EMSEAL

EMSHIELD SecuritySeal SSF2

INSTALL DATA

DO NOT OPEN ANY PACKAGES or install this material until all members of your crew have read and understand these instructions as well as all relevant MSDS sheets. If you do not understand any part of these instructions CALL EMSEAL: 800-526-8365 or 508-836-0280

This document does not purport to address all of the safety concerns, if any, associated with this product's use. It is the responsibility of the user of this document to establish appropriate safety and health practices and to determine the applicability of regulatory limitations prior to use. The use of a dust mask, safety goggles and gloves is recommended. Keep out of reach of children.

IMPORTANT: This product cannot perform its intended function if not properly installed.

For installation of SecuritySeal (SSF2) for floors and decks

1 Equipment & Material Storage

In addition to safety equipment required to comply with applicable federal, state and local safety regulations, equipment to prepare and repair the joint-faces, as well as normal tools of the trade, the following are required:

Equipment Checklist:
☐ Tape measure
☐ Mixing paddle and heavy-duty, low-speed drill for mixing epoxy adhesive
☐ Caulking gun for 10-oz polyurethane tubes provided
☐ Sausage caulk gun for 20-oz intumescent sausages provided
☐ Long-bladed, serrated bread knife
☐ Hacksaw
☐ Spray bottle with water
☐ Duct Tape (2 ½ times the length of joint)
☐ Spatula to scrape epoxy from can
☐ Chemical-resistant gloves
☐ 2-inch wide (50mm) margin trowels for applying epoxy adhesive on the material and for spreading intumescent sealant on exposed foam face.
☐ Caulk knives for tooling sealant bands
☐ Acetone* for cleaning joint-faces, trowels and mixer tools
☐ Clean lint-free, 100% cotton rags

Cold Days: Store Sealant, off the floor, inside at above 68°F (20°C). It will recover slower when cold and faster when warm.
Very Hot Days: Keep sealant out of direct sun when the temperature is greater than 60°F (15°C) until immediately prior to installation into joint.

2 Prepare & Solvent-Wipe Joint Faces

Concrete:
• Remove loose particles and weak concrete to ensure sound concrete substrate. Spalls, chipped edges and uneven surfaces must be repaired using suitable patching material and proper patching geometry and techniques. Joint faces must be parallel.
• Joints must have unobstructed depth greater than or equal to the full depth of the largest material supplied plus 1/2-inch (6mm).
• Remove all contaminants 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.
• Dry all wet surfaces.
  NOTE: Do not use flame to dry substrate--this will leave carbon on the substrate and cause bond-failure.
• Wipe joint faces with solvent-dampened, lint-free rags to remove all concrete dust and contaminants.

Other Substrates: Contact EMSEAL.

3 Measure Joint Width & Find Correct Size Material

• Measure joint width at deck surface and below to ensure joint faces are parallel.
• Material has been supplied to suit your mean temperature field-measured joint widths. Widths of material supplied are marked on each stick of material. Find correct box and open it.
• Compare width of material supplied as marked on each stick against mean joint width. Actual width of material as measured between hardboard will be slightly less than marked size because material is over-compressed for ease of installation.
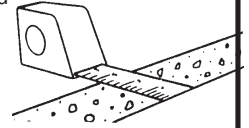
NOTE: If unsure of correct material selection, consult EMSEAL.

IMPORTANT: Do not remove outer plastic packaging until you have read and understand the rest of these instructions as material may expand prematurely.

4 Mask Floor & Mix Epoxy Adhesive

• Using duct tape, tape off the deck on both sides of the joint.

Mix Epoxy
• EMSEAL epoxy adhesive may be used in the 41°F (5°C) to 95°F (35°C) temperature range.
• Using a trowel, transfer the entire contents of Part B (hardener) into the contents of Part A (base) .
• Mix the material thoroughly with a drill and mixing paddle. Scrape the walls and bottom of the container to ensure uniform and complete mixing.
• Always mix component B (hardener) into component A (base). Ensure that a uniform gray color with no black or white streaks is obtained.

IMPORTANT: DO NOT thin the epoxy.

• **Precaution:** 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.

5 Apply Epoxy to Substrate, Unwrap SecuritySeal SSF2

Ensure that the mixed epoxy adhesive is applied to the substrate before the pot life has expired (10 - 30 minutes depending on the ambient temperature).

WARNING: Epoxy will harden more quickly when left in the pot. Apply it onto the joint face as soon as possible.

IMPORTANT: The epoxy must still be uncured when installing SecuritySeal foam into the joint-gap.

If the epoxy cures before installing the SecuritySeal foam then reapply new epoxy. If work is interrupted for more than 2 hours after initial cure then grind the old epoxy and apply new wet epoxy.

IMPORTANT: While one or more workers are applying epoxy to the joint faces, others must prepare the SecuritySeal SSF2 foam. The SecuritySeal foam is kept under compression by plastic wrapping and hardboard on both sides.

- Slit the plastic packing by cutting on the hardboard and remove hardboard. DO NOT cut along the polyurethane bellows face.
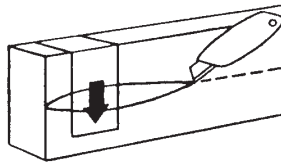
IMPORTANT: Work quickly and deliberately after cutting the shrink-wrap to avoid material expanding beyond a usable size.

6 Wipe Release Agent Off Polyurethane Facing of SecuritySeal SSF2 Foam

- For packaging and production reasons, the polyurethane facing is coated in the factory with a release agent.
- Prior to installation, this agent must be wiped off in order for the injected sealant bands described in Step #9 to adhere to the polyurethane facing and to avoid contamination of the substrate at this point.
- Lightly, quickly and thoroughly wipe the cured polyurethane facing with a lint-free rag made damp with water to remove the release agent.

