

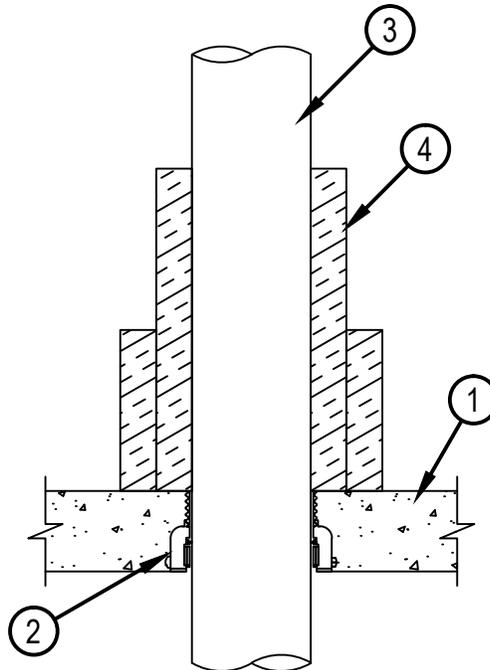
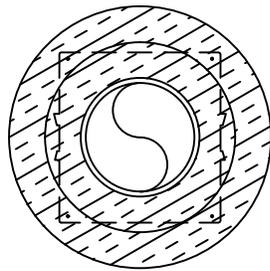


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. F-A-1106

FA 1106

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating - 2 Hr	F Rating - 2 Hr
T Rating - 2 Hr	FT Rating - 2 Hr
L Rating At Ambient - Less Than 1 CFM/sq ft	FH Rating - 2 Hr
L Rating At 400 F — Less Than 1 CFM/sq ft	FTH Rating - 2 Hr
W Rating — Class 1 (See Item 2A)	L Rating At Ambient - Less Than 1 CFM/sq ft
	L Rating At 400 F — Less Than 1 CFM/sq ft



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. As an alternate, any min 2 hr fire rated D700, D800 or D900 Series Floor-Ceiling Design in the UL Fire Resistance Directory having a min 2-1/2 in. (64 mm) thickness of lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete topping over the steel deck may be used.
2. Firestop Device* — Cast in place firestop device permanently embedded during concrete placement or grouted in concrete floor assembly in accordance with accompanying installation instructions. Device sized to nom diam of penetrant. Device is to be trimmed flush with the top surface of the floor.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 680-P 2", CP 680-P 3", CP 680-P 4", CP 680-P 6" Cast-In Firestop Device.
CP 680-PX 2", CP 680-PX 3"
- 2A. Firestop Device* — Water Barrier Module — (Optional, Not Shown) - Used in combination with the CP 680-P(X) device to achieve a W Rating. Module is threaded onto top of device. W Rating applies only when water barrier module is used and pipe is installed from bottom of device.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — Water Barrier Module



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3. Through-Penetrant — One metallic pipe installed concentrically or eccentrically within opening. Penetrant to be rigidly supported on both sides of floor assembly. The following types and sizes of penetrants may be used:
- A. Steel Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe.
 - B. Iron Pipe — Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.
 - C. Iron Pipe — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or nom 6 in. (152 mm) diam (or smaller) rigid steel conduit.
4. Duct Wrap Material* — Encapsulated duct wrap tightly wrapped around penetrant to extend 24 in. (610 mm) above the floor for penetrants of nom 4 in. (102 mm) diam or smaller, and 36 in. (914 mm) above floor for penetrants greater than a nom 4 in. (102 mm) diam. An additional layer of encapsulated duct wrap tightly wrapped around the first layer of duct wrap to extend 12 in. (305 mm) (914 mm) above floor. All longitudinal seams of both layers of duct wrap and joints between layers of duct wrap are sealed with foil tape. One of the following types and thicknesses of duct wrap material shall be used.
- A. Nom 2 in. (51 mm)) or 1-1/2 in. (38 mm) thick encapsulated duct wrap.
UNIFRAX I L L C — FyreWrap 2.0 Duct Insulation or FyreWrap 1.5 Duct Insulation
 - B. Nom 1-1/2 in. (38 mm) thick encapsulated duct wrap.
THERMAL CERAMICS INC — FireMaster FastWrap XL Duct Insulation
- * 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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