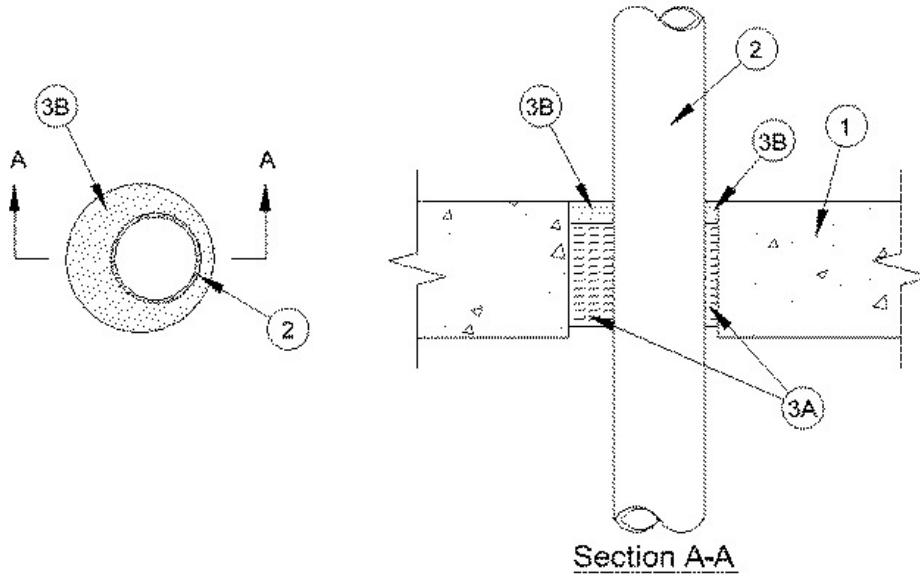


F Rating — 1 Hr
T Rating — 1/2 Hr
L Rating At Ambient — Less than 1 CFM/Sq Ft
L Rating At 400°F — Less than 1 CFM/Sq Ft



1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100 -150 pcf or 1600-2400 kg/cu meter) concrete. Floor may also be constructed of any min 6 in. (152 mm) thick hollow-core **Precast Concrete Units**. Wall may also be constructed of any UL **Classified Concrete Blocks***. Max diam of opening is 8 in. (203 mm) Max diam of opening in floors constructed of hollow-core is 7 in. (178 mm).

See **Concrete Block (CAZT)** or **Precast Concrete Units (CFTV)** category in the Fire Resistance Directory for names of manufacturers

2. Through Penetrants — One metallic pipe, conduit or tubing to be installed within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The annular space shall be min 1/4 in. to max 1-1/4 in. (7 to 32 mm). The following types and sizes of pipes, conduits or tubing may be used:

A. **Steel Pipe** — Nom 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe

B. **Iron Pipe** — Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.

C. **Copper Tubing** — Nom 6 in. (152 mm) Type L (or heavier) copper tubing.

D. **Copper Pipe** — Nom 6 in. (152 mm) Regular (or heavier) copper pipe.

E. **Conduit** — Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.

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

A. **Packing Material** — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material. When the floor is constructed of hollow-core precast concrete units, packing material shall be recessed from both surfaces of floor to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Material*** — **Caulk** — Min 1/4 in. (7 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall assembly. When the floor is constructed of hollow-core precast concrete units, fill material shall be installed symmetrically on both sides of floor, flush with both floor surfaces.

RECTORSEAL — [SmokeSeal](#)

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