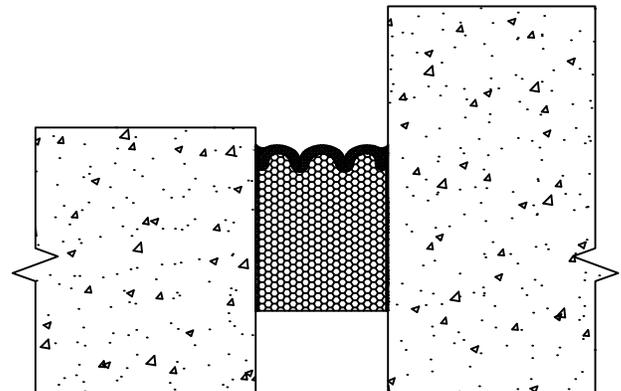
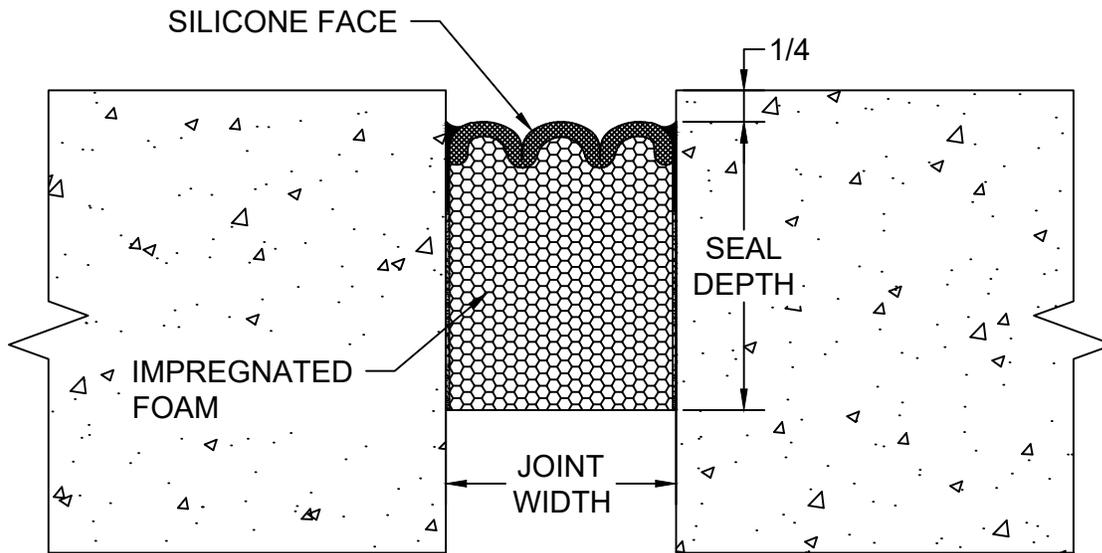


HF

INSTALLATION INSTRUCTIONS



IMPORTANT INFORMATION

Prior to the commencement of Installation, all materials **MUST** be inspected for Damage. Any damage must be reported to CONSTRUCTION SPECIALTIES, INC., as soon as possible, so that replacement materials may be furnished without delay.

All work must be completed as per Architect's Approved "Shop Drawings", and in accordance with these Installation Instructions. When installation is complete, all materials must be protected from damage until the Architect's FINAL INSPECTION.

All materials should be arranged in the order that they are to be installed. All hardware required for each portion of the work should be placed with the appropriate materials.

Please review all Approved Shop Drawings and this Document to familiarize yourself with all the details and components of this assembly.

IMPORTANT:

READ THROUGH ALL INSTRUCTIONS PRIOR TO STARTING INSTALLATION

8/5/19



Construction Specialties™

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GENERAL NOTES:

Before beginning installation, review the architectural drawings and approved Construction Specialties Inc. shop drawings to familiarize yourself with the joint cover models and locations.

Check all of the joint cover components to confirm that the correct joint cover model and size have been received. Also, check for materials that may have been damaged during shipping. Report all incorrect and/or damaged components to CS at 800-233-8493.

Read through all the steps of these instructions prior to beginning work.

