



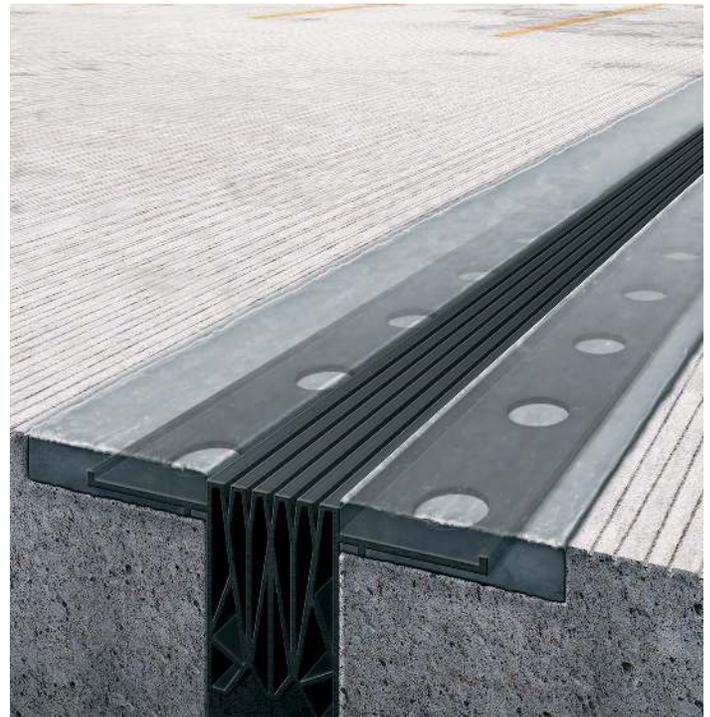
## WAF Bridging Seal Joint System and Delpatch™ Elastomeric Concrete **Installation Instructions**

### Responsibility

- It is the responsibility of the installer to understand all of the requirements of this document before attempting to install the WAF bridging seal joint system and the Delpatch™ material.
- Failure to perform any of these steps outlined in this document will result in underperformance or failure of this product.
- Proper installation of these products is the responsibility of the installing company personnel.
- Failure to perform any of these steps outlined in this document shall void any warranties, either expressed or implied, with regard to these products.
- It is the responsibility of The D.S. Brown Company to provide written instructions for the proper installation and handling of the WAF bridging seal and the Delpatch™ material.
- It is the responsibility of The D.S. Brown Company to provide technical support, training, quality control, and testing as requested by the installer, contractor, or the owner of the project.
- Technical support, training, and quality control testing is available for a fee.

**NOTE: Check for pedestrians and/or vehicles above or below the installation area. Pre-plan the work to protect any pedestrians and/or vehicles from falling or airborne debris. Pre-planning is a must. Failure to do so could leave the installer liable for any damages or injuries that may occur.**

The following installation procedures are very important and it is the responsibility of the installing company personnel to contact The D.S. Brown Company technical support group with any questions related to the installation of the materials or preparation of the concrete blockout areas. Office Number: (419) 257-3561 or (419) 343-3016.



### Product Description

The WAF bridging seal is a winged, webbed compression seal with a honeycomb design. This honeycomb design makes for an excellent watertight walking surface. A variety of seal sizes are available. Delpatch™ is an elastomeric concrete for high performance concrete pavements.

Each Delpatch™ Unit makes 3.7 Cubic Feet (27.7 gallons/mixed) of elastomeric concrete material.

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- One Delpatch™ unit consists of the following materials:
  - Two 5-gallon pails of Part A
  - One 5-gallon pail of Part B
  - Twelve bags of mixed aggregate
  - One quart can of Delpatch™ primer

### Product Safety

- Delpatch™ Elastomeric Concrete is a two-part polyurethane material mixed with proprietary aggregates. Please review each component's SDS before installation to fully understand the safety concerns related to this system. Failure to do so could result in serious injury or death.

The following guidelines are recommendations consistent with the SDS literature. These recommendations are not intended to supersede or replace any existing requirements set forth by local laws or policies.

### Personal Protective Equipment (PPE)

- Use approved respiratory protection equipment when airborne exposure is excessive.
- Consult SDS for exposure limits.
- Operators should be properly trained in the use of a respirator.
- OSHA's respiratory protection standards set forth requirements for a facility Respiratory Protection Program. (29 CFR 1910.134)
- Resistant chemical gloves (e.g. nitrile)
- Eye protection consisting of safety glasses with side shields or tightly sealed goggles
- Workers not wearing the proper PPE equipment should not enter the working area.

