

Installation Instructions

J990/J995 Series Fire Rated Foam Seal

J990/J995 Series, Fire Rated Foam Seal Type UC

Warning: Do not remove outer shrink wrapping from the Fire Rated Foam stick until you have read and understand the FULL instructions for proper installation. Failure to follow these directions may degrade fire endurance performance or make the material unsuitable (expanding before installed) for installation.

Recommended Tools

- Tape Measure, Sharp Knife, Miter Saw, Painters Tape, Mineral Spirits, Clean Cloth, Isopropyl Alcohol or Acetone, Wood Wedges, Caulking Gun, Caulking Trowel, Duct Tape, Jiffy Mixer, 2 Empty Clean 1 Gallon Containers, Lint Free Rags

Items Included

- 990/995 Foam Sticks
- Required SIL 300
- Required Color Match Silicone Sealant
- Required Epoxy

Material Sizing

- Measure joints every 5-7 feet to ensure the opening is correct for the supplied material. Recess the material 1/8"-1/4" [3-6mm] in the joint.

Material Preparation

- Store the material at a minimum of 68°F [20°C] for at least 24 hours before the installation, regardless of the temperature at the installation site.
- **NOTE:** Storing material in cold temperature will increase the amount of time required for the foam seal to fully expand.
- Store the materials in a dry enclosed area. Keep material off the ground and out of direct sunlight.

Joint Preparation

Concrete:

- Verify the joint is clean and sound and is an appropriate surface for installation of the joint sealant. Use compressed air to clear any loose debris from the joint. Apply water or alcohol to a clean cloth and wipe the joint walls to the depth of 1" [25mm] below the sealant material.
- Ensure Joint is parallel along entire length, joint depth must have a depth greater than or equal to the full depth of the material, plus 1/2" [6mm] See FIG A
- Verify that the joint is uniform. Repair any spalls prior to installation using proper materials and methods to ensure maintenance of fire-rated wall assembly. Joint faces must be parallel.
- Apply blue painters tape to the joint face edges to prevent silicone from contacting the deck surface.

Metal:

- Confirm that the metal is clean and ready for the epoxy adhesive.
- Solvent-wipe the substrate just prior to applying epoxy.

IMPORTANT: Ensure that there is no rust or loose paint on metal substrates before the epoxy is applied.

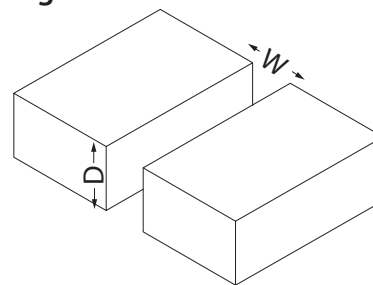
Gypsum: (See detail in Appendix A)

- See UL for listed fire rated wall assemblies that yield the endurance rating equal to the installed FR Expansion Joint. For joints 3 1/4" [83mm] and wider, use either 3/8" [9.5mm] Hardiebacker® by James Hardie or PermaBase® Cement Board by National Gypsum Company instead of 5/8" [16mm] Gypsum Type X at joint face
(Depicted in solid gray in the detail in Appendix A).
- Adjust finish course of gypsum so it is flush with the cement board as shown.
- Check the material for length, width and depth. Supplied material should be approximately 25% larger but never less than 12% larger than the intended opening. Joint depth must allow for the installed material to be recessed 1/8"-1/4" [3-6mm] from the joint face.

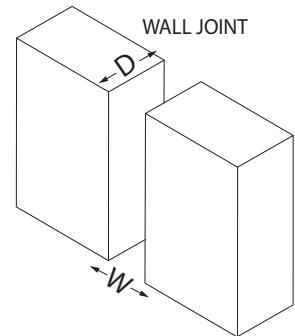
Important Note on Pre-Compressed Foam Seal:

- **Material is made to order, Keeping Pre-Compressed foam seals in storage for longer than 2 weeks will greatly increase the amount of time required for the foam seal to reach maximum expansion.**
- **NOTE: Material may take up to 72 hrs. to fully expand.**
- **NOTE: In cold temperature installations, provide as much ambient heat as possible around the installed joint (after installation) to accelerate the rate of material recovery.**

Fig A FLOOR JOINT



WALL JOINT



Fire Proofing & UL Listing Information

Following these installation instructions will ensure that the 990/995 Fire rated foam seal is installed as tested and meets UL 2079 standards. Failure to follow these installation instructions as described may result in the installed joint not complying with the UL listing, as designed and tested, and therefore, has potential life safety risk.

