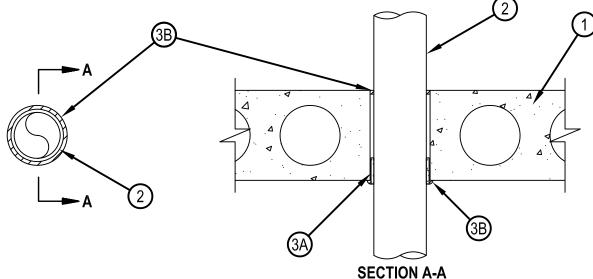


T Rating - 1-1/2 Hr W Rating - Class 1 (See Item 3B)



1. Floor or Wall Assembly — Min 8 in. (203 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Floor assembly may also be constructed of any 8 in. (203 mm) thick UL Classified hollow-core Precast Concrete Units*. Max diameter of opening is 4 in. (102 mm).

See Precast Concrete Units CFTV) category in the Fire Resistance Directory for names of manufacturers

- 2. Through Penetrants One nonmetallic pipe or conduit to be installed concentrically within the firestop system. Annular space between pipe or conduit and edge of opening to be 1/4 in. (6 mm). Pipe to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of nonmetallic pipes or conduits may be used:
 - A. Polyvinyl Chloride (PVC) Pipe Nom 3 in. (76 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 3 in. (76 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.
- 3. Firestop System The firestop system shall consist of the following:
 - A. Fill, Void or Cavity Materials*-Wrap Strip Nom 3/16 in. (5 mm) thick by 1-3/4 in. (45 mm) wide intumescent wrap strip. One layer of intumescent wrap strip is tightly wrapped around pipe with ends butted and held in place with tape. Wrap strip installed such that 1/2 in. (13 mm) extends beyond bottom surface of floor or both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 648-E W45/1-3/4" Wrap Strip

- A1. Fill, Void or Cavity Material* Wrap Strip As an alternate to the wrap strip in Item 3A on nom 3 in. (76 mm) diam pipes only, nom 3/16 in. (5 mm) thick by 1-3/4 in. (45 mm) wide intumescent wrap strip. One layer is tightly wrapped around the pipe with ends butted and held in place with integrated tape. Wrap strip installed such that 1/2 in. (13 mm) extends beyond bottom surface of floor or both surfaces of wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC CP648-S-3" US
- B. Fill, Void or Cavity Materials*-Sealant Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with top surface of floor. An additional 1/4 in. (6 mm) bead shall be installed at wrap strip/concrete interface on lower surface of floor or both surfaces of wall. W Rating applies only when CP 601S, CFS-S SIL GG, CFS-S SIL SL (floors only) or CP 604 Sealant is used. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC FS-ONE Sealant, FS-ONE MAX Intumescent Sealant, CP 601S Sealant, CFS-S

SIL GG, CFS-S SIL SL (floors only) or CP 604 Sealant

- C. Packing Material (not shown) Min 1/2 in. (13 mm) thickness of 4 pcf (64 kg/m3) mineral wool batt insulation firmly packed into annular space and recessed from the top surface of floor to accommodate the required thickness of fill material. Required only when CP 604, CFS-S SIL GG or CFS-S SIL SL (floors only) Sealant 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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