TOOLS:

The following tools may be needed for installation of the HF:

- | | | | | | |
|-------------------------|------------------|-------------|-----------------------------|-------------------------|----------------|
| - Serrated Edge Knife | - Measuring Tape | - Miter Saw | - Utility Knife | - Caulking Gun / Knives | - Spray Bottle |
| - Clean Paint Buckets | - Acetone | - Duct Tape | - Hacksaw | - Lint Free Rags | - Gloves |
| - Drill & Mixing Paddle | - Spatula | - Trowels | - Chemical Resistant Gloves | | |

Material Storage and Installation:

- 1.) **Cold Days** - Store sealant, off the floor, inside at above 68°F (20°C). Best to store at room temperature .
- 2.) **Very Hot Days** - Keep sealant out of direct sun when temperatures greater than 60°F (15°C) until immediately prior to installation into joint. **Expansion is quicker when warm, slower when cold.**

Pre-Installation:

Concrete:

- 1.) Joint must have unobstructed depth greater than or equal to the full depth of the largest material supplied plus 1/2" .
- 2.) Remove loose particles and weak concrete to ensure sound concrete substrate. Repair spalled, irregular or unsound joint surfaces using accepted industry practices for repair of the substrates in question. Joint faces must be parallel.
- 3.) Remove all contaminants/residues by sandblasting or grinding to ensure a thoroughly clean and sound substrate for the full sealant depth. NOTE: Do not use a wire wheel this will polish the substrate and cause bond failure.
- 4.) Ensure all joint surfaces are dry. NOTE: Do not use flame to dry substrate this will leave carbon on the substrate and cause bond failure.
- 6.) Wipe joint faces with solvent dampened, lint free rags to remove all concrete dust and contaminants.

Metal:

- 1.) Sandblast or grind to rough, white metal and solvent wipe immediately. IMPORTANT: Ensure that no oxidation (rusting) occurs before the epoxy is applied.

Material Packaging:

- 1.) Material has been manufactured as straight sticks. joint widths for material supplied are marked on the packing. Actual material width measured between hardboard will be slightly less than indicated joint width. **DO NOT REMOVE OUTER PLASTIC PACKING UNTIL YOU READ AND UNDERSTAND THE REST OF THESE INSTRUCTION.**
- 2.) Proper performance of expansion seals necessitate proper installation from beginning through completion. Improper handling will cause product to expand prematurely.

Plane Changes / Installation:

- 1.) Changes is plane, either up or down, requiring the use of Transitions, 90's, or termination pieces need to be installed first. Connect straight run material to the installed terminations and transitions. NOTE: If installing very long runs of material, to avoid having to work at distant ends of a joint run and in order to prevent epoxy from fully curing, the final termination transition can be installed the second to last piece.
- 2.) Cut closing pieces 3/8" longer than the opening to be joined. Compress material longitudinally to fit.

STEP 1

PREPARE DECK & EPOXY

- 1.1 Using duct tape, tape off the deck on both sides of the joint.
- 1.2 To mix epoxy adhesive, using a trowel transfer the entire contents of Part B (hardener) into the contents of Part A (base). Always mix Part B into Part A.
- 1.3 Mix material thoroughly for 3 minutes with drill and mixing paddle. Scrape the walls and bottom of the container to ensure uniform and complete mixing with no black or white streaks. Do not thin the Epoxy.

IMPORTANT: Epoxy adhesive may be used in the 40° F to 95° F temperature range. Wear chemical resistant gloves and/or barrier hand cream when handling liquid sealant or epoxy. Remove promptly from skin with a commercial hand cleaner before eating or smoking. Avoid inhaling vapors.

STEP 2

APPLYING EPOXY

- 2.1 Apply epoxy to both substrate walls before the pot life has expired (10-30 minutes depending on the ambient temperature). The epoxy will harden more quickly when left in the pot. Apply it onto the joint faces as soon as possible.
IMPORTANT: The epoxy must still be uncured when installing HF foam into the joint gap.
- 2.2 If epoxy cures before installing the HF foam then reapply new epoxy. If installation is interrupted for more than 2 hours after initial cure then grind the old epoxy off and apply new wet epoxy.