IPC.1572/Rev.5

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Fig 1

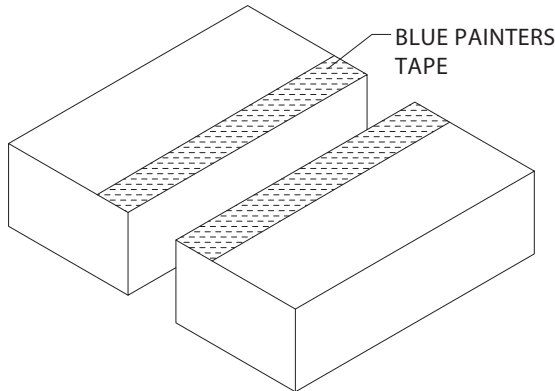


Fig 2

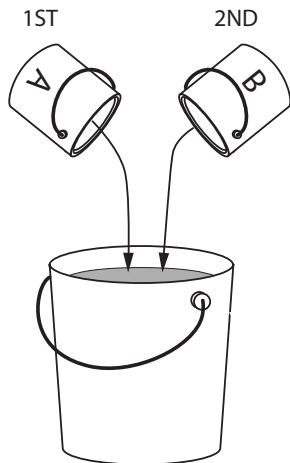
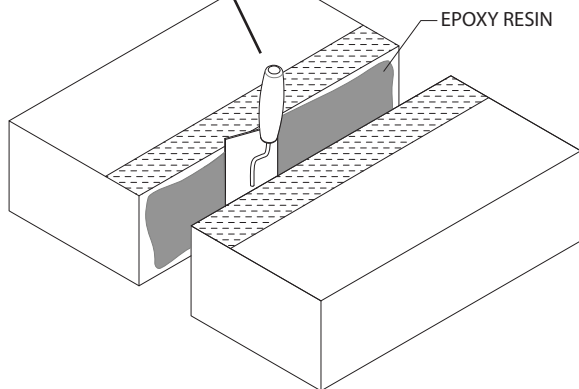


Fig 3

TROWEL SHOWN
(CAN BE APPLIED
BY BRUSH OR
GLOVED HAND)



Joint Prep and Mixing Epoxy

1. Use painters tape or other suitable tape to protect the exposed joint face. **See Fig.1**
2. Epoxy adhesive may be used in the >40°F (5°C) to 95°F (35°C) temperature range. Transfer the contents of Part B (hardener) into the contents of Part A (base). **See Fig 2**

Mix the material thoroughly with a low speed drill (300 rpm) for 3 minutes. Scrape the walls and bottom of the container to ensure uniform and complete mixing with no streaks.

NOTE: Normal pot life at 77°F is 45 min. For every +17°F [9.5°C] epoxy cures twice as fast; While every -17°F [9.5°C] epoxy cure time doubles.

TIP: Mix only the required amount of the epoxy that will be used within 45 minutes to prevent the epoxy from curing prematurely.

WARNING: NEVER thin the epoxy

NOTE: Epoxy will harden faster when left in the mixing pot, because of that, apply epoxy to the joint as soon as possible to slow the curing time.

Installation

3. Using a trowel, brush, or gloved hand, apply the mixed epoxy on both sides of the joint edge in a uniform layer. **See Fig 3.**

While applying epoxy to the joint faces, others should prepare the Fire Rated Foam for installation into joint opening. **DO NOT** Remove the Fire Rated Foam from its original shrink wrapped packaging until its equivalent length of joint has been prepared

Epoxy must still be uncured, and tacky when installing the 990/995 system.

