

December 14, 2016

ANSI/UL2079

Assembly Ratings – 1, 2, 3 and 4 Hr (See Item 2)

Nominal Joint Width – 2 in.

Class II Movement Capabilities – 50% Compression or Extension

CAN/ULC S115

F Ratings – 1, 2, 3 and 4 Hr (See Item 2)

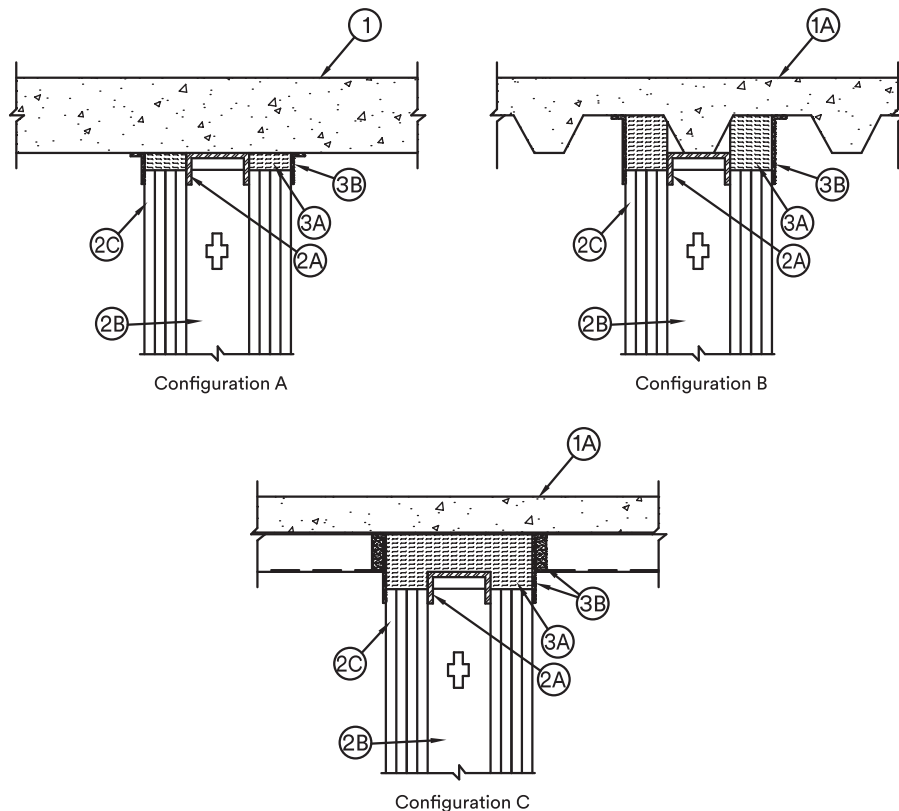
FT Ratings – 1, 2, 3 and 4 Hr (See Item 2)

FH Ratings – 1, 2, 3 and 4 Hr (See Item 2)

FTH Ratings – 1, 2, 3 and 4 Hr (See Item 2)

Nominal Joint Width – 51 mm

Class II Movement Capabilities – 50% Compression or Extension



- 1. Floor Assembly** – Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete. Floor may also be constructed of any UL Classified hollow-core **Precast Concrete Units***.

See **Precast Concrete Units** (CFTV) in Fire Resistance Directory for names of manufacturers.

- 1A. Floor Assembly** – The fire-rated fluted steel deck/concrete floor assembly shall be constructed of the materials and in the manner described in the individual D900 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

- A. Steel Floor And Form Units*** – Max 3 in. (76 mm) deep galv steel fluted floor units.
- B. Concrete** – Min 2-1/2 in. (64 mm) thick reinforced concrete, as measured from the top plane of the floor units.

- 2. Wall Assembly** – The 1, 2, 3 or 4 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400 or V400 Series Wall and Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

- A. Steel Floor and Ceiling Runners** – Floor and ceiling runners of wall assembly shall consist of min No. 25 gauge galv steel channels sized to accommodate steel studs (Item 2B). Ceiling runner flange height to be min 1/2 in. (13 mm) greater than joint width at max anticipated extension. Ceiling runner secured with steel masonry anchors or welds spaced max 24 in. (610 mm) OC. Ceiling runner secured directly to bottom of floor for Configuration A. Ceiling runner secured parallel to and centered with flute as shown in Configuration B. For Configuration C, ceiling runner secured perpendicular to steel deck flutes.
- B. Studs** – Steel studs to be min 3-5/8 in. (92 mm) wide. Studs cut max 1-1/4 in. (32 mm) less in length than assembly height to accommodate max anticipated compression of joint width with bottom nesting in and resting on floor runner and with top nesting in ceiling runner without attachment. Stud spacing not to exceed 24 in. (610 mm) OC.
- C. Gypsum Board*** – Gypsum board sheets installed to a min total thickness of 5/8 in., 1-1/4 in., 1-7/8 in., or 2-1/2 in. (16, 32, 48 or 64 mm) on each side of wall for 1, 2, 3 and 4 hr fire rated wall assemblies, respectively. Wall to be constructed as specified in the individual U400 Series Design in the UL Fire Resistance Directory, except that a max 2 in. (51 mm) gap shall be maintained between the top of the gypsum board and the bottom surface of the floor. The screws securing successive layers of gypsum board shall be staggered min 1 in. (25 mm) from screws in preceding layer(s). Top row of screws in face layer of gypsum board shall be installed into the studs 1-1/2 in. (38 mm) below flange of ceiling runner.

