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## System No. W-L-2044



System tested with a pressure differential of 50 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

1. Wall Assembly — The 1 hr or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400, V400 or W400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 51 by 102 mm (2 by 4 in.) lumber spaced 406 mm (16 in. OC). Steel studs to be min 89 mm (3-1/2 in.) wide and spaced max 610 mm (24 in.) OC.

B. Gypsum Board\* — The gypsum board type, thickness number of layers, fastener type and sheet orientation shall be specified in the individual Wall and Partition Design in the UL Fire Resistance Directory. Max diam of opening is 76 mm (3 in.).

The F and FT Ratings of the firestop system are dependent upon the fire rating of the of the wall assembly in which it is installed as shown in the table below:

Fire Rating of Wall, Hr	F Rating, Hr	T Rating, Hr
2	2	1-1/2
1	1	1

2. Through Penetrant — One nominal 51 mm (2 in.) diam (or smaller) Schedule 80 polypropylene pipe installed either concentrically or eccentrically within the firestop system. Pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. The annular space between the pipe and the periphery of the opening shall be a min 5 mm (3/16 in.) to a max 8 mm (5/16 in). Pipe to be rigidly supported on both sides of wall assembly.

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

A. Fill, Void or Cavity Material\* — Wrap Strip — One layer of nom 5 mm (3/16 in.) thick intumescent wrap strip continuously wrapped around the pipe with ends butted and held in place with integrated tape. Wrap strip slid into annular space such that the ends are flush with the surface of the wall. Wrap strips are installed on each surface of the wall

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - Hilti CP 648S/2" Wrap Strip, CP 648S/1.5"

B. Fill, Void or Cavity Material\* — Sealant — Min 6 mm (1/4 in.) thickness of fill material applied within annulus, flush with both surfaces of wall assembly. Additional 6 mm (1/4 in.) bead of fill material applied at wrap strip/pipe interface on both sides of wall. 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.



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