NOTE: If epoxy cures before installing the 990/995 system, new epoxy can be within 2 hours. **AFTER 2 HOURS:** The substrate must be abraded to eliminate the amine blush the occurs during the final cure.

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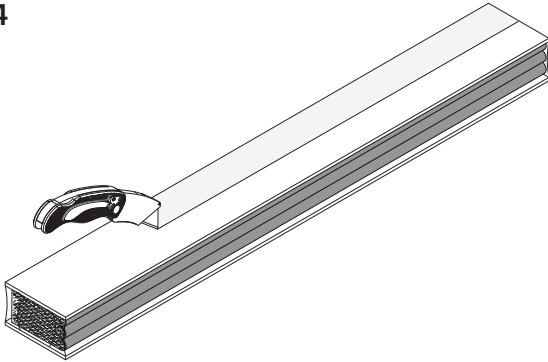
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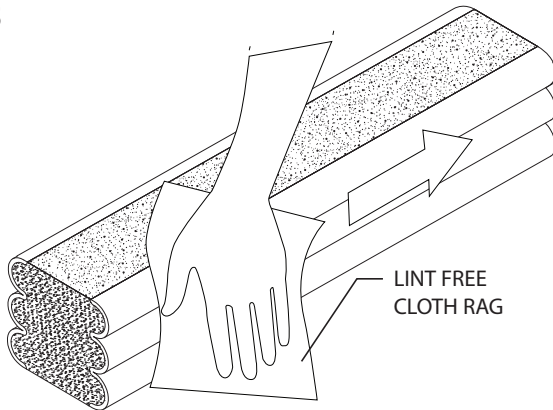
Fig 4



4. To remove Fire Rated Foam from shrink wrap cut the plastic packaging by cutting on the hard board along the length of the stick DO NOT cut along the silicone face. See Fig 4. Remove hard board and inner release liner.

After cutting the shrink wrap, work quickly to avoid material expanding beyond a usable size.

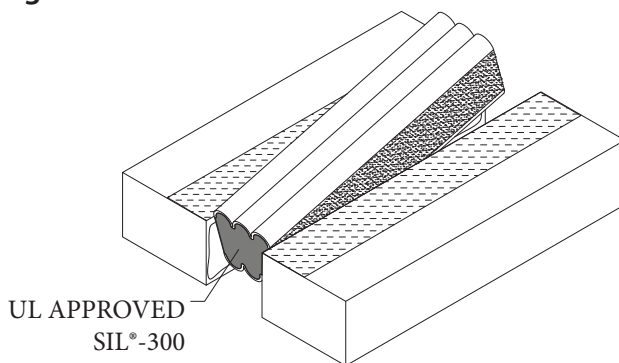
Fig 5



5. (Not required for uncoated material)
Silicone face may be coated in the factory with a release agent. Prior to installation, this agent must be wiped off in order for the finish bead to properly adhere along the edge of the 990/995 system.

To remove the release agent, lightly, quickly, and thoroughly wipe the cured silicone facing with a lint-free rag dampened with water.

Fig 6



6. After verifying that the epoxy on the joint has not cured, install the foam into the joint. For vertical conditions begin installation starting from the bottom of the joint working upward. See Fig 6.

Starting from one end of the Fire Rated Foam stick, insert material into the joint opening, ensure the silicone surface of the seal is facing outwards. The material should fit securely and must be installed into the substrate to the fully installed depth, usually 1/8" to 1/4" [3mm-6mm] below joint surface. When the material has expanded to a secure fit, it will support itself while the epoxy cures.

Apply a bead of UL approved SIL-300 to the front face/ base of the fire rated foam stick, smooth and flatten to an even 1/8" [2mm] coat.

