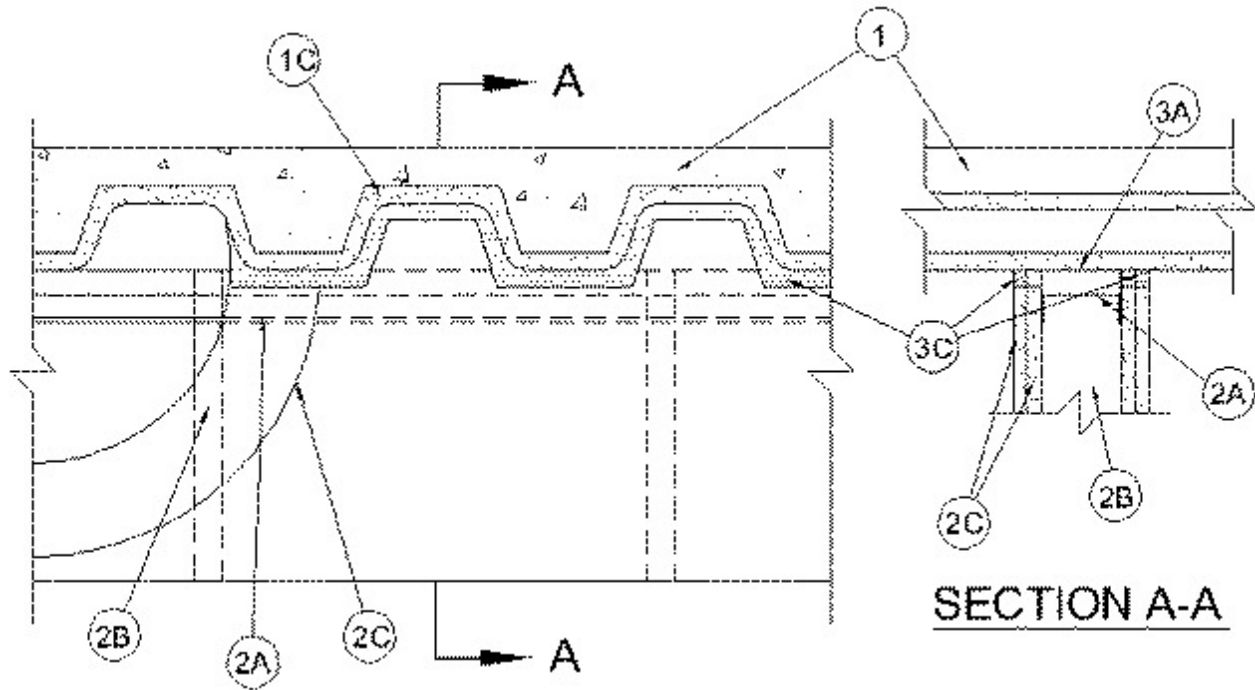




System No. HW-D-0375

February 04, 2014

ANSI/UL2079	CAN/ULC S115
Assembly Rating — 1 and 2 Hr (See Item 2)	F Rating — 1 and 2 Hr (See Item 2)
Nominal Joint Width - 1 In.	FT Rating — 1 and 2 Hr (See Item 2)
Class II or III Movement Capabilities — 25% Compression or Extension	FH Rating — 1 and 2 Hr (See Item 2)
	FTH Rating — 1 and 2 Hr (See Item 2)
	Nominal Joint Width - 25 mm
	Class II or III Movement Capabilities — 25% Compression or Extension



1. **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 D700 Series Floor-Ceiling Design in the UL Fire Resistance Directory and shall include the following construction features:

- A. **Steel Floor and Floor 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.
- C. **Spray-Applied Fire Resistive Material*** — Prior to the installation of the Forming Material and Fill, Void or Cavity Materials (Items 3B and 3C, respectively), all surfaces of the steel floor units to be sprayed with the thickness of material specified in the individual D700 Series Design.

W R GRACE & CO - CONN — Types MK-6/HY, MK-6/HY ES, MK-6S and RG.

1A. **Roof Assembly (Not Shown)** — As an alternate to the floor assembly, a fire-rated fluted steel deck roof assembly may be used. The roof assembly shall be constructed of the materials and in the manner described in the individual P700 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly rating of the roof assembly shall be equal to or greater than the hourly rating of the wall assembly. The roof assembly shall include the following construction details:

A. **Steel Roof Deck** — Max 3 (76 mm) in. deep galv steel fluted roof deck.

B. **Roof Insulation** — As specified in the individual P700 Series Design.

C. **Spray — Applied Fire Resistive Materials*** — Prior to the installation of the Forming Material and Fill, Void or Cavity Materials (Items 3B and 3C, respectively), the steel roof deck shall be sprayed with the thickness of material specified in the individual P700 Series Design.

