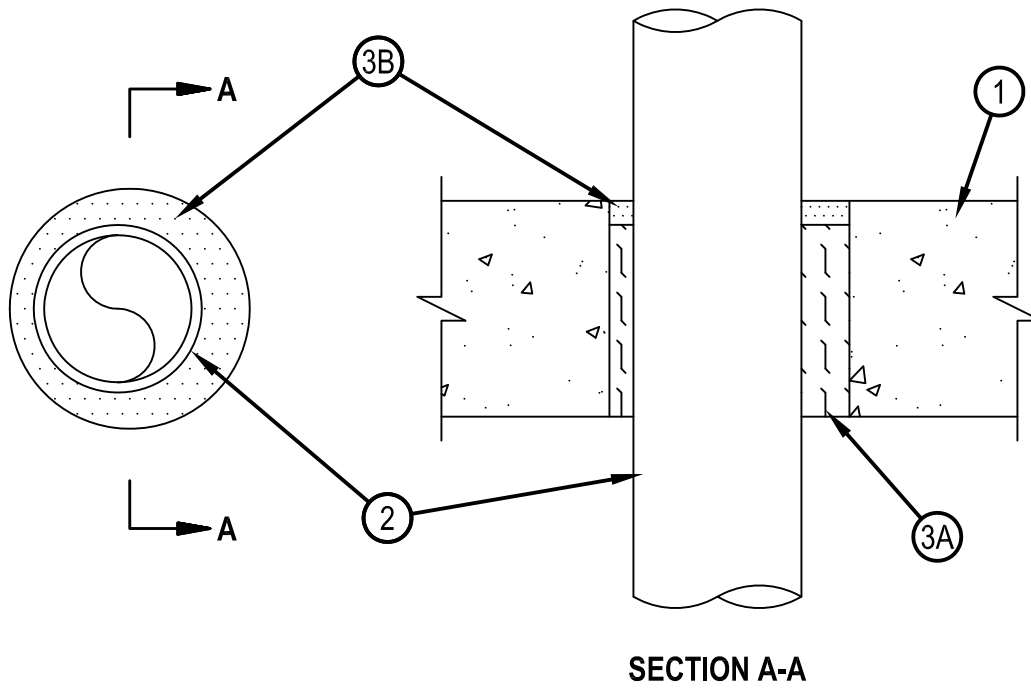




Classified by  
Underwriters Laboratories, Inc.  
to UL 1479

**System No. C-AJ-2335**  
**F Rating -- 3 Hr**  
**T Rating -- 2-3/4 and 3 Hr (See Item 3)**

CAJ 2335



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 or 5 in. thick reinforced lightweight or normal weight concrete wall. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diameter of opening is 5 in. (127 mm).  
See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufactures.
2. Through Penetrants — One nonmetallic pipe or conduit to be installed concentrically or eccentrically within the firestop system. Annular space between pipe or conduit and edge of opening to be min 1/4 in. (6 mm) and max 1-1/4 in. (32 mm). Pipe or conduit to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of nonmetallic pipes or conduit may be used:
  - A. Polyvinyl Chloride (PVC) Pipe — Nom 3 in. (76 mm) diam (or smaller) Schedule 40 solid or cellular core PVC for use in closed (process or supply) piping systems.
  - B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 3 in. (76 mm) diam (or smaller) SDR13.5 CPVC for use in closed (process or supply) piping systems.
3. Firestop System — The firestop system shall consist of the following:
  - A. Packing Material — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or both surfaces of wall to accommodate the required thickness of fill material.
  - B. Fill Void or Cavity Materials\* - Sealant — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top surface of floor or both surfaces of wall.  
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant  
The T Rating is 3 hr when the FS-ONE sealant is used and 2-3/4 hr when the FS\_ONE MAX 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.



**Hilti Firestop Systems**

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