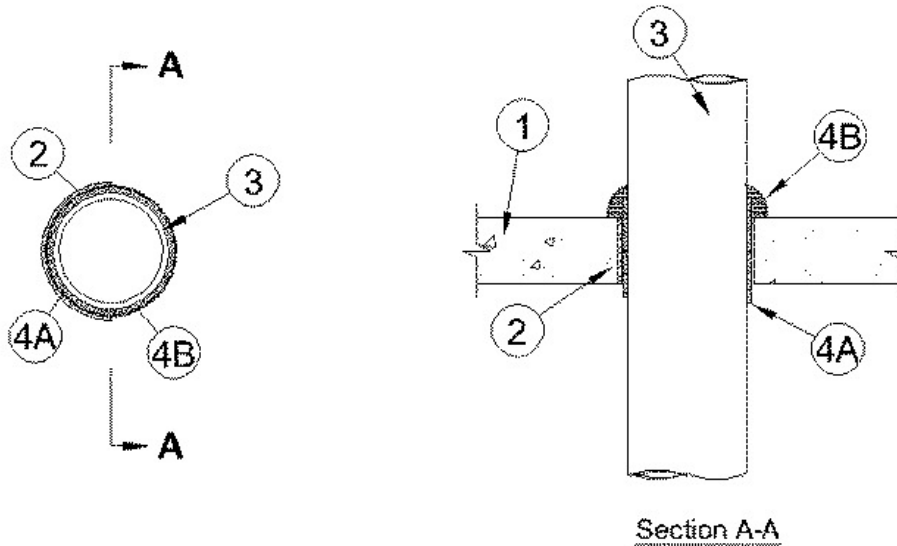


ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings - 1-1/2 and 3 Hr (See Item 3)	F Ratings 1-1/2 and 3 Hr (See Item 3)
T Rating - 1/2 Hr	FT Rating - 1/2 Hr
	FH Ratings - 1-1/2 and 3 Hr (See Item 3)
	FTH Ratings - 1/2 Hr



1. Floor or Wall Assembly — Reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Min 2-1/2 in. (64 mm) thick concrete floor assembly or min 5-1/2 in. (140 mm) thick concrete wall assembly. Floor may also be constructed of any min 6 in. thick UL Classified hollow core **Precast Concrete Units***. Wall may also be constructed of any UL Classified **Concrete Units***. Diam of opening to be 1/2 in. (13 mm) larger than outside diam of penetrant. Max diam of opening is 5 in. (127 mm).

See **Concrete Blocks** (CAZT) and **Precast Concrete Units** (CFTV) categories in the Fire Resistance Directory for names of manufacturers.

2. Metallic Sleeve — Nom 5 in. (127 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe cast or grouted into floor or wall assembly, flush with floor or wall surfaces. Inside diam of metallic sleeve to be 1/2 in. (13 mm) larger than outside diam of penetrant. Sleeve is optional except that in floors constructed of precast concrete units, the sleeve is required.

3. Through Penetrants — One nonmetallic pipe or conduit to be centered within the opening. Pipe to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of nonmetallic pipes and conduits may be used:

A. Polyvinyl Chloride (PVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

B. Rigid Nonmetallic Conduit+ — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electric Code (NFPA No. 70).

C. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) SDR17 SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.

D. Flame Retardant Polypropylene (FRPP) Pipe — Nom 3 in. (76 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

E. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular core or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

The hourly F Rating of the firestop system is 1-1/2 hr for Penetrants A, B and C above and 3 hr for Penetrants D and E above.

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

A. Fill, Void or Cavity Material* - Wrap Strip — Nom 1/4 in. (6 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. (38 mm) wide strips. A stack of two single layers of wrap strip are wrapped around the through-penetrant with butted seams and joints. The butted ends of each single layer are held in place with masking tape.

Butted ends in layer of each stack shall be offset. Stacked wrap strips secured together with aluminum foil tape (not shown) around entire circumference with min 1-1/2 in. (38 mm) tape overlap to penetrant at top and bottom of floor opening or both sides of wall opening. The stacked wrap strips are slid into annular space until bottom edge of wrap strip protrudes 1/4 in. (6 mm) below bottom surface of floor. In wall assemblies, a stack of wrap strips shall be installed on each side of wall and protrude 1/4 in. (6 mm) from each wall surface.

RECTORSEAL — FlameSafe® Wrap Strip

B. Fill Void or Cavity Materials* - Sealant — Min 1/4 in. (6 mm) thickness of fill material applied within annular space between wrap strip and periphery of opening, flush with top of floor or both surfaces of wall. In addition, min 1 in. (25 mm) diam bead of sealant applied around periphery of the penetrant at top of floor opening or both sides of wall. In floors constructed of precast concrete units, sealant shall be applied within the annular space and around the penetrant at the top and bottom surface of floor.

RECTORSEAL — FlameSafe® FS900+, FS1900 Sealant, [Metacaulk MC 150+](#), Biostop FB [150+](#)

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

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