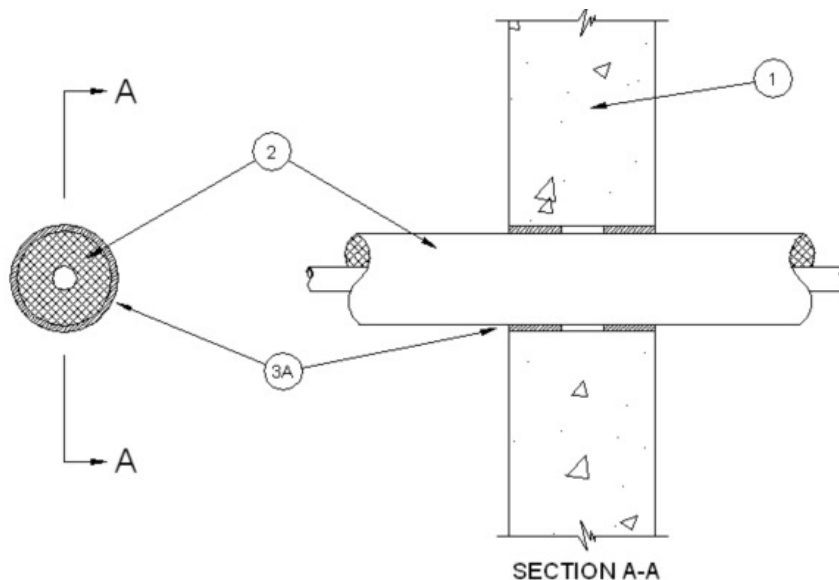


F Rating — 2 Hr
T Rating — 2 Hr
L Rating at Ambient - less than 1 CFM/ft² (See Item 3B)
L Rating At 400° F - Less than 1 CFM/ft² (See Item 3B)



1. **Wall Assembly** — Min 6 in. (152 mm) thick lightweight 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 2-3/4 in. (70 mm).
See **Concrete Blocks (CAZT)** category in the Fire Resistance Directory for names of manufacturers.

2. **Through Penetrant** — One nonmetallic pipe, or tube to be installed eccentrically or concentrically within the firestop system. Annular space to be min 1/4 in. (6 mm) to max 3/8 in. (10 mm). Pipe or tube to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipes and tubes may be used:

A. **Crosslinked polyethylene (PEX) Tubing** — Nom 3/4 in. (19 mm) diam (or smaller) UPONOR - WIRSBO AQUAPEX pre insulated crosslinked polyethylene (PEX) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. Pipe insulation is crosslinked closed cell foam with a nominal thickness of 1/2 in. (13 mm) (or smaller).

B. **Crosslinked polyethylene (PEX) Tubing** — Nom 3/4 in. (19 mm) diam (or smaller) UPONOR - WIRSBO AQUAPEX plus Red or Blue pre insulated crosslinked polyethylene (PEX) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. Pipe insulation is crosslinked closed cell foam with a nominal thickness of 1/2 in. (13 mm) (or smaller).

C. **Crosslinked polyethylene (PEX) Tubing** — Nom 3/4 in. (19 mm) diam (or smaller) UPONOR - WIRSBO hePEX plus pre insulated crosslinked polyethylene (PEX) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. Pipe insulation is crosslinked closed cell foam with a nominal thickness of 1/2 in. (13 mm) (or smaller).

D. **Crosslinked polyethylene (PEX) Tubing** — Nom 3/4 in. (19 mm) diam (or smaller) UPONOR - Pre sleeved WIRSBO AQUAPEX, AQUAPEX plus, or hePEX plus pre insulated crosslinked polyethylene (PEX) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. Pipe sleeve is a corrugated plastic sleeve between the tube and the insulation. Pipe insulation is crosslinked closed cell foam with a nominal thickness of 1/2 in. (13 mm) (or smaller).

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

A. **Fill, Void or Cavity Material* - Wrap Strip** — One layer of nom 1/4 in. (6 mm) thick by 1 in. (25 mm) wide intumescent wrap strip individually wrapped around the outer circumference of the pipe and slid into the annular space such that wrap strip installed flush with both surfaces of wall. Wrap strip secured with tape, wire or tie wire.

RECTORSEAL — [Metacaulk Wrap Strip](#)

B. **Fill void Cavity material* -Sealant** — (Optional Not Shown) Min 1/2 in. (13 mm) crown bead of fill material applied at the pipe wrap strip interface. Min 1/2 in. (13 mm) thickness of sealant to be placed within any annular spaces between the wrap strip and the periphery of opening.

RECTORSEAL — Metacaulk 1000

The L Rating only applies when Item 3B is used.

*,+ 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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