

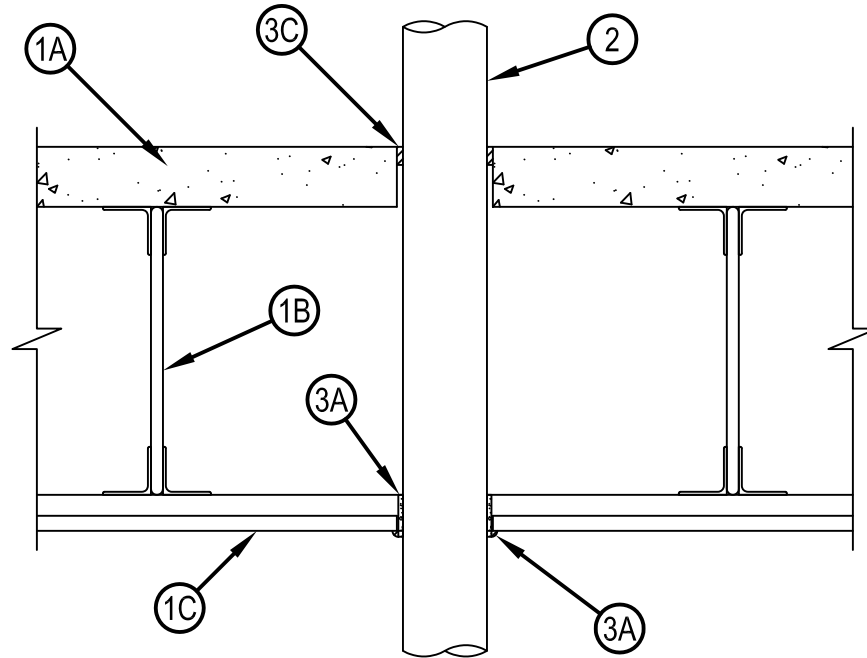


Classified by
Underwriters Laboratories, Inc.
to UL 1479

System No. F-E-2029

F Rating — 1 Hr
T Ratings — 0, and 1/2 Hr (See Item 2)

FE 2029



1. Floor-Ceiling Assembly — The 1 hr fire rated concrete and steel joist Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individual G500 Series Design in the UL Fire Resistance Directory, as summarized below:
 - A. Flooring — Lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete as specified in the individual G500 Series Design. Max diam of opening shall be 4 in. (102 mm).
 - B. Joists — Steel joists or Structural Steel Members* as specified in the individual G500 Series Design.
 - C. Gypsum Board* — Min 5/8 in. (16 mm) thick, screw-attached to furring channels as specified in the individual G500 Series Design. Max diam of opening shall be 4 in. (102 mm).
2. Through Penetrants — One non-metallic pipe or conduit to be installed concentrically or eccentrically within the opening. The annular space between the pipe or conduit and the periphery of opening shall be min 3/16 in. (4.8 mm), to max 5/16 in. (8 mm). Pipe or conduit to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of non-metallic pipes or conduit may be used:
 - A. Polyvinyl Chloride (PVC) Pipe — Nom 3 in. (76 mm) diam (or smaller) Schedule 40 cellular core or solid core PVC pipe for use in vented (drain, waste or vent) or closed (process or supply) piping systems.
 - B. Chlorinated Polyvinyl (CPVC) Pipe — Nom 3 in. (76 mm) diam (or smaller) SDR13.5 CPVC pipe for use in vented (drain, waste or vent) or closed (process or supply) piping systems.
 - C. Rigid Nonmetallic Conduit+ — Nom 3 in. (76 mm) diam (or smaller) PVC conduit installed in accordance with the National Electrical Code (NFPA 70).
 - D. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 3 in. (76 mm) diam (or smaller) Schedule 40 cellular or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.The T Rating is 1/2 Hr for penetrants with a nom diam of 2 in. (51 mm) or smaller. The T Rating is 0 Hr for penetrants with a nom diam greater than 2 in. (51 mm).



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System No. F-E-2029

FE 2029

3. Firestop System — The firestop system shall consist of the following:

A. Fill, Void or Cavity Material* - Wrap Strip — Wrap strip to be wrapped around pipe with ends tightly butted and held in place with tape. Wrap strip slid into the annular space such that the bottom edge of the wrap strip extends 1/4 in. (6 mm) from the bottom surface of the ceiling board.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 648S - 1.5"(38 mm) US, CP 648S - 2"(51 mm) US, CP 648S - 3"(76 mm).

B. Fill, Void or Cavity Material* - Sealant — Min 1/4 in. (6 mm) bead applied around periphery of wrap strip, at the wrap strip/gypsum board interface.

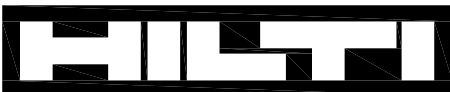
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or FS-ONE-MAX Intumescent Sealant

C. Fill, Void or Cavity Material* - Sealant — Min 3/4 in (19 mm) depth applied within the annulus, flush with the top surface of the floor.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-One Sealant or 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.

+Bearing the UL Listing Mark.



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