STEP 3

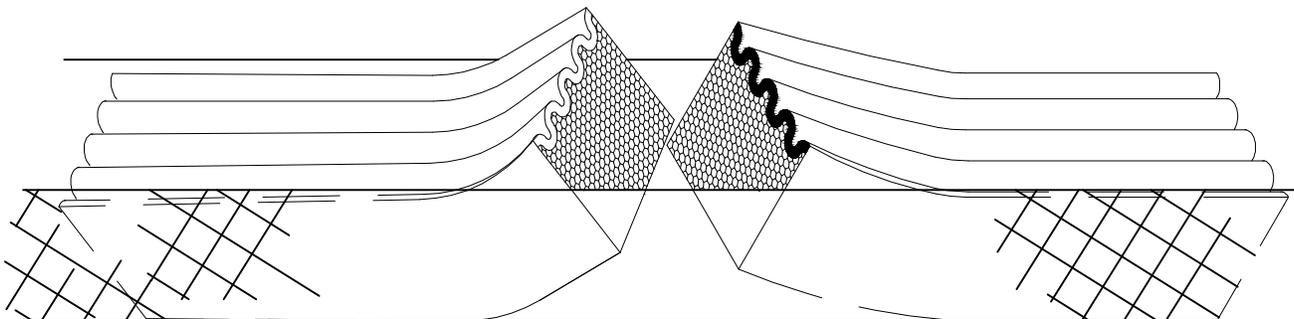
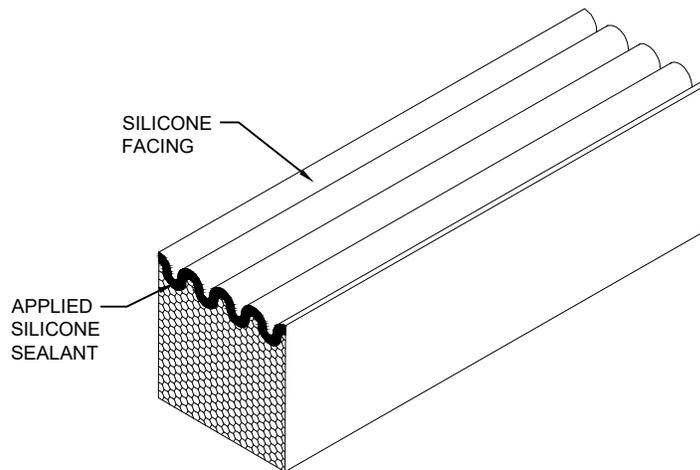
PREPARE SEAL

- 3.1 When ready to install the HF, remove the plastic packing by cutting on the hardboard and remove hardboard and inner release liner. **DO NOT CUT ALONG THE SILICONE COATING FACE.**
IMPORTANT: The HF foam is kept under compression by the plastic wrapping and hardboard, work quickly and deliberately after cutting the shrink-wrap to avoid material expanding beyond a usable size.
- 3.2 Wipe factory applied release agent off silicone facing using a clean lint free cloth made damp with water.

STEP 4

INSTALLATION OF SEAL & SPLICES

- 4.1 When installing the HF into the joint, make sure the epoxy on the joint face has not cured.
- 4.2 Install stick lengths of HF starting from the terminations and transitions first before installing at the end of a run. Install HF in the joint so that the silicone face is a 1/4" below the deck surface. The HF will fit tightly and must be eased into the joint with steady, firm pressure.
- 4.3 Leave the end to be joined to the HF transition or new length of HF to protrude up and out from the joint. Using a caulking gun apply a bead of liquid silicone sealant along the silicone facing edge only. Avoid spreading silicone sealant to the foam block areas.
- 4.4 Install the next length of HF leaving the splicing end to protrude up and out from the joint. Push the HF joining faces together. Push hard on the stick to compress splicing joint firmly together making sure there are no voids at the splice.
- 4.5 With the full length of HF installed, push the protruding splice ends into the joint and tool off the excess silicone.
NOTE: During low temperature installations, provide as much ambient heat as possible around the installed HF foam to accelerate recovery.

