

 Wall Assembly — Min 4-7/8 in (123 mm) for 1 hour assemblies, and 6-1/8 in (156 mm) thick for 2 hour assemblies, reinforced 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 5 in. (127 mm).

See Concrete Blocks (CAZT) in the Fire Resistance Directory for names of manufacturers.

2. Through Penetrants — One nonmetallic pipe installed within the firestop system. Pipe to be rigidly supported on both sides of floor or wall assembly. The space between pipe and periphery of opening shall be min 1/2 in. (13 mm) to max 1 in. (25 mm). Pipe to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of nonmetallic pipes may be used:

A. Chlorinated Polyvinyl Chloride (CPVC) Pipe (Schedule 80 or SDR 11) —Nom 3 in. (76 mm) diam (or smaller). for use in closed (process or supply) piping systems.

- Fill, Void or Cavity Materials\* Sealant Fill material installed within annulus, flush with both surfaces of the wall. Installed to min 1-1/4 in thickness for 2 hr applications, and min 5/8 in thickness for 1 hr applications.
  HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE MAX Intumescent Sealant.
- \* 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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