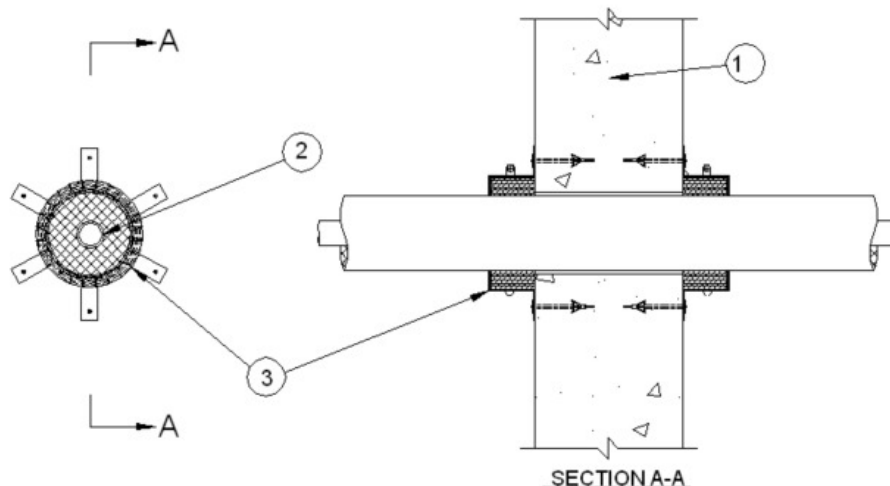


F Rating —2 Hr
T Rating —2 Hr
L Rating at Ambient - less than 1 CFM/ft² (See Item 3B)
L Rating At 400° F - Less than 1 CFM/ft² (See Item 3B)



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*. Diam of opening shall be 1/4 to 1 in. (6 to 25 mm) larger than the outside diam of nonmetallic pipe or conduit (Item 2).

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. **Cross-linked polyethylene (PEX) Tubing** — Nom 3/4 in. (19 mm) diam (or smaller) UPONOR - WIRSBO AQUAPEX pre insulated cross-linked 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. **Cross-linked polyethylene (PEX) Tubing** — Nom 3/4 in. (19 mm) diam (or smaller) UPONOR - WIRSBO AQUAPEX plus Red or Blue pre insulated cross-linked 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. **Cross-linked polyethylene (PEX) Tubing** — Nom 3/4 in. (19 mm) diam (or smaller) UPONOR - WIRSBO hePEX plus pre insulated cross-linked 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. **Cross-linked polyethylene (PEX) Tubing** — Nom 3/4 in. (19 mm) diam (or smaller) UPONOR - Pre sleeved WIRSBO AQUAPEX, AQUAPEX plus, or hePEX plus pre insulated cross-linked 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. **Firestop Device*** — Galv steel collar lined with an intumescent material sized to fit specific diam of the through penetrant. Device to be installed around through penetrant in accordance with accompanying installation instructions. Device incorporates anchor tabs for securement to both surfaces of the wall by means of 1/4 in. x 1-1/4 in. Tapcons.

RECTORSEAL — [Metacaulk Pipe Collar](#)

B. **Fill void Cavity material* -Sealant** — (Optional — Not Shown) Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall.

RECTORSEAL — [METACALK 1000](#), [METACALK 150+](#) OR [METACALK 1200](#)

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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