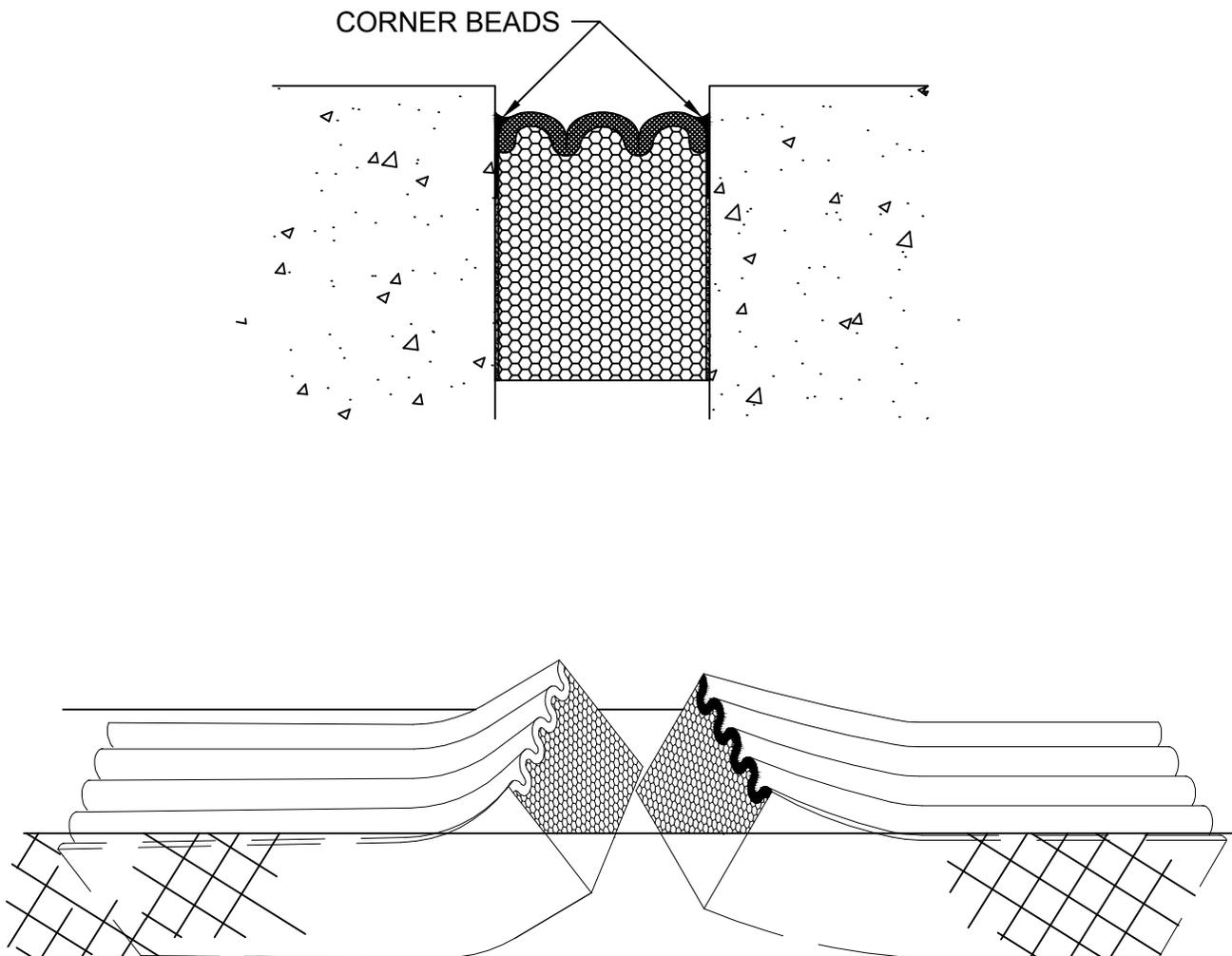


STEP 5

INSTALLATION OF CORNER BEADS

- 5.1 Wipe any excess epoxy from top of HF material using a clean rag.
- 5.2 Before the epoxy cures, force the tip of the silicone nozzle between the substrate and the HF foam block. Inject a 3/4" deep silicone sealant corner beads between the HF foam block, the cured silicone facing and the joint face.
- 5.3 Tool the freshly applied silicone firmly to blend with the substrates and cured silicone facing, and to ensure a proper bond and seamless appearance.
- 5.4 Where the HF foam meets at the butt joints, tool the excess silicone that squeezes out from the top and between the silicone facing. Silicone left between the valleys of the silicone facing bellows could constrain movement. Use a caulk knife and remove excess sealant. Blend any sealant that remains into the silicone facing bellows.

NOTE: Application of silicone sealant corner beads ensures a warranted watertight sealed face. Restriction of installation access may preclude the ability to seal both faces.