NOTE: Ensure the joint material is not stretched during installation

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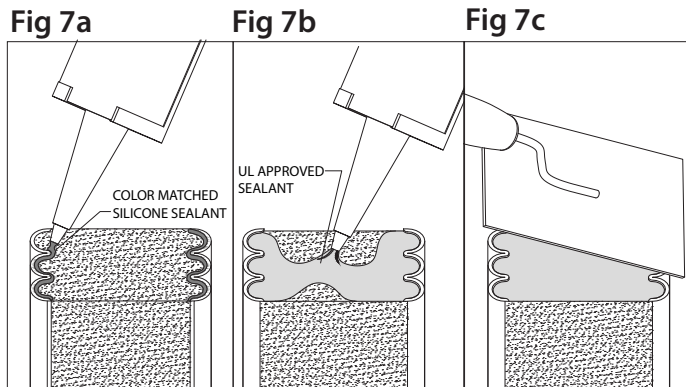
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NOTE: Joint substrate not shown to aid in clarity only

Fig 8

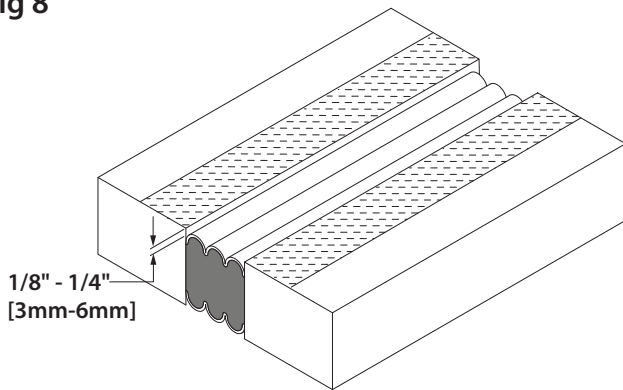
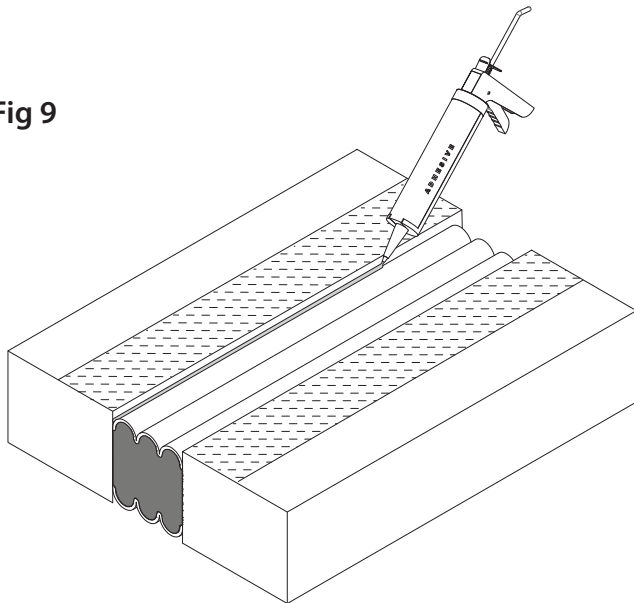


Fig 9



7. After the first 990/995 stick is installed to the proper depth, run a continuous bead of supplied color matched silicone along the edge of the silicone bellows. See Fig 7a.

Apply the supplied UL approved SIL[®]-300 on the end of the installed Fire Rated Foam, ensuring to completely entomb end in sealant. See Fig 7b.

Flatten the UL approved SIL[®]-300 to an even 1/16th [2mm] thickness. See Fig 7c.

Note: UL approved SIL[®]-300 must be applied to top, bottom, and all termination splices. This should always be done when the 990/995 fire rated foam is installed in the joint.

8. To install next length of Fire Rated Foam, repeat instructions 3-6. Always work in the same direction, pressing each new stick into the previous.

Insert the uncoated end of the new stick into the joint. The uncoated end of the new stick should be securely butted up against the end of previously installed stick which has been coated in UL approved SIL[®]-300 as described in step 5. Securely compress the two pieces together, ensuring there are no voids at joint unions.

Apply UL approved SIL[®]-300 to exposed end of newly installed stick as described in step 7

Remove all excess silicone left on the joint surface or silicone face. Be sure not to fill in the valleys of the bellows as this will bond the valleys together, comprising the movement performance of the Fire Rate Foam system.

