

3M Company
Design No. 3M/PHV 120-15
Through Penetration
3M™ Fire Barrier Mortar
3M™ Fire Barrier FS-195+ Wrap Strip
3M™ Fire Barrier RC-1 Collar
3M™ Fire Barrier CP 25WB+
CAN/ULC-S115, ASTM E814
Rating: See Table 1
Pressure Differential: Positive, 50 Pa (0.20 in. w.g.)

TABLE 1. RATINGS

Penetrating Item	Pipe Size Max.	CAN/ULC-S115 F, FT, FH, FTH	ASTM E814 F, T
PVC	8 in.	2 Hr	2 Hr

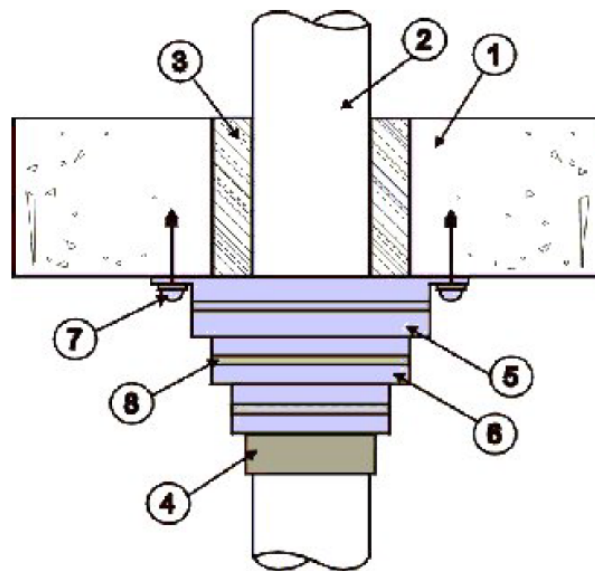


Figure 1. Penetration Detail

1. FLOOR OR WALL ASSEMBLY: Code conforming 2 hour fire-rated floor or wall assembly, nominal 4-1/2 in. thick, normal or low density cast concrete, or hollow core concrete. Wall

may also be constructed of nominal 8-in. thick concrete blocks (filled or unfilled).



2. PENETRATING ITEMS: (See Table 1) Schedule 40, nominal 8-in. diameter PVC pipe for use in DWV (Drain, Waste and Vent) or Closed (Process and Supply) piping systems. Install into opening with a maximum 1/2-in. annular space. Rating achieved will equal that of floor or wall assembly (Item 1).

3. FILL, VOID, OR CAVITY MATERIAL:

Certified Products:

- **3M™ Fire Barrier Mortar**

The annular space between the pipe and the opening shall be filled with 3M™ Fire Barrier Mortar or with a non-shrink grout to the full thickness of the substrate.

4. ALUMINUM FOIL TAPE: Cover the pipe for an 8-in. length beginning at the substrate within adhesive backed aluminum foil tape.

5. CERTIFIED PRODUCT:

- **3M™ Fire Barrier FS-195+ Wrap Strip**

(Not shown) Three stacks formed in a “telescope” fashion of nominal 2-in. wide wrap strips, wrapped around the pipe with butted seams in successive layers staggered. The first stack is butted to the substrate consisting of five layers, the middle stack four layers, and the bottom stack three layers of wrap strip. Wrap strips are held in position using aluminum foil tape, filament tape, steel wire tie or equivalent.

6. CERTIFIED PRODUCT:

- **3M™ Fire Barrier RC-1 Collar**

Wrap the steel collar around the top stack of wrap strip with a 1-in. overlap seam. The anchor tabs are bent outward 90° and secured to the substrate with a minimum 1/4-in. diameter by minimum 1-1/2-in. long steel expansion bolts or equivalent in conjunction with steel fender washers, minimum 1-1/4-in. diameter (Item 7) in each anchor tab. Secure the steel collars in place with a stainless steel band clamp or hose clamp (Item 8). Each successive stack is covered with a steel collar positioned with the anchor tabs extending under the stainless steel band clamp or hose clamp and bent over to lock it in place. The stainless steel band clamps or hose clamps are mechanically interlocking using steel screws. The bottom fingers of the steel collar or bent 90° towards the pipe.

Certified Product: Caulk

- **3M™ Fire Barrier CP 25WB+**

(Not shown) Apply a ¼-in. bead of caulk around the pipe at the substrate and wrap strip interface.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.