



**System No. FW-D-2009  
XHBN.FW-D-2009  
Joint Systems**

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**Design/System/Construction/Assembly Usage Disclaimer**

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
  - Authorities Having Jurisdiction should be consulted before construction.
  - Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
  - When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
  - Only products which bear UL's Mark are considered Certified.
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**Joint Systems**

[See General Information for Joint Systems](#)

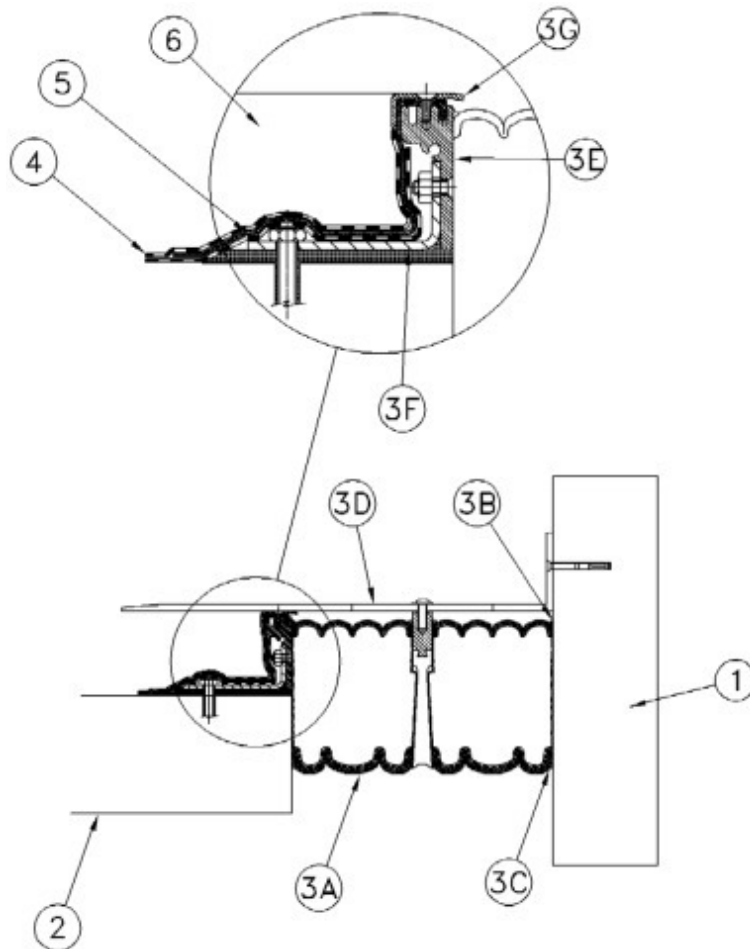
**System No. FW-D-2009**

November 14, 2013

**Assembly Rating — 2 Hr**

**Nominal Joint Width — 7 to 10 in.**

**Class II & III Movement Capabilities — 50% Compression Or Extension**



1. **Wall Assembly** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight 100 - 150 pcf, (1600 - 2400 kg/cu meter) 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.

2. **Floor Assembly** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight 100 - 150 pcf, (1600 - 2400 kg/cu meter), structural concrete.

3. **Joint System** — Nominal width of joint is 7 to 10 in. (178 to 254 mm). The joint system is designed to accommodate a max 25 percent compression or extension from its installed width. The joint system shall consist of the following:

A. **Forming Material\*** — Compressed, fire-retardant impregnated, 5 in. (125 mm) deep foam. Topside of foam is coated with Silicone and underside is coated with intumescent. As an option, one additional layer of Silicone may be applied over the underside layer of intumescent. Foam is installed in joint opening as a permanent form.

**EMSEAL LLC** — SJS-FP-FR2 Mechanical joint system.

B. **Sealant Band** — (Optional) — Watertight 3/4 in. (19mm) deep polyurethane sealant band and corner bead supplied by joint system manufacturer, and installed in accordance with installation instruction.

C. **Epoxy adhesive** — Consists of two parts; part A (base), and part B (hardener). The epoxy is supplied by joint system manufacturer, and installed in accordance with installation instructions.

D. **Coverplate** — Minimum 1/4 in. (6 mm) thick by maximum 18 in. (457 mm) Aluminum or Stainless Steel Coverplate. Coverplate is fastened to the floor or wall by self-tapping 18-8 (3/8 in. or 10 mm diameter by 1 in. (25 mm) long stainless steel flat head screws at 12 in. OC.

E. **Aluminum Rail** — 3 in. (75 mm) extruded aluminum as detailed. Bolted to steel mounting angle (item E) using 5/16 in. by 3/4 in. long (7.9 mm by 19 mm long) flat head cap screw 6.625 in. (168 mm) OC.

F. **Steel Mounting Angle** — 1.5 in. (38 mm) by 3.5 in. (89 mm) by 0.164 in. (4.2 mm) thick steel angle placed on a minimum 1/4 in. (6 mm) thick epoxy of cementitious curb.

The angle is anchored to the concrete slab using 5/16 in. (7.9 mm) by 2-1/2 in. (64 mm) long expansion anchors, 12 in. (305 mm) OC. The expansion anchor shall have a minimum clear edge distance of 1-1/8 in. (29 mm).

G. **Capping Strip** — Stainless Steel Capping Strip fastened to the Aluminum angle (item E) using self-tapping minimum 1/8 in. (3.2 mm) diameter steel flat head cap screw at 12 in. (305 mm) OC.

4. **Roofing Membrane** — Roofing Membrane may be PVC, Hot Rubberized Asphalt, or Rubber.
5. **Side Sheet** — PVC Side Sheet tied into the Roofing Membrane (item 4) according to Manufacturer's Installation Instructions.
6. **Roof Topping** — Minimum 3 in. (75 mm) thick poured concrete, precast concrete or masonry pavers installed into mortar.

\*Bearing the UL Classification Mark

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