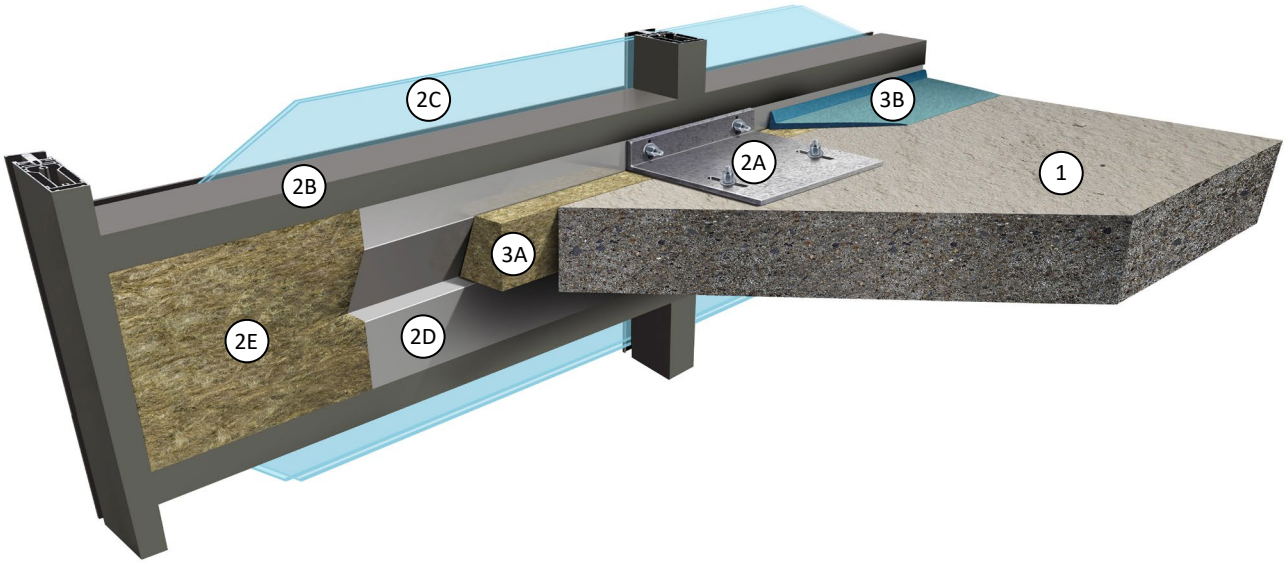
Thermafiber, Inc.
Design No. TFI/BPF 120-16
Perimeter Fire Barrier System
Thermafiber® Firespan® 90
Thermafiber® Safing
ASTM E2307
F-Rating: 2 Hour
T-Rating: 0 Hour
Cycling: NA



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 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 the depth of the blockout formed in the concrete. The blockout width is unrestricted.

2. **CURTAIN WALL ASSEMBLY:** Incorporate the following features:

A. MOUNTING ATTACHMENT – Attach the vertical aluminum framing members (mullions) to the structural framing or to the top side of the concrete floor assembly according to the curtain wall manufacturer's instructions. Max. distance between anchored mullions is 60 in.

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. 5-1/2 in. depth and a min. width of 2-1/2 in. for horizontal

members and vertical members. Mullions are to be spaced with a max. of 60 in. between mullions. The spandrel transoms are to be positioned to have 23-1/2 in. of space between the bottom side of the upper transom and the top side of the lower transom. The lower face of the top spandrel transom is to be located 0 in. to 3 in. above the top surface of the concrete floor assembly (Item 1).

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. thick (double-paned), tempered or heat-strengthened glass.

D. STEEL BACKPAN – Min. 20 GA (min. 0.0396 in. or 1.0 mm thick) galvanized steel panel installed between mullions and transoms within the spandrel. Backpan provided with 3 in. wide return lip around all four sides. Backpan installed flush with the interior face of the of the aluminum framing members (Item 2B) and screw-attached to mullions and transom along all sides with min. No. 10 x 3/4 in. (19 mm) long self-drilling, self-tapping steel screws spaced max 8 in. (203 mm) on center (oc). Patent-pending crimp to be located behind the Thermafiber® Safing mineral wool insulation (item 3A).

E. SPANDREL INSULATION – Mineral Wool

CERTIFIED PRODUCT: Thermafiber® Inc., Firespan® 90, min. 3 in. thick, nominal 8 pcf, semi-rigid, mineral wool insulation board.

Install as a continuous piece. The batt is to be tightly fitted between the return lips of the backpan, and secured with 12 GA steel weld pins, having sufficient length to accommodate the insulation thickness (min. 3-1/2 in. long). Three rows of pins shall be fitted with nominal 1-3/16 in. (30 mm) diameter galvanized steel cup heads and spaced a max. 12 in. (305 mm) oc. One row 1 in. above the crimp, one row 4-1/2 in. below the crimp, and one row 10-1/2 in. below the crimp.

3. PERIMETER JOINT PROTECTION: The perimeter joint (linear opening) is not to exceed 4 in. wide (joint width at installation) as measured from the interior face of the curtain wall assembly aluminum framing (Item 2B) and the face of the concrete floor assembly (Item 1). Incorporate the following construction features:

A. PACKING MATERIAL – Mineral Wool

CERTIFIED PRODUCT: Thermafiber® Inc., Safing, min. 4 in. thick, nominal 4 pcf, mineral wool insulation.

Install min. 4 in. deep into the joint with the fibers running parallel to the slab edge and curtain wall. Compress the packing material a min. 33% in the joint width, ensuring that the material is installed at a thickness that maintains 33% compression throughout the entirety of the joint depth. Batt sections cut to min. 4 in. width to be rotated 90 degrees and installed into the depth of the joint. These sections to be stacked to a thickness to achieve a 33% compression ratio with the nominal joint width. The packing 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 concrete floor assembly (Item 1) or recessed a max. 1/8 in. If installing fill, void, or cavity material (Item 3B), the material shall be cut with a matching angled profile, to that of the adjacent backpan (Item 2D) to maintain the required amount of compression.

An architectural cover, such as stool trim, kick plate, or similar finish, shall be installed over the joint.

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

CERTIFIED PRODUCT: Hilti Corporation, Firestop Joint Spray, CFS-SP WB or Silicone Joint Spray CFS-SP SIL

To be applied (sprayed, brushed, or troweled) to cover the top exposed surface of the mineral wool installed in the perimeter joint (Item 3A).

CFS-SP WB – Apply a min. wet film thickness of 1/8 in. and overlap the material a min. 1/2 in. onto the adjacent curtain wall assembly (Item 2) and concrete floor slab assembly (Item 1). 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.

CFS-SP SIL – Apply a min. wet film thickness of 0.079 in. (2 mm) and overlap the material a min. 1/2 in. onto the adjacent curtain wall assembly (Item 2) and concrete floor slab assembly (Item 1). 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.

C. ARCHITECTURAL COVER (Not Shown) – An architectural cover, such as stool trim, kick plate, or similar finish, shall be installed over the joint with the following design features. Cover shall be a min. 24 GA steel or min. 0.05 in. thick aluminum, with L- or Z-profile, overlapping the concrete floor (Item 1) by min. 1 in., and splices in the cover to be located a min. of 12 in. offset from the splices in the joint packing material (Item 3A).

Consult the listing report on the Directory of Building Products (https://bpdirectory.intertek.com) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.