### Material Storage

#### Delpatch™ Elastomeric Concrete

- Material storage recommendations apply to all components of the system.
- Shelf life on the Delpatch™ material is approximately two year in factory-sealed containers.

- Store unopened containers between 50°F and 90°F. Do not allow any of these materials to get wet.
- When storing materials on a jobsite, protect the pails and aggregate from direct sunlight. Failure to do so may cause the product material to overheat.
- If the components are stored at less than 45°F they will freeze and cannot be used.
- Open containers should be consumed entirely because the product will react with air and moisture after the seal on the container has been broken.
  - Material that has been stored in an open container should be tested before it is used at a later date.
  - Open containers of material cannot be returned.

### WAF Bridging Seal

- The WAF Bridging Seal must be safely stored to prevent damage.

### Equipment

Equipment requirements for the mixing and placement of Delpatch™ Elastomeric Concrete and WAF Bridging Seal are as follows:

- Two straight, long-handled hoes or strip seal installation tools (Strip Sealer Tools can be purchased from the D.S. Brown Company.)
- Pizza wheel roller for splicing repairs (Splicing materials can be purchased from the D.S. Brown Company.)
- Aluminum channels or heavy plastic strips for maintaining the proper joint expansion (When using plastic strips, metal weights must also be used to help hold the strips in place.)
- Aluminum or metal pins long enough to cover the expansion area
- Hand-held mortar mixer with paddle or ¾-HP slow-speed drill with a barrel or spiral mixing paddle
- Minimum of two clean, 5-gallon mixing buckets
- Two 5000 ML measuring pails or pitchers
- Two 2" margin trowels
- One long handle 3" margin trowel
- One notched trowel for material finishing
- Paint brushes or spray bottle for primer application
- Duct tape or other suitable masking material

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### Pre-Application Inspection and Prep Work

- The installation team must perform a visual inspection of the bridge deck or parking deck.
- New concrete should have a minimum of 14 days of cure time.
- Moisture content of the concrete should be lower than 5%.
- The expansion blockout should be a minimum of 1" depth. It should be a minimum of 3.5" width on each side of the expansion opening.
- The blockout area should be level on the bottom where the seal comes into contact with the concrete; this will keep the wing of the seal inside the blockout and allow the aluminum channels or plastic strips to lay level.
- Abrasive sandblasting is the preferred method to clean the blockout area. Water blasting is allowed, but there must be no dirt, grime, grease or any type of bond-breaker in the blockout that will prevent the Delpatch™ material from obtaining a proper bond.

**Note: If waterblasting is used, a 24-hour drying period is required before the Delpatch™ material can be placed. You must block off the cleaned areas. No construction traffic can travel over these cleaned areas after waterblasting takes place. Waterblasting only applies to a concrete deck.**

- Substrate and air temperature must be above 45°F and rising before placement of the Delpatch™ material.
- Do not attempt to install the Delpatch™ material if the temperature falls below 45°F degrees within 2 hours of the expected completion of the last pour.
- Alternate heat sources may be used to warm the joint area above 45°F but this temperature must be held while the material cures out completely.
- The blockout area must have an abrasive sandblast (minimum of SPF 6) on a steel decking and a coarse to a 1/4" profile for a concrete deck.
- If a curing compound was used with the new concrete deck, abrasive blasting must be used to remove the material.

- The blockout must be free of all moisture, dust, debris and laitance.
- The minimum application of the blockout area is 3.5" wide and 1" deep.
- All blockouts must have square edges to meet the minimum blockout requirements.
- Loose, contaminated, weak, spalled, deteriorated and/or delaminated concrete must be removed down to sound concrete.
- Any spalls, voids or structural cracking at joint interfaces must be repaired prior to the placement of the Delpatch™ material.
- Mask off the edges of the blockouts to create a clean edge.

### Preparation and Installation of WAF Bridging Seal

- Apply DSB 1516 Lubricant Adhesive, brushing it on to the joint opening sidewalls to lubricate the walls (lubricate the sidewalls in 10 to 15 feet sections).
- Using the two long-handled hoes, compress the bottom of the WAF seal and place it into the joint opening by stepping directly on the top of the WAF seal.
- Use a de-bonding agent on the aluminum metal channels or plastic strips and place these dividers on the top of the WAF Seal web.

