

System tested with a pressure differential of 50 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

- 1. Floor or Wall Assembly Min 114 mm (4-1/2 in.) thick reinforced lightweight or normal weight 1600-2400kg/m3 (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diameter of tapered opening 89 mm (3-1/2 in.).
 - See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- 2. Through Penetrants One nonmetallic pipe to be installed concentrically or eccentrically within the firestop system. The annular space between the pipe and the periphery of the bottom opening shall be 14 mm (9/16 in.). Pipe to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of nonmetallic pipes may be used:
 - A. Polyvinyl Chloride (PVC) Pipe Nom 51 mm (2 in.) diam (or smaller) Schedule 40 solid or cellular core PVC for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - B. Chlorinated Polyvinyl Chloride (CPVC) Pipe Nom 51 mm (2 in.) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.
 - C. Chlorinated Polyvinyl Chloride (CPVC) Pipe Nom 51 mm (2 in.) drain (or smaller) SDR 11 CPVC for use in closed (process or supply) piping systems.

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- 3. Firestop System The firestop system shall consist of the following:
 - A. Fill, Void or Cavity Material* Wrap Strip Nom 5 mm (3/16 in.) thick by 44 mm (1-3/4 in.) wide intumescent wrap strip. One layer of wrap strip is wrapped tightly around pipe with ends butted and held in place with aluminum foil tape. Wrap strip installed recessed from bottom surface of floor or both surfaces of wall 6 mm (1/4 in.). The max diam of penetrant, max diam on each side of opening, min and max annular spaces within firestopsystem are tabulated below.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E-45/1-3/4" Firestop Wrap Strip

	Diam of mm (in.)	Diam of Top Opening mm, (in.)	Diam of Bottom Opening mm (in.)	F Rating, Hr	FT Rating Hr	FH Rating, Hr	FTH Rating, Hr
38	(1.5)	48 (1-7/8)	76 (3)	3	0	3	0
51	1 (2)	64 (2.5)	89 (3.5)	3	0	3	0

- B. Fill, Void or Cavity Materials*-Sealant Min 6 mm (1/4 in.) thickness of fill material applied within the annulus, flush with bottom surface of floor of both surfaces of wall.
- HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC FS-ONE Sealant or 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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