



Classified by
Underwriters Laboratories, Inc.
to CAN/ULC-S115

System No. C-AJ-2049

F Ratings -- 2 and 3 Hr (See Item 3)

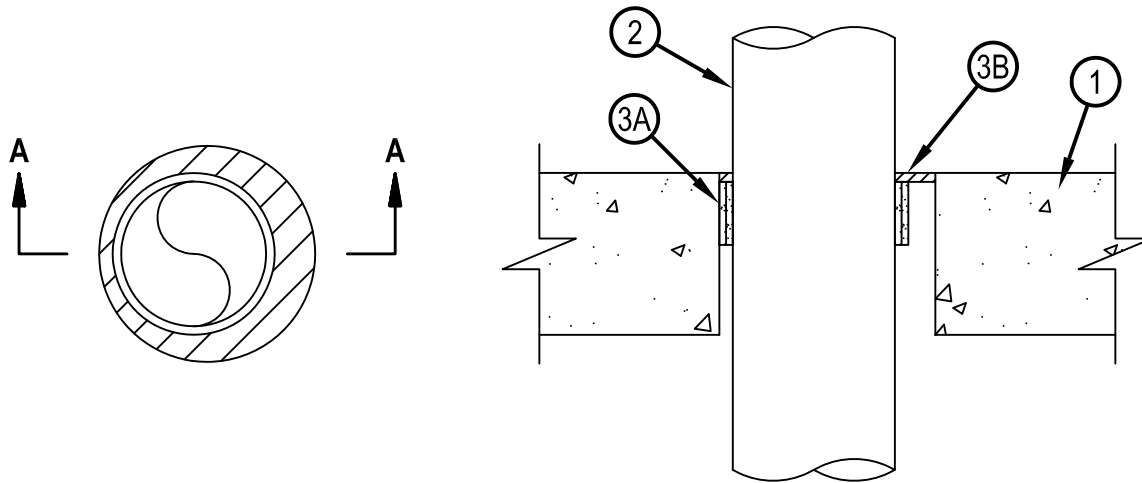
FT Rating -- 1/4 Hr

FH Rating -- 0 Hr

FTH Rating -- 0 Hr



CAJ 2049



SECTION A-A

System tested with a pressure differential of 50 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

1. Floor or Wall Assembly — Min 114 mm (4-1/2 in.) thick reinforced lightweight or normal weight (1600-2400 kg/m³ or 100-150 pcf) or concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. See Table in Item 3 for max diameter of opening.

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufactures.

2. Through Penetrants — One nonmetallic pipe to be installed concentrically or eccentrically within the firestop system. See Table in Item 3 for annular space required between pipe and periphery of opening. Pipe to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of nonmetallic pipes may be used:

A. Polyvinylidene Fluoride (PVDF) Pipe — Nom 51 mm (2 in.), 76 mm (3 in.), or 102 mm (4 in.) diam (or smaller) Schedule 40 PVDF pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

3. Firestop System — The firestop system shall consist of the following:

A. Fill Void or Cavity Material* - Wrap Strip — Nom 5 mm (3/16 in.) thick by 45 mm (1-3/4 in.) wide intumescent wrap strip continuously wrapped around the pipe and held in place with tape. Wrap strip to be recessed 64 mm (2-1/2 in.) from lower surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material. The opening diam, number of layers of wrap strip, annular space and the F Rating for the system is dependent on the size of penetrant as specified in the Table below.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E-W45/1-3/4

Pipe Size mm (in.)	Max Opening Diam mm (in.)	Annular space Min mm (in.)	Annular space Max mm (in.)	Number of Layers	Hourly F Rating
51 (2)	76 (3)	5 (3/16)	22 (7/16)	1	3
76 (3)	127 (5)	10 (3/8)	29 (1-1/8)	2	2
102 (4)	152 (6)	10 (3/8)	29 (1-1/8)	2	2

B. Fill, Void or Cavity Materials*- Sealant — Min 6 mm (1/4 in.) thickness of fill material applied within the annulus, flush with top surface of floor or both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



Hilti Firestop Systems

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