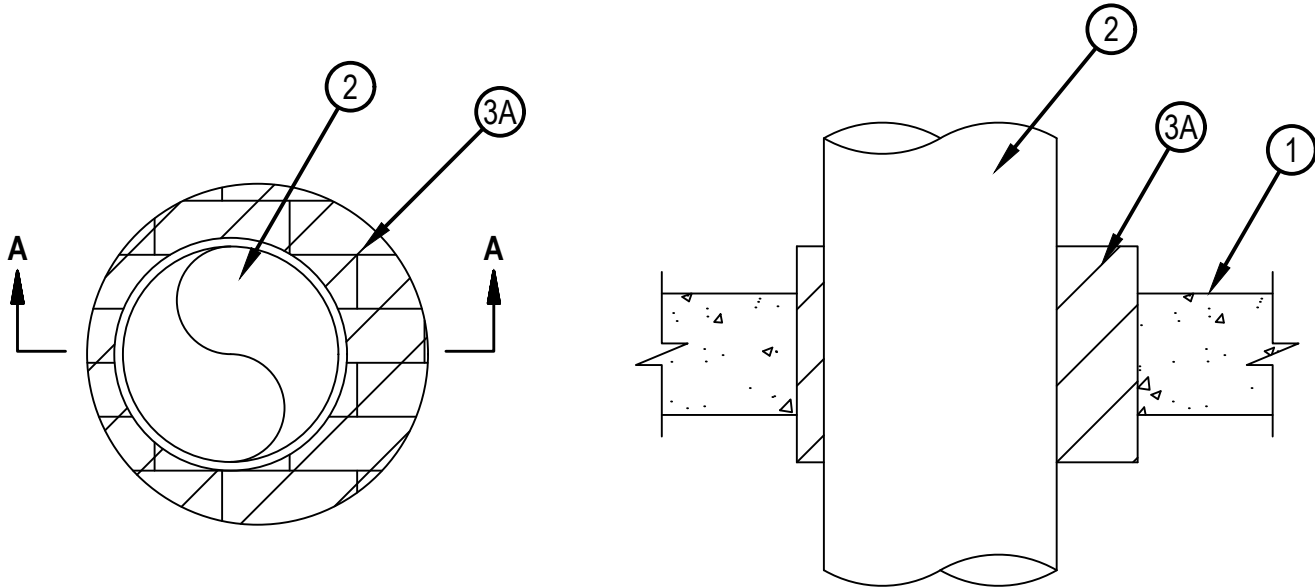




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to UL 1479

System No. F-A-2322
F Rating - 2 Hr
T Rating - 1-3/4 Hr and 2Hr (See Item 2)

FA 2322



SECTION A-A

1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Max diam of opening is 18 in. (457 mm).
2. Through Penetrants — One nonmetallic pipe to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe and periphery of opening shall be min 1/2 in. (13 mm) to max 5 in. (127 mm). Pipe to be rigidly supported on both sides of floor assembly. The following types and sizes of nonmetallic pipes may be used:
 - A. Polypropylene (PP-R) Pipe — Nom 12 in. (305 mm) diam Aquatherm Bluepipe MF SDR 11 PP-R pipe for use in closed (process or supply) piping systems. The T Rating for the firestop system is 1-3/4 hr when this penetrant is used.
 - B. Polypropylene (PP-RTC) Pipe — Nom 12 in. (315 mm OD) diam SDR 7.3 Niron Multi Clima pipe for use in closed (process or supply) piping systems. The T Rating for the firestop system is 2 hr when this penetrant is used.
3. Firestop System — The firestop system shall consist of the following:
 - A. Fill, Void or Cavity Materials* — Fire blocks installed with long dimension passed through the opening (centered) within floor opening. Fire blocks firmly packed to fill entire annular space between penetrant and periphery of opening.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-BL Firestop Block
 - B. Fill, Void or Cavity Material* — Sealant (Not Shown) — Fill material applied to the maximum extent possible to fill any voids within the annular space around the penetrant, at top or bottom surface of floor.
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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