UL System No. HW-D-0755 XHBN - Joint Systems

January 22, 2018

ANSI/UL2079	CAN/ULC S115
Assembly Ratings – 2, 3 and 4 Hr (See Item 2)	F Ratings – 2, 3 and 4 Hr (See Item 2)
Nominal Joint Width – 2 In.	FT Ratings – 2, 3 and 4 Hr (See Item 2)
Class II Movement Capabilities – 19% Compression or Extension	FH Ratings – 2, 3 and 4 Hr (See Item 2)
	FTH Ratings – 2, 3 and 4 Hr (See Item 2)
	Nominal Joint Width - 51 mm
	Class II Movement Capabilities – 19% Compression or Extension



Configuration C

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 D700 or D900 Series Floor-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the floor assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The floor assembly 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.



Construction Joints

Head of Wall

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Head of Wall

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C. Spray Applied Fire Resistive Material* (Optional, Not Shown) – The steel floor units may be sprayed with fire resistive material in accordance with the applicable Floor-Ceiling Design. The spray applied fire resistive material is to be removed from the steel deck for the installation of the joint system (Item 3) such that the steel deck is bare over the wall.

GCP APPLIED TECHNOLOGIES INC - Type MK-6/HY

- 1B. Roof Assembly (Not Shown) As an alternate to the floor assembly (Item 1), 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 or P900 Series Roof-Ceiling Design in the UL Fire Resistance Directory. The hourly fire rating of the roof assembly shall be equal to or greater than the hourly fire rating of the wall assembly. The roof assembly shall include the following construction features:
 - A. Steel Roof Deck Max 3 in. (76 mm) deep galv steel fluted roof deck.
 - B. Roof Insulation Min 2-1/2 in. (64 mm) thick poured insulating concrete, as measured from the top plane of the steel roof deck.
 - **C.** Spray Applied Fire Resistive Material* (Optional, Not Shown) The steel roof units may be sprayed with fire resistive material in accordance with the applicable Roof-Ceiling Design. The spray applied fire resistive material is to be removed from the steel deck for the installation of the joint system (Item 3) such that the steel deck is bare over the wall.

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2. Wall Assembly – Min 6-1/8 in. (156 mm), 7-3/8 in. (187 mm) or 8-5/8 in. (219 mm) thick lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete for 2, 3 and 4 hr Assembly (F, FT,FH and FTH) Ratings, respectively. Wall may also be constructed of UL Classified Concrete Blocks. The hourly Assembly, F, FT, FH and FTH rating of the joint system is equal to the hourly rating of the wall.

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

3. Joint System – Max separation between bottom of floor and top of wall at time of installation of joint system is 2 in. (51 mm). The joint system is designed to accommodate a maximum 19 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 thickness equal to twice the height of the gap between the top of the wall and the bottom of the floor. Insulation compressed 50 percent in thickness and inserted within joint to completely fill the space between the top of the wall and the bottom of the floor, over the full thickness of the wall.

INDUSTRIAL INSULATION GROUP L L C - MinWool-1200 Safing

JOHNS MANVILLE – Safing

ROCK WOOL MANUFACTURING CO - Delta Board

ROCKWOOL MALAYSIA SDN BHD - Type Safe

ROCKWOOL – 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 wall and steel deck or spray applied fire resistive material 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 to completely cover mineral wool forming material and overlap a min of 1 in. (25 mm) onto wall and steel deck, or min 2 in. (51 mm) onto spray applied fire resistive material, on both sides of wall. Adjoining lengths of Tape shall overlap min 1/2 in. (13 mm).

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 wall with its ends projecting 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 wall and with a thickness equal to twice the height of the gap between the top of the wall and the valleys of the steel deck floor. Insulation compressed 50 percent in thickness and inserted between the top of the wall and the bottom of the floor, flush with both sides of the wall.

INDUSTRIAL INSULATION GROUP L L C - MinWool-1200 Safing

JOHNS MANVILLE - Safing

ROCK WOOL MANUFACTURING CO - Delta Board

ROCKWOOL MALAYSIA SDN BHD - Type Safe

ROCKWOOL – 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 wall and steel deck or spray applied fire resistive material on both sides of wall.

3M COMPANY 3M FIRE PROTECTION PRODUCTS - FireDam[™] Spray 200

3M Industrial Adhesives and Tapes Fire Protection Products 3M Center, Building 230-B-S-37 St. Paul, MN 55144-1000

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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 and extending to lap min 1 in. (25 mm) onto the gypsum wall. Additional pieces of Tape are applied along the joint to completely cover the remaining mineral wool between bottom of steel deck and top edge of wall along length of joint, lapping min 1 in. (25 mm) onto the contour of the steel floor units and min 1 in. (25 mm) onto the gypsum wall. When the steel deck is coated with spray applied material, the Tape shall overlap min 2 in. (51 mm) onto the spray applied material. 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.

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