**Note: Form oil or grease is not to be used on the formwork that is used over the expansion of the WAF seal (a de-bonding agent can be purchased from the D.S. Brown Company).**

- Any required field splicing must be done before placing any Delpatch™ material.

### WAF Bridging Seal Splicing Details

- The WAF wing seals need to be placed as close as possible to each other to help ensure a watertight joint.
- Determine the area to be spliced. Use a suitable solvent to clean the WAF seal. The area cleaned should be a minimum of 6" past the contact area of the two seals to be spliced.
- Using a wire brush, aggressively brush the top of the two seals to remove any salt-curing compound or built-up dirt and grime.

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- Using a suitable solvent, wipe clean the wire-brushed area to remove any rubber dust or contaminants that can prevent a sound bonding area.
- Cut the non-cured neoprene (supplied by the D.S. Brown Company) 5-6" long on each side of the splice, making sure to have enough neoprene to overlap the wing of the seal as well.
- To help prevent water leakage, apply DSB 1516 Lubricant Adhesive, brushing it between the two pieces of seal to be spliced.
- Also apply the DSB 1516 Lubricant Adhesive to the top of the two seals in the cleaned areas.
- Using the cut pieces of non-cured neoprene, center the neoprene over the cleaned area of the seals. Starting at the center of the seal, use the pizza wheel roller and begin rolling the non-cured neoprene to the outer edge and on to the wing to make the non-cured neoprene look like the WAF winged seal itself.
- Cut out any holes that have been covered up with the non-cured neoprene to allow for the Delpatch™ material to flow through.

### Primer Application

- Delpatch™ primer can be applied using a pressurized sprayer, spray bottle or paint brushes.
- Do not dip the brushes into the container that the Delpatch™ primer was supplied in, unless you will be using the complete container in one application.
- Do not return any unused portions of the primer to its original container.
- Avoid pooling the primer. Brush out any accumulated primer before it dries.
- Allow the Delpatch™ primer to dry for a minimum of 30 minutes. On cooler installation days (45°F to 60°F) allow the primer to dry for a minimum of 45 minutes. The Delpatch™ material must be placed on the primer within a 4-hour time period.

### Preparation and Installation of Delpatch™

- One mix of Delpatch™ will make approximately 2.3 gallons of material.
- Make sure that you have enough material available to complete the entire installation before starting the mixing process.
- Delpatch™ must be installed in a continuous pour.
- For large pours, it may be necessary to have multiple sets of beakers, pails and mixers.
- Any work stoppage must terminate at the end of the joint or occur at some sort of formwork.
- Do not stop mixing/pouring material until all areas that are required to be level and even with the existing concrete surface are completed.

### Delpatch™ Mixing Instructions

- Using the beakers, measure out 3000 ML of the Part A liquid and 1500 ML of the Part B liquid.
- Empty the Part A and Part B beakers into the 5-gallon mixing bucket and mix for 30 seconds.

**Note: Never pour the liquid Part A and Part B into a 5-gallon bucket and then let it set; it must be mixed immediately.**

- While continuing to mix, add the full bag of aggregate to the liquid mixture.
- The mixture will turn white when it has been fully mixed.
- The liquids and aggregates must be mixed for a minimum of 60 seconds. The mixture should have an even consistency with no dry aggregate or white streaks visible.
- Immediately start pouring the Delpatch™ material into the blockout area.
- Use the edge of a trowel to lift the wing of the WAF seal and then place the Delpatch™ material under the wing of the seal.
- Press down on the WAF wing so as to allow the Delpatch™ material to flow through the holes in the wing of the WAF seal.
- Continue to pour the Delpatch™ material over the top of the wing of the WAF seal.

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- Trowel and level as you go. One mix of the approximately 2.3 gallons should be placed under and over the WAF seal wing in the same pour.
- The Delpatch™ material sets in approximately 30 minutes.
- Notching or grooving of the Delpatch™ surface texture can then be performed.
- Once the Delpatch™ material has cured for 3-4 hours, remove the aluminum metal channels/plastic strips.

**Note: Do not layer the Delpatch™ material and always trowel and finish as you go.**

**Cleanup**

- All masking and protective materials should be removed after the installation has been completed.
- Small tools and mixing paddles should be wiped down and then placed immediately into a suitable solvent to remove the mixed polymer.
- Material waste should be disposed of according to local laws and regulations. Consult SDS sheets for proper handling of all waste.