W R GRACE & CO - CONN — Types MK-6/HY, MK-6/HY ES, MK-6S and RG.

2. **Wall Assembly** — The 1 or 2 hr fire-rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual U400, V400 or W400 Series Wall or 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 to be provided with min 1-1/4 in. (32 mm) flanges. Studs and gypsum board must have a min 1/4 in. (6 mm) engagement onto the flanges of the ceiling runner at the furthest point of extension of the joint. When U shaped deflection channel (Item 3A) is used, ceiling runner is installed within the U-shaped deflection channel with 1 in. (25 mm) gap maintained between the top of ceiling runner and top of deflection channel. When deflection channel is not used, ceiling runner installed perpendicular to the direction of the fluted steel floor units (Item 1A) or roof deck and secured to valleys of steel floor units (Item 1A) or roof deck with steel fasteners or weld spaced a max 24 in. (610 mm) OC.

A1. **Light Gauge Framing* — Slotted Ceiling Runner** — When the thickness of the spray-applied fire resistive material is less than 1 in., (25 mm) slotted ceiling runner may be used as an alternate to the ceiling runner in Item 2A. Slotted ceiling runner to consist of galv steel channel with slotted flanges sized to accommodate steel studs (Item 2B). Slotted ceiling runner installed perpendicular to direction of fluted steel floor units or roof deck and secured to valleys with steel fasteners spaced max 24 in. (610 mm) OC. When slotted ceiling runner is used, deflection channel (Item 3a) shall not be used.

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A2. **Light Gauge Framing* — Clipped Ceiling Runner** — As an alternate to the ceiling runner in Item 2A, clipped runner to consist of galv steel channel with clips preformed in track flanges which positively engage the inside flange of the steel studs (Item 2B). Track sized to accommodate steel studs (Item 2B). Track flanges to be min 2-1/2 in. (64 mm). Clipped ceiling runner installed perpendicular to direction of fluted steel floor units and secured to valleys with steel fasteners spaced max 24 in. (610 mm) OC. When clipped ceiling runner is used, deflection channel (Item 3A) shall not be used.

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B. **Studs** — Steel studs to be min 3-5/8 in. (92 mm) wide. Studs cut 3/4 in. (19 mm) less in length than assembly height with bottom nesting in and secured to floor runner. When deflection channel (Item 3A) is used, steel studs attached to ceiling runner (Item 2A) with sheet metal screws located 1/2 in. (13 mm) below bottom of deflection channel. When deflection channel is not used, studs to nest in ceiling runners without attachment. When slotted ceiling runner (Item 2A1) is used, steel studs secured to slotted ceiling runner with No. 8 by 1/2 in. (13 mm) long wafer head steel screws at midheight of slot on each side of wall. Stud spacing not to exceed 24 in. (610 mm) OC.

C. **Gypsum Board*** — Gypsum board sheets installed to a min total 5/8 or 1-1/4 in. (16 or 32 mm) thickness on each side of wall for a 1 or 2 hr fire-rated wall, respectively. Wall to be constructed as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory, except that the gypsum board is cut to fit the contour of the protected steel floor units or protected roof deck with a nom 1 in. gap. In addition, the top row of screws shall be installed 1/2 to 1 in. (13 to 25 mm) below the bottom edge of the ceiling runner flange.

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

3. **Joint System** — Max separation between bottom of spray-applied fire resistive material and top of wall (at time of installation of joint system) is 1 in. (25 mm) The joint system is designed to accommodate a max 25 percent compression from it's installed width. The joint system shall consist of a material with or without a deflection channel as

follows:

A. Deflection Channel — (Optional) — Nom 3 in. (76 mm) deep by min 25 gauge galv steel U-shaped channel sized to accommodate ceiling runner (Item 2A). Deflection channel installed perpendicular to direction of the fluted steel floor units (Item 1A) or roof deck and secured to valleys of steel floor units or roof deck with steel fasteners or by welds spaced max 24 in (610 mm) OC. The ceiling runner is installed within the deflection channel to maintain a 1 in. (25 mm) gap between the top of the ceiling runner and the top of the deflection channel. The ceiling runner is not fastened to the deflection channel.

B. Packing Material (Not Shown) — Optional in 2 hr fire rated assemblies, foam backer rod friction fitted into joint opening and recessed to accommodate the required thickness of fill material.

C. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied on each side of wall between the top of the gypsum board and all surfaces of the protected steel floor unit or protected roof deck, flush with each surface of the wall. Bond breaker tape shall be applied to the ceiling runner (Item 2A) or deflection channel (Item 3A) prior to the installation of fill material on both sides of the wall in 1 hr fire rated wall assemblies and in 2 hr fire rated wall assemblies where optional backer rod is not used.

RECTORSEAL — FlameSafe FS 1900, Metacaulk 1000, Metacaulk 350i, Biostop 350i or Biostop 500+

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