrel panel or tilt-up panel are to be spaced max 72 in. (1829 mm) OC. The top of the dead load anchor is to be recessed min 1/2 in. (13 mm) from top surface of floor

B. Joint System — (Not Shown) - Vertical joints between spandrel panels or tilt-up panels to be protected using Joint System No. WW-S-0042

C. Framed Window — Metal framed window with nom 1/4 in. (6 mm) thick heat-strengthened glass. Sill of window to be min 6 in. (152 mm) above top of floor.



Hilti Firestop Systems

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System No. CW-D-1001

CWD 1001

3. Safing System — Max separation between edge of floor assembly and concrete spandrel or tilt-up panel is 6 in. (152 mm). The safing system is designed to accommodate vertical shear movement of up to 5 percent of its installed width. The safing system shall incorporate the following construction features:

A. Forming Material* — Nom 4 in. (102 mm) thick mineral wool batt safing material to be installed between the concrete spandrel or tilt-up panel and the edge of the concrete floor slab. Safing material to be cut to a min 4-1/2 in. (114 mm) width and stacked to a thickness which is at least 25 percent greater than the width of the linear gap between the concrete spandrel or tilt-up panel and the edge of the concrete floor slab. The safing material is compressed and inserted cut-edge-first into the linear gap such that its top surface is flush with the top surface of the floor assembly. A max of one tightly-butted seam is permitted between dead load anchors. An additional min 1/2 in. (13 mm) thick piece of mineral wool batt safing material to be installed to cover top surface of each dead load anchor.

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B. Fill, Void or Cavity Material* — Min 1/8 in. (3.2 mm) wet thickness (1/16 in. or 1.6 mm dry) of fill material spray-applied over top of forming material and lapping min 1 in. (25 mm) onto the top surface of the concrete floor and onto the concrete spandrel panel or tilt-up panel. When CFS-SP SIL is used, min wet (and dry) thickness of spray is 2 mm.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 672 FC Firestop Joint Spray, CFS-SP SIL Firestop Silicone Joint Spray or CFS-SP WB Firestop Joint Spray

*Bearing the UL Classification Mark



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