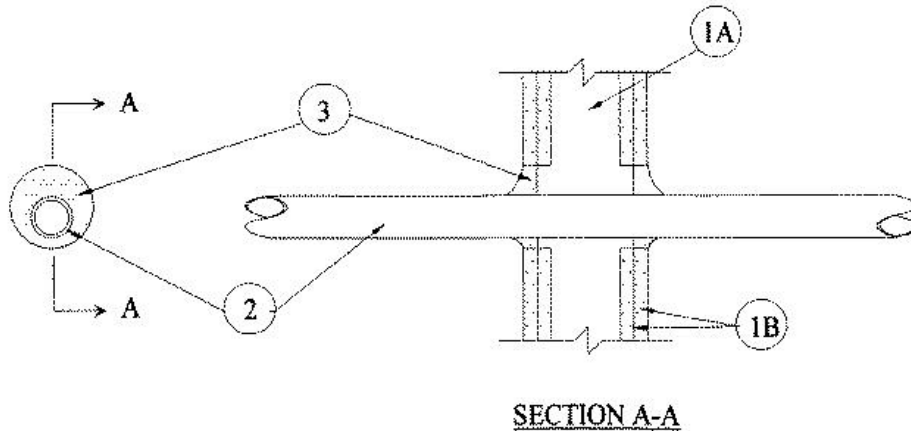


**F Ratings — 1 and 2 Hr (See Item 2)**  
**T Ratings — 0 and 1 Hr (See Item 2)**  
**L Rating at Ambient - Less than 1 CFM/sq ft**  
**L Rating at 400° F - Less than 1 CFM/sq ft**



**1. Wall Assembly** — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400, V400 or W400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

**A. Studs** — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-5/8 in. (92 mm) wide and spaced max 24 in. (610 mm). OC.

**B. Gypsum Board\*** — 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Design in the UL Fire Resistance Directory. Max diam of opening is 4 in. (102 mm).

**The hourly F and T Ratings of the firestop system are dependent on the hourly fire rating of the wall and type and diam of through penetrant as shown in Item 2.**

**2. Nonmetallic Pipe** — One nonmetallic pipe or conduit to be installed either concentrically or eccentrically within the firestop system. The annular space between the through penetrant and the periphery of the opening is dependent upon the diam of through penetrant. If the nom diam of the through penetrant is 1-1/2 in. (38 mm) or less, the annular space shall be a min 3/8 in. (10 mm) to max 1-1/8 in. (29 mm). If the nom diam of the through penetrant is greater than 1-1/2 in. (38 mm), the annular space shall be a min 5/8 in. (16 mm) to max 1 in. (25 mm). Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types of nonmetallic pipes, conduits or tubing may be used:

**A. Polyvinyl Chloride (PVC) Pipe** — Nom 2 in. (52 mm) diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste, or vent) piping systems.

**B. Chlorinated Polyvinyl Chloride (CPVC) Pipe** — Nom 2 in. (52 mm) diam (or smaller) SDR 1713.5 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

**C. Rigid Nonmetallic Conduit+** — Nom 2 in. diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code, (NFPA No. 70).

**D. Acrylonitrile Butadiene Styrene (ABS) Pipe** — Nom 1-1/2 in. (38 mm) diam Schedule 40 cellular or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

**E. Electrical Nonmetallic Tubing (ENT)+** — Nom 1-1/2 in. (38 mm) diam (or smaller) PVC tubing installed in accordance with the National Electrical Code, (NFPA No. 7

**F. Cross Linked Polyethylene (PEX) Tubing** — Nom 1-1/2 in. (38 mm) diam (or smaller) SDR 9 cross linked polyethylene (PEX) tubing for use in closed (process or supply) piping systems.

The hourly F and T Ratings of the firestop system are dependent on the hourly fire rating of the wall and type and max diam of through penetrant as tabulated below:

Rating of Wall, Hr	Type of Through Penetrant	Max Diam of Through Penetrant, In. (mm)	F Rating Hr	T Rating Hr
2	PVC Pipe, CPVC Pipe or PVC Conduit	2 (51)	2	1
2	PVC ENT	1-1/2 (38)	2	1
2	ABS Pipe or PEX Tubing	1-1/2 (38)	2	0
1	PVC Pipe, CPVC Pipe or PVC Conduit	2 (51)	1	0
1	PVC ENT, ABS Pipe or PEX Tubing	1-1/2 (38)	1	0

**3. Fill, Void or Cavity Material\* — Sealant** — Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall. Additional fill material to be installed such that a min 1/4 in. (6 mm) thick crown is formed around the penetrating item.

**RECTORSEAL** — FlameSafe FS1900, FS1901, FS1905, FS1929, [Metacaulk 1000](#), [Metacaulk 350i](#), Biostop 350i or Biostop 500+

\*Bearing the UL Classification Marking

\*,+ 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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