



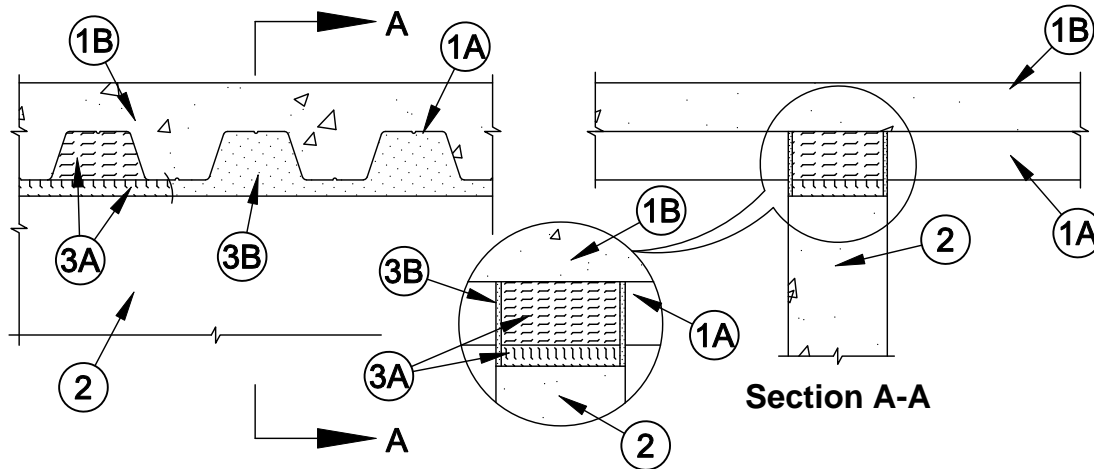
System No. HW-D-0039

Assembly Rating - 1 and 2 Hr (See Item 2)
Nominal Joint Width - 1 In.

L Rating At Ambient - Less Than 1 CFM/Lin Ft

L Rating At 400°F - Less Than 1 CFM/Lin Ft

Class II Movement Capabilities - 25% Compression Or Extension (See Item 1C, 1A-D)



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 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.

C. **Spray-Applied Fire Resistive Material*** - (Optional, Not Shown) - After installation of the ceiling runner (Item 2A) or deflection channel (Item 3A), steel floor units to be sprayed with a min 5/16 in. (8 mm) to max 11/16 in. (17 mm) thickness of material in accordance with the specifications in the individual D700 or D800 Series Design. When spray applied fire resistive material is used, ceiling runner or deflection channel to be provided with 2 in. (51 mm) flanges. Excess material to be scraped from flanges of ceiling runner or deflection channel prior to installation of gypsum board. When Spray-Applied Fire Resistance Material is used, Class II Movement Capabilities restricted to ONLY - 25% Compression.

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1A. **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, P800 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 2-1/4 in. (57 mm) thick poured insulating concrete, as measured from the top plane of the steel roof deck.

C. **Roof Covering*** - Hot-mopped or cold-application materials compatible with insulating concrete.



Specified Technologies Inc. 210 Evans Way Somerville, NJ 08876

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D. **Spray-Applied Fire Resistive Material*** - (Optional, Not Shown) - After installation of the ceiling runner (Item 2A) or deflection channel (Item 3A), steel floor units to be sprayed with a min 5/16 in. (8 mm) to max 11/16 in. (17 mm) thickness of material in accordance with the specifications in the individual P700 or P800 Series Design. When spray applied fire resistive material is used, ceiling runner or deflection channel to be provided with 2 in. (51 mm) flanges. Excess material to be scraped from flanges of ceiling runner or deflection channel prior to installation of gypsum board. When Spray-Applied Fire Resistance Material is used, Class II Movement Capabilities restricted to ONLY - 25% Compression.

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- 1B. **Floor Assembly** - (Not Shown) - As an alternate to the floor assembly (Item 1), min 4-1/2 in. (114 mm) thick structural concrete (100-150 pcf or 1600-2400 kg/m³) or min 6 in. (152 mm) thick hollow-core **Precast Concrete Units***. See **Precast Concrete Units** (CFTV) category in Fire Resistance Directory for names of manufacturers.
2. **Wall Assembly** - Min 8 in. (203 mm) thick reinforced light or normal weight (100-150 pcf or 1600-2400 kg/m³) structural concrete. Wall may also be constructed of any UL Classified Concrete Blocks*.
See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.
- 2A. **Through Penetrant** - (Optional, Not Shown) - Nom 3/8 in. or 1/2 in. (10 or 13 mm) diam rigid steel conduit, steel electrical metallic tubing (EMT) or or 1-1/2 in. (38 mm) Sch 40 PVC conduit may be installed within the flutes of the steel floor or roof deck. The conduit or EMT shall be located near the middepth of the steel deck with a clearance of 1/2 to 1-1/2 in. (13 to 38 mm) between the conduit or EMT and the steel deck. A max of one conduit or EMT is permitted in an individual flute. **When conduit or EMT is installed in flute of steel deck, the hourly rating of the joint system is 1 hr.**
3. **Joint System - Max separation between bottom of floor or roof deck 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 or extension from it's installed width.** The joint system shall consist of a forming material and fill material in the flutes of the steel floor or roof deck and between the top of the wall and bottom of the steel floor or roof deck as follows:
- A. **Forming Material*** - Min 7 in. (178 mm) width of 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into the flutes of the steel floor or roof deck and between the top of the concrete wall and the bottom of the steel floor or roof deck and recessed from each surface of wall to accommodate the required thickness of fill material. Mineral wool batt insulation shall be packed into opening edge first with a min 50 percent compression.

FIBREX INSULATIONS INC - FBX Safing Insulation

IIG MINWOOL L L C - MinWool-1200 Safing

ROCK WOOL MANUFACTURING CO - Delta Board

ROXUL ASIA SDN BHD - SAFE

ROXUL INC - SAFE

THERMAFIBER INC - Type SAF

- B. **Fill, Void or Cavity Material* - Sealant** - Min 1/4 in. (6 mm) thickness of fill material installed on each side of the concrete wall in the flutes of the steel floor or roof deck and between the top of the wall and the bottom of the steel floor or roof deck flush with each surface of concrete wall.

SPECIFIED TECHNOLOGIES INC - SpecSeal ES Sealant

*Bearing the UL Classification Mark



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