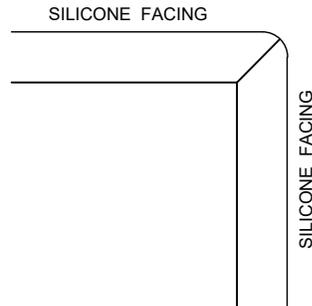


STEP 6

TRANSITIONS, ENDS AND SPECIAL CONDITIONS

6.1 Outside Corners:

- A) Notch the back of the HF foam only about 2/3 of the way through at a 40° angle. Bend the HF foam over keeping the silicone face intact



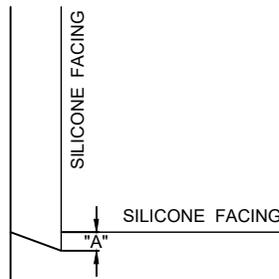
Outside Corner Transition (Section)

6.2 Inside Corners:

- A) Cut the material for the horizontal joint longer than needed by an amount equal to depth of the material being installed. The inside corner must be joined by cutting a keyway in the horizontal material with a matching key in the vertical material.

- B) To cut the keyway, first make a template using a piece of the hardboard packaging and a hacksaw.

Keyway Dimensions: Nominal Material Size up to 3/4" dimension "A" is 1/2" anything over 3/4" dimension "A" is 1"



Inside Corner Transition (Section)

- C) Using the template and a water sprayed bread knife or hack saw, cut the key at the end of the HF foam stick for the vertical section and the keyway in the end of the horizontal section.

- D) Install the horizontal section ensuring that the keyway is inserted past the vertical face of the joint.

- E) Inject some liquid silicone into the face of the keyway and install the vertical section of material into the wet silicone. Be sure of a tight fit with no voids.

6.3 Flat Corners:

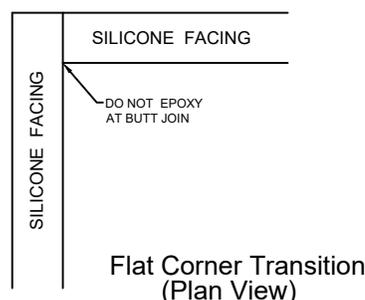
- A) Work towards the corner so that the last two pieces to install will join at the corner. Cut each piece to be joined 3/8" longer than needed.

- B) Install one piece so that it runs through the intersecting joint gap. Firmly push and compress the extra length so that a tight fit in the corner is achieved.

- C) Firmly butt intersecting pieces into sides of placed material. *IMPORTANT: Be sure that there is no epoxy on the sides or faces of the HF foam at a butt joint.

- D) Using a caulk knife, remove any excess sealant and blend the liquid silicone into the silicone facing to preserve the facing shape. NOTE: The extra length will make it a tight fit making this a compression fit.

- E) Inject a bead of liquid silicone where the silicone faces join and where the silicone faces meet the substrate.

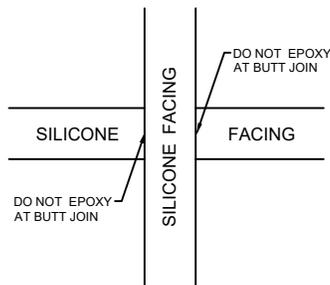


STEP 6 Con't

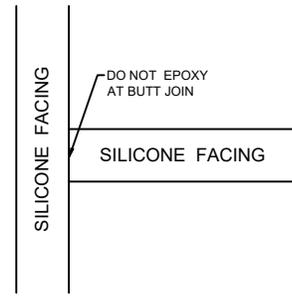
TRANSITIONS, ENDS AND SPECIAL CONDITIONS

6.4 Crosses and Tees:

- A) Run one piece of material across the intersection. Apply liquid silicone sealant along the silicone facing edge ONLY at the end of the intersecting piece. Firmly butt intersection pieces into side of already placed material.
- B) Using a caulk knife, remove any excess sealant and blend the liquid silicone into the silicone facing to preserve the facing profile.



Cross Transition
(Plan View)



Tee Transition
(Plan View)

NOTE: Silicone coat any exposed foam ends

IMPORTANT: Runs not part of a closed loop system lightly coat any exposed HF foam ends using the liquid silicone sealant provided. This is critical in ensuring that the HF foam is sealed and watertight.