

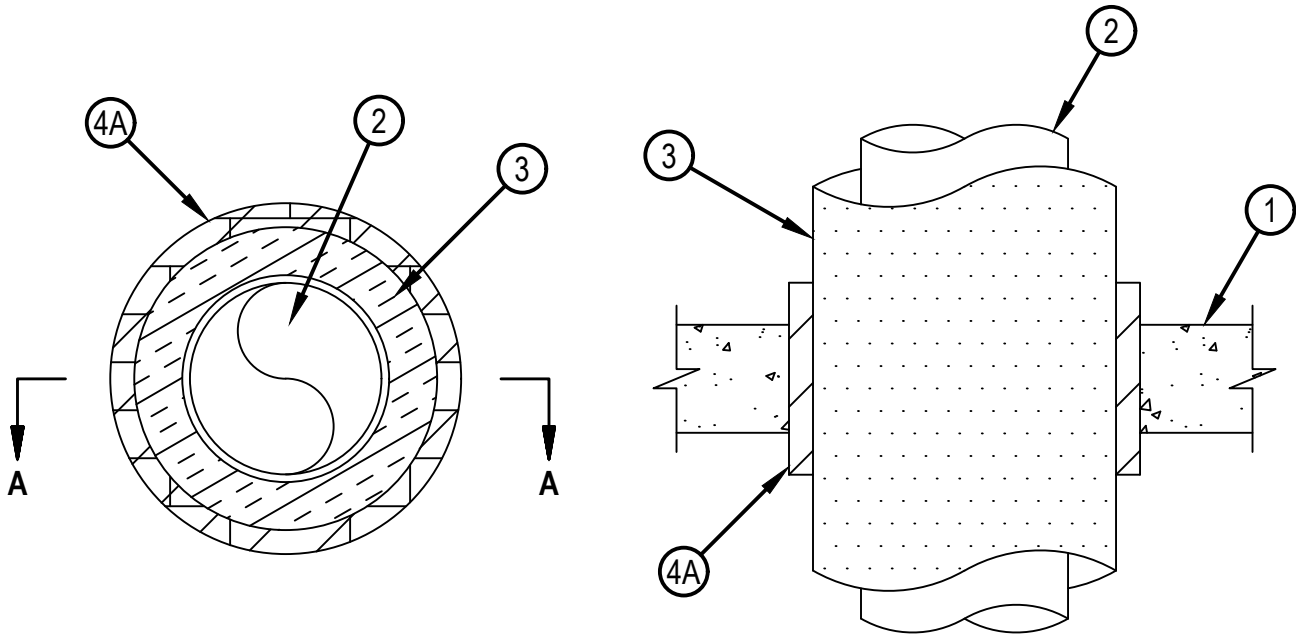


Classified by  
Underwriters Laboratories, Inc.  
to UL 1479

# System No. C-AJ-5432

F Rating - 2 Hr  
T Rating - 2 Hr

CAJ 5432



SECTION A-A



**Hilti Firestop Systems**

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1. Floor or Wall Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diam of opening is 18 in. (457 mm).  
See Concrete Blocks (CAZT) 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. 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. Polypropylene (PP-R) Pipe — Nom 12 in. (315 mm OD) diam Aquatherm Bluepipe MF SDR 9 or 11 PP-R pipe for use in closed (process or supply) piping systems.
  - 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.
3. Pipe Covering\* — Max 2 in. (51 mm) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m<sup>3</sup>) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. The annular space between insulated pipe and periphery of opening shall be min 1/2 in. (13 mm) to max 1-1/8 in. (127 mm).  
See Pipe and Equipment Covering - Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
- 3A. Pipe Covering Materials\* — As an alternate to Item 3, max 2 in. (51 mm) thick unfaced mineral fiber pipe insulation having a min density of 3.5 pcf (56 kg/m<sup>3</sup>) and sized to the outside diam of the pipe. Used in conjunction with Item 3B. The annular space between insulated pipe and periphery of opening shall be min 1/2 in. (13 mm) to max 1-1/8 in. (127 mm).  
INDUSTRIAL INSULATION GROUP L L C — High Temperature Pipe Insulation 1200, High Temperature Pipe Insulation BWT and High Temperature Pipe Insulation Thermaloc
- 3B. Sheathing Material\* — Use in conjunction with Item 3B. Foil-scrim-kraft or all service jacket material shall be wrapped around the outer circumference of the pipe insulation (Item 3B) with the kraft side exposed. Longitudinal and transverse joints sealed with metal fasteners or butt tape.  
See Sheathing Materials (BVDV) category in the Building Materials Directory for names of manufacturers. Any sheathing material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
4. 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 or wall opening. Fire blocks firmly packed to fill entire annular space between insulated 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 or either surface of wall assembly.  
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.