The hourly fire rating of the joint system is equal to the hourly fire rating of the wall.

Construction Joints

Head of Wall

HWD

- 3. Joint System** – Max separation between bottom of floor and top of gypsum board sheets at time of installation of joint system is 2 in. (51 mm). The joint system is designed to accommodate a maximum 50 percent compression or extension from its installed width. The joint system consists of the following:

Configurations A and B

- A. Forming Material*** – Min 4 pcf (64 kg/m³) density mineral wool batt insulation cut to a width equal to the overall thickness of the gypsum board and with a thickness equal to twice the height of the gap between the top of the gypsum board and the bottom of the floor. Insulation compressed 50 percent in thickness and inserted between the top of the gypsum board and the bottom of the floor on both sides of the wall.

INDUSTRIAL INSULATION GROUP LLC – MinWool-1200 Safing

JOHNS MANVILLE – Safing

ROCK WOOL MANUFACTURING CO – Delta Board

ROCKWOOL MALAYSIA SDN BHD – Type Safe

ROXUL INC – Type Safe

- B. Fill, Void or Cavity Material*** – Min 1/16 in. (1.6 mm) dry thickness (1/8 in. or 3.2 mm wet thickness) of fill material sprayed or brushed to completely cover forming material and to overlap a min of 1/2 in. (13 mm) on to gypsum board and concrete or steel floor deck on both sides of wall.

3M COMPANY

3M FIRE PROTECTION PRODUCTS – FireDam™ Spray 200

- B1. Fill, Void or Cavity Material* – Tape** – As an alternate to Item B, Tape cut to size and press applied over the mineral wool forming material and lapping min 1 in. (25 mm) onto the steel floor units or concrete floor and concrete wall. Tape applied in minimum 1 ft (305 mm) lengths along joint and adjoining lengths of Tape shall overlap min 1/2 in. (13 mm). Tape shall be applied at both sides of wall.

3M COMPANY – 3M Fire and Water Barrier Tape

Configuration C

- A. Forming Material*** – Nom 4 pcf (64 kg/m³) mineral wool batt cut to the shape of the steel deck flute with a height 1 in. (25 mm) greater than the height of flutes and with a length equal to the overall thickness of the wall assembly. Mineral wool batt compressed and installed into each flute above the ceiling runner with its projecting ends flush with the wall surfaces. Additional pieces of min 4 pcf (64 kg/m³) density mineral wool batt cut to a width equal to the overall thickness of the gypsum board and with a thickness equal to twice the height of the gap between the top of the gypsum board and the valleys of the steel deck floor. Insulation compressed 50 percent in thickness and inserted between the top of the gypsum board and the bottom of the floor on both sides of the wall.

INDUSTRIAL INSULATION GROUP LLC – MinWool-1200 Safing

JOHNS MANVILLE – Safing

ROCK WOOL MANUFACTURING CO – Delta Board

ROCKWOOL MALAYSIA SDN BHD – Type Safe

ROXUL INC – Type Safe

- B. Fill, Void or Cavity Material*** – Min 1/16 in. (1.6 mm) dry thickness (1/8 in. or 3.2 mm wet thickness) of fill material sprayed or brushed to completely cover forming material and to overlap a min of 1/2 in. (13 mm) on to gypsum board and steel deck on both sides of wall.

3M COMPANY

3M FIRE PROTECTION PRODUCTS – FireDam™ Spray 200

- B1. Fill, Void or Cavity Material* – Tape** – As an alternate to Item B, Tape cut to size and press applied within fluted areas of joint to completely cover mineral wool lapping min 1 in. (25 mm) onto the contour of the steel floor units or concrete floor and extending to lap min 1 in. (25 mm) onto the gypsum wall. Adjoining lengths of Tape shall overlap min 1/2 in. (13 mm). Tape shall be applied at both sides of wall.

3M COMPANY – 3M Fire and Water Barrier Tape

*Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



Reprinted from the Online Certifications Directory with permission from UL©