TIP: Use the hardboard packaging as a flat, clean working surface.

- **Clean Up:** Remove epoxy and polyurethane sealant from equipment before it cures using acetone* or other solvent. Solvents are not effective after the expoxy or silicone has cured. Cured material may be removed by cutting it away with sharp tools, sandpapering or softening with chlorinated solvents*.

  (Solvents can be considered toxic and flammable. Observe solvent manufacturer's precautions and refer to Material Safety Data Sheets as well as local and federal requirements for same handling and use).

7 Install First SecuritySeal Foam Length into Joint & Apply Polyurethane to Bellows Face

- **Both bellows faces are trafficable.** Either side can be installed as the top "traffic" face.

  Note: *In cases where different colors of polyurethane are chosen for opposite bellows faces, the designer or architect might have a desired color that is intended aesthetically to be installed face up. Consult the designer to determine which face is intended to be the traffic face.*

- Immediately install the foam into the joint. Ensure that epoxy on the joint face has not cured.
- When installed, the SSF2 must be recessed so that the top of the bellows is recessed 1/4-inch below the deck surface.
- Note: When material is correctly expanded for a snug fit it will support its own weight in the joint.
- Feed material into joint, starting from one end. The material should fit snugly and must be eased into the joint with steady, firm pressure.
- Leave the end to be joined to the next length sticking slightly proud of the joint.
- Repeat step #6 for each new stick.
- On the end of the next stick, using a caulking gun and the tubes of polyurethane provided, apply the liquid polyurethane to the exposed end faces of the upper and lower polyurethane bellows.
- Using a sausage caulk gun and the sausage of intumescent sealant provided, apply the intumescent sealant to the exposed end face of the foam.
- Use a caulk knife or margin trowel to spread the intumescent sealant over the face of the foam to an even 1/16th-inch (2mm) thickness.
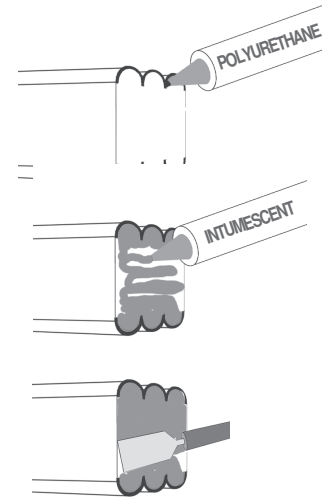
IMPORTANT: All sticks of SSF2 foam MUST have a coating of intumescent on the faces of all joins. This ensures that joins do not compromise the fire barrier.

8 Install Next Length. Repeat.

- Work in one direction towards the previously installed length or end of joint. Do not stretch material.
- Leave the end to be joined to the previous length sticking proud of the joint--push the joining faces together.
- **Push Hard** on the stick to compress joins firmly together. Ensure there are no voids at joins.
- Once the full length is installed, push the protruding join into the joint and tool off the excess polyurethane.
- During low temperature installation, provide as much ambient heat as possible around installed SecuritySeal foam to accelerate recovery.

9** Inject Polyurethane Sealant Bands at Substrates & Tool Excess Polyurethane

- Wipe any excess epoxy from top of material using a clean rag.
- Before the epoxy cures, force the tip of the polyurethane caulk gun between the substrate and the SecuritySeal SSF2 foam. Inject a 3/4-inch (20mm) deep polyurethane sealant band between the foam, cured polyurethane facing and the joint-face.
- Tool the freshly applied polyurethane firmly to blend with the substrates and cured polyurethane facing, and to ensure a proper bond and seamless appearance.
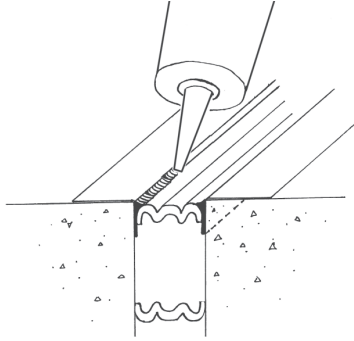
- Where SecuritySeal SSF2 foam meets at butt joins, tool the excess polyurethane that squeezes out from the top and between the bellows.

  IMPORTANT: Polyurethane left between the wrinkles of the bellows could constrain movement -- using a caulk knife, remove excess sealant and blend what remains into the bellows.

  Note: *Field-applied sealant bands are required on the face(s) which will be exposed to moisture or water (e.g. from weather at exteriors or cleaning in interiors). Field-applied sealant bands are optional in applications where contact with moisture will not occur.*

POLYURETHANE-COAT ANY EXPOSED FOAM ENDS:

IMPORTANT: Any stick of SecuritySeal SSF2 which finishes with an open end, not terminating into another stick or structural termination, must be lightly coated on the exposed foam end using the liquid polyurethane sealant provided. This is critical to ensure that the fire-retardant impregnated foam is sealed.

NOTES

Design/System/Construction/Assembly Usage Disclaimer
This material has been tested to UL/ULC 2079 and is manufactured under UL's Follow-Up Service. The material is being supplied as a fire-rated component of a wall or floor assembly. It has been tested to UL 2079 in assemblies as depicted in EMSEAL's various listings in the UL Online Certifications Directory. The published information in these listings cannot always address every construction nuance encountered in the field. Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products or materials. Authorities Having Jurisdiction should be consulted before construction to ensure that specific adjacent substrates and assemblies are detailed and constructed to meet local fire-rating requirements.

Rev. SSF2 11-04-2014

NOTES