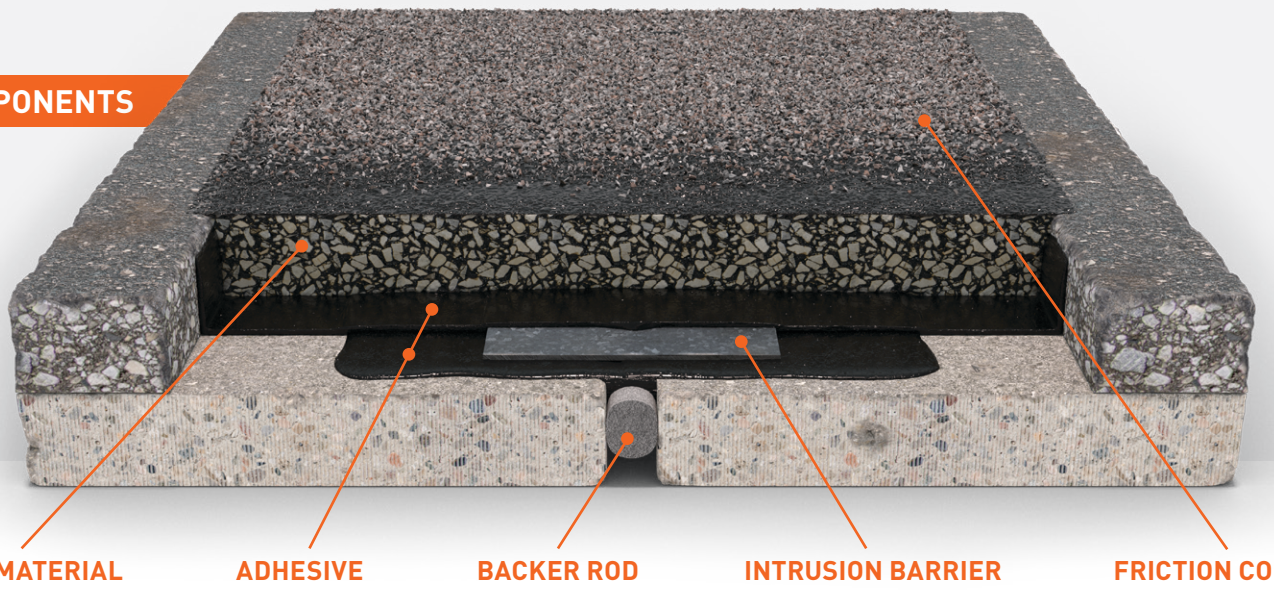
# GAP|PATCH™
# PLUG JOINT INSTALLATION GUIDE

MAXWELL PRODUCTS

## COMPONENTS




## OVERVIEW

GAP-Patch materials employ polymer modified, thermoplastic, asphalt binders with advanced, engineered aggregate, to deliver a long-term, watertight plug joint repair and stable, durable, load-bearing driving surface. Used in conjunction with the recommended adhesive sealant the intent of this system is to work with existing plug joint methods for both expansion and fixed end joints. This includes the use of either galvanized steel plates or other, approved, intrusion barrier designed to prevent the plug material and other non-compressible debris from entering the joint opening. A proper installation consists of the following components:

**PLUG MATERIAL** - GAP-Patch material is a hot-applied, asphalt-based plug joint solution, which delivers a durable,stable, load-bearing, moisture-sealed repair. Consult sales representative for proper material selection in your climate region.

**ADHESIVE** - Hot applied sealant protects the joint and backer rod, preventing moisture from penetrating the joint and lower bridge structure, and holds intrusion barrier in place prior to introduction of the plug material. Consult sales representative for proper material selection in your climate region.

**BACKER ROD** - Compressible foam material which helps seal the joint in preparation for application of the joint adhesive.

**INTRUSION BARRIER** - Galvanized steel plates (or other, approved, intrusion barrier material) provide a strong, level bridge across the joint opening, as well as prevent plug material and other non-compressible debris from entering the joint opening. It is recommended the barrier extend at least 2" past both edges of the joint opening.

**FRICTION COURSE/TOPPING STONE** - An optional layer of aggregate spread across the top of the plug material to increase friction and wear resistance. (GAP Topping Stone recommended)

## INSTALLATION

### STEP 1: JOINT PREPARATION

Saw cut the pavement to a depth that exposes the joint below the pavement surface. The width of the joint is typically 10-12 inches, with a width of 5-6 inches on each side of the expansion gap centerline. A minimum depth of 2 inches is necessary for the long term success of the joint. If the bridge has an asphalt driving surface, the concrete deck below should be completely exposed. Remove all material between the saw cuts, including the waterproofing, riser bars, old expansion joint material, and any loose concrete or repair materials.

All vertical and horizontal surfaces must be cleaned of all dirt, sludge, and debris so as to not inhibit the application of the heated joint adhesive. If necessary, use a propane torch or heat lance to ensure the joint surfaces are sufficiently dry that they register below 12 percent on a masonry moisture meter. vvCare should also be taken to ensure a matching level surface on each side of the joint. This is necessary to ensure that the intrusion barrier does not rock when laid over the joint prior to the application of the GAP-Patch material.

NOTE: For a cleaner finished look, we recommend a 4-inch band of construction or duct tape be placed parallel with the joint edge on the surface of the surrounding pavement to catch any spills or drips that may fall during installation. Tape should be removed within minutes of application before the plug joint material can cool down and make it difficult to remove.









## STEP 2: ADHESIVE APPLICATION

The hot-applied adhesive sealant is to be melted and heated in an oil jacketed melter to the products recommended application temperature. A thin layer of is to be applied to both horizontal and vertical surfaces. The binder can be brushed, squeegeed, or sprayed.

Once the binder has been applied to all surfaces, the intrusion barrier is to be placed over the joint gap. The barrier shall then also be coated with adhesive to prepare for installation of the plug material.







## STEP 3: PLUG MATERIAL INSTALLATION

The GAP-Patch material is to be melted and heated in an oil jacketed melter to an application temperature of 320° Fahrenheit. The melter must have automatic temperature control features that can regulate and maintain the proper application temperature, as well as an agitation mechanism that constantly blends the material and prevents segregation.

Once GAP-Patch has reached the proper pouring temperature, distribute the material into the prepared joint area. (We recommend continuous agitation to ensure even aggregate distribution, but STOP the agitation any time you need to add more blocks of material. Resume agitation only after the melter lid is once again securely shut.) Care should be taken to not needlessly spill or over apply the material, which could cause an unsightly appearance, as