9. Remove any excess epoxy from the face of the material using a clean, dry, rag.

Install a bead of color matched silicone along the edge of the Fire Rated Foam and the joint faces. Tool the silicone firmly into groove of the joint substrate and the silicone face to ensure a proper bond and seamless appearance. See Fig 8. The silicone bead is only applied to the weather side of the foam. No Sealant is required on the other side.

At butt joints and intersections, remove any residual silicone and epoxy from the joint face using a putty knife or utility knife.

Remove masking tape from joint surface to complete installation.

NOTE: Any joint that terminates with an exposed end and not terminating into another stick or structural termination **MUST** be coated on exposed end with UL approved SIL[®]-300 after the system is installed, or by applying to terminating substrate. This will ensure the joint is properly terminated.

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Fig 10

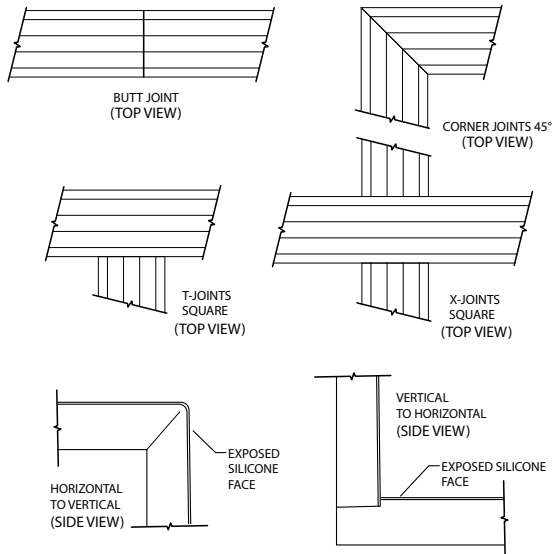
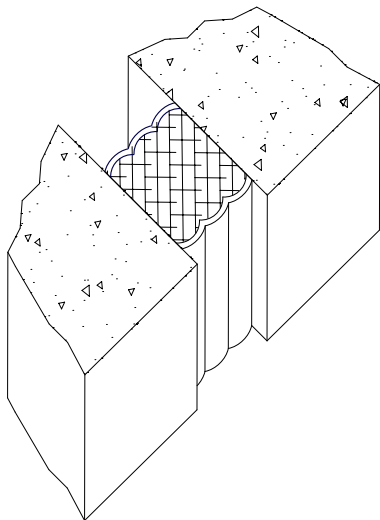


Fig 11



10. Verify that the new piece of material is cut square and not at an angle to the previous material installed.

11. Apply UL approved SIL[®]-300 splicing sealant to the butt end of the new piece of material.

12. Overlap extra material (approximately 1/2"-1") at seams and splices to ensure that the seam is in compression after installation.

13. "T" and "+" Intersections:

Install horizontal material first. Butt the vertical material up to the horizontal material following steps 1+2.

NOTE: After installation, if there are any mitered joints with a hole or a void, use the supplied UL approved SIL[®]-300 to fill and seal the joint and cover the sealant with the supplied silicone sealant.

14. Horizontal To Vertical Intersections:

Begin the installation at the horizontal condition. At the point of transition cut a V-notch in the back of the foam seal, making sure not to cut through the face of the seal. Fold foam seal downward, and seal the connection with the provided UL approved SIL[®]-300 splicing sealant.

15. Vertical to Horizontal Intersections:

Starting at one end, cut the silicone face of the horizontal foam seal to create a matching notch for the vertical seal to seat in. Install horizontal seal, then continue installing vertical seal. Seal the connection with the provided UL approved SIL[®]-300 splicing sealant.

16. Use the matching silicone sealant to run a bead along each edge of the joint to fill any irregularities in the substrate.

Note: Seal does not require an external fillet bead to provide a watertight seal.

Finish- See Fig. 11 (Not required for UL condition)

17. Tool the silicone over all seams and transitions using a small caulking tool.

18. Evenly spread the silicone on exposed seams to allow for a clean, aesthetic finish.

19. Remove any excess silicone left on the surface of the material or substrate.

WARNING: Do not allow the silicone to cure before removal.

20. Remove the painters tape from the substrate surface.

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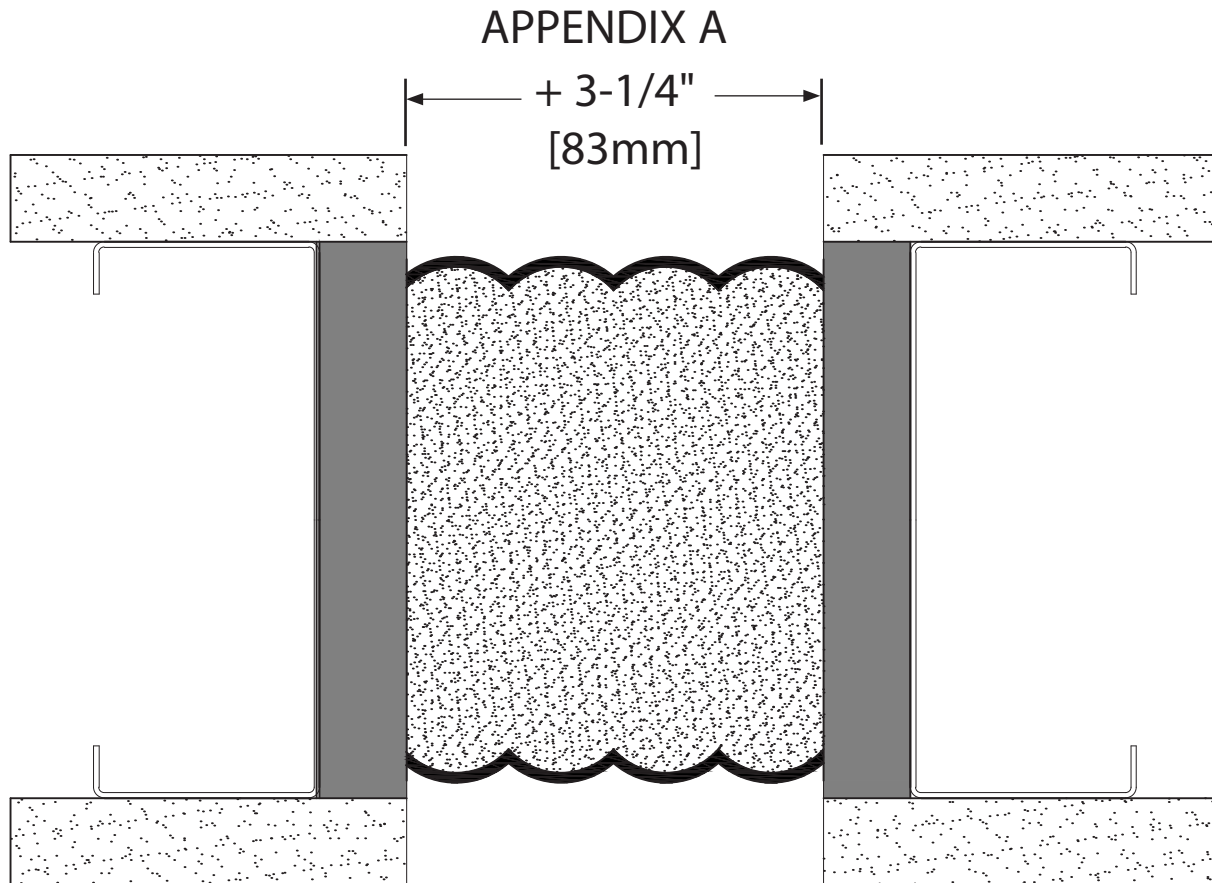
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A. Use either 3/8" Hardiebacker® by James Hardie or PermaBase® Cement Board by National Gypsum Company instead of 5/8" Gypsum Type X at joint face . (depicted in solid gray).

B. InPro recommends using a UL approved cement board at all joint interfaces. Through our extensive outside and independent UL lab testing, it is concluded that while Fire Rated Foam sealants pass the required hose stream component of UL 2079, there is an additional margin of safety in bonding to cement board over bonding to the paper covered gypsum interface.

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