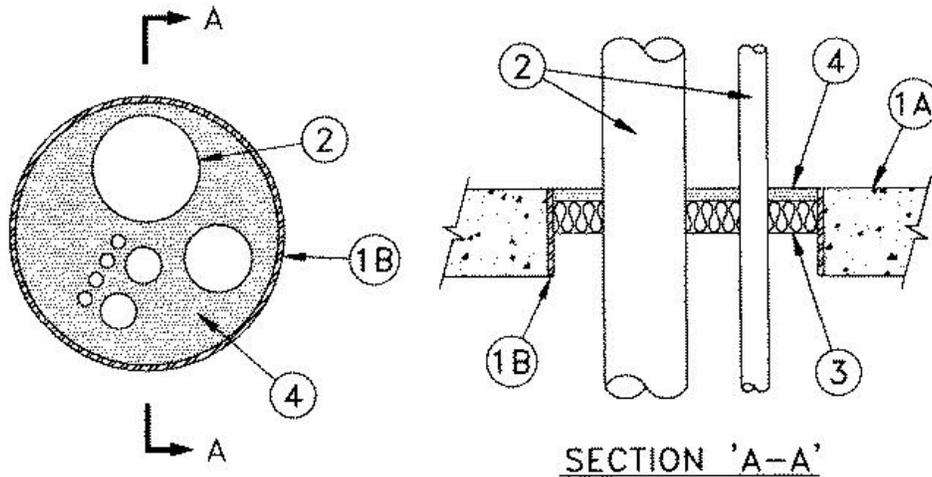


ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
	FH Rating — 2 Hr
	FTH Rating — 0 Hr
L Rating at Ambient - Less than 1 CFM/sq ft	L Rating at Ambient - Less than 1 CFM/sq ft
L Rating at 400° F - Less than 1 CFM/sq ft	L Rating at 400° F - Less than 1 CFM/sq ft



1A. Floor or Wall Assembly — Min 2-1/2 in. (64 mm) thick floor or 3 in. (76 mm) thick wall of reinforced light weight or normal weight (100-**150** pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening is 15-1/4 in. (387 mm).

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

1B. Metallic Sleeve (Optional) — Nom 15-1/4 in. (387 mm) diam (or smaller), Schedule 30 (or heavier) steel pipe sleeve, cast or grouted into floor or wall assembly, flush with floor or wall surfaces.

2. Through Penetrants - — A max of eight pipes, conduits or tubing to be installed within the opening. The space between pipes, conduits or tubing shall be min 1/2 in. (13 mm) to max 3 in. (76 mm). The space between pipes, conduits or tubing and periphery of opening shall be min 1/2 in. (13 mm) to max 5 in. (127 mm). Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. **Steel Pipe** — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe.

B. **Conduit** — Nom 2 in. (51 mm) diam (or smaller) electrical metallic tubing.

C. **Copper Tubing** — Nom 3/4 in. (19 mm) diam (or smaller) Type L (or heavier) copper tubing.

D. **Copper Pipe** — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.

3. Packing Material — Min 2 in. (51 mm) thick mineral wool insulation of min 4 pcf (64 kg/m³) firmly pressed into opening as a permanent form. Insulation material to be recessed by min depth of 1/2 in. (13 mm) from top surface of floor or both surfaces of wall.

4. Fill, Void, or Cavity Materials* - Caulk — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top surface of floor or both surfaces of wall.

RECTORSEAL — FlameSafe® **FS900+**, **Metacaulk MC 150+** and Biostop **BF 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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