



Classified by  
Underwriters Laboratories, Inc.  
to UL 1479

## System No. C-AJ-2342

F Rating — 3 Hr

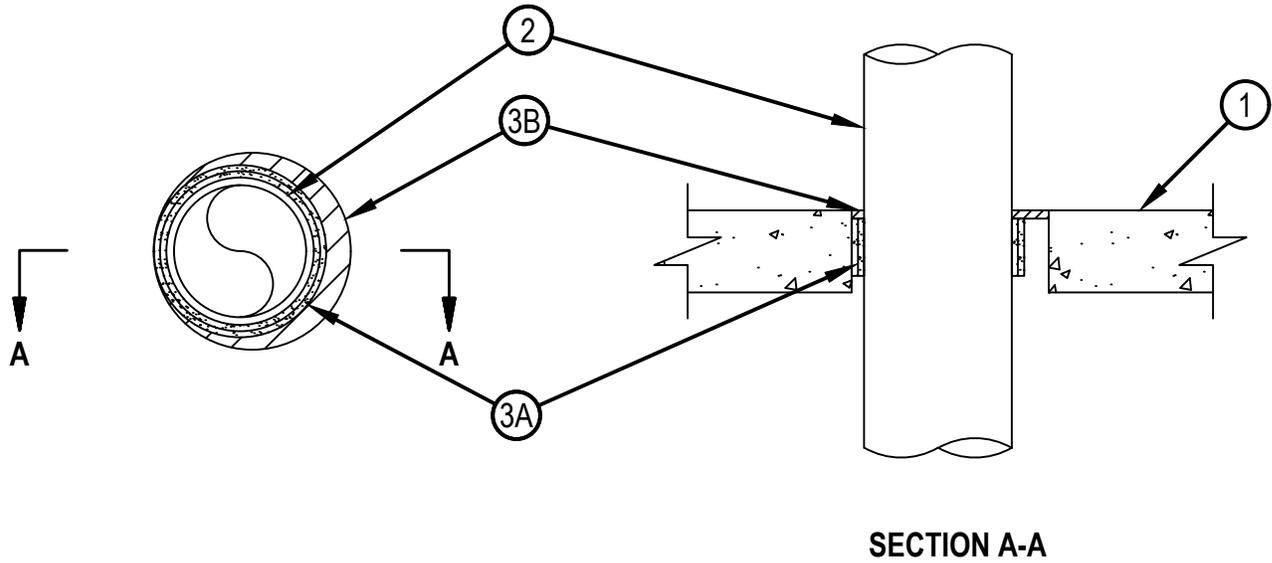
T Rating — 0 Hr

W Rating - Class 1 (See Item 3B)

L Rating at Ambient — Less Than 1 CFM/sq ft (See Item 3B)

L Rating at 400 F — Less Than 1 CFM/sq ft (See Item 3B)

CAJ 2342



1. Floor or Wall Assembly — Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete floor or wall. Wall may also be constructed of any UL Classified Concrete Blocks\*. Max diam of opening is 6 in. (152 mm).  
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. Annular space within the firestop system is dependent upon the max diam and type of penetrant used as tabulated in Item 3A. 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 4 in. (102 mm) 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 4 in. (102 mm) diam (or smaller) SDR13.5 CPVC for use in closed (process or supply) piping systems.
  - C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid or cellular core ABS for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
  - D. Flame Retardant Polypropylene (FRPP) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
3. Firestop System — The firestop system shall consist of the following:
  - A. Fill, Void or Cavity Material\* — Wrap Strip — Layers of intumescent wrap strip are continuously wrapped around the pipe with ends held in place with tape. Wrap strip installed recessed max 1/4 in. (6 mm) from bottom surface of floor or from both surfaces of wall. Size of wrap strip and number of layers for a given size penetrant are shown in table below:  
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E W25/1" or CP648-E W45/1-3/4" Firestop Wrap Strip



Hilti Firestop Systems

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June 24, 2016

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Product Designation	Pipe Size in. (mm)	Max Opening Diam (in.)	Annular Space Min in.(mm)	Annular Space Max in. (mm)	Number of Layers	Nom Wrap Strip Width in. (mm)
CP648-E W25/1"	1 1/2 (38)	3 (76)	3/16 (4.8)	15/16 (24)	1	1 (25)
CP648-E W45/1-3/4"	1 1/2 (38)	3 (76)	3/16 (4.8)	15/16 (24)	1	1 3/4 (45)
CP648-E W25/1"	2 (51)	3 1/2 (89)	3/16 (4.8)	15/16 (24)	1	1 (25)
CP648-E W45/1-3/4"	2 (51)	3 1/2 (89)	3/16 (4.8)	15/16 (24)	1	1 3/4 (45)
CP648-E W45/1-3/4"	3 (76)	4 (102)	3/16 (4.8)	15/16 (24)	1	1 3/4 (45)
CP648-E W45/1-3/4"	3 (76)	5 (127)	3/8 (10)	1 1/16 (27)	2	1 3/4 (45)
CP648-E W45/1-3/4"	4 (102)	6 (152)	3/8 (10)	1 1/8 (29)	2	1 3/4 (45)

A1. Fill, Void or Cavity Material\* — Wrap Strip — (As an alternate to the wrap strip in Item 3A) — One layer of intumescent wrap strip is continuously wrapped around the pipe with ends butted and held in place with integrated tape. Wrap strip installed recessed max 1/4 in. (6 mm) from bottom surface of floor or from both surfaces of wall. Size of wrap strip for a given size penetrant are shown in the table below.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-S-1.5" US, CP648-S-2" US, CP648-S-3" US or CP648-S-4" US Wrap Strip

Product Designation	Pipe Size in.(mm)	Max Opening Diam (in.)	Annular Space Min in. (mm)	Annular Space Max in. (mm)	Nom Wrap Strip Length in. (mm)	Nom Wrap Strip Thick in. (mm)	Nom Wrap Strip Width in. (mm)
CP648-S-1.5" US	1 1/2 (38)	3 (76)	3/16 (4.8)	15/16 (24)	6.5 (165)	0.18 (4.6)	1 (25)
CP648-S-2" US	2 (51)	3 1/2 (89)	3/16 (4.8)	15/16 (24)	8 (203)	0.18 (4.6)	1 (25)
CP648-S-3" US	3 (76)	4 (102)	3/16 (4.8)	5/16 (8)	11.5 (292)	0.18 (4.6)	1 3/4 (45)
CP648-S-4" US	4 (102)	6 (152)	3/8 (10)	1 1/8 (29)	15.1 (384)	0.36 (9)	1 3/4 (45)

B. Fill, Void or Cavity Material\* — Sealant — Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with top surface of floor of both surfaces of wall. W Rating and/or L Rating applies only when CP 601S, CFS-S SIL GG or CFS-S SIL SL (floors only) 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 or CFS-S SIL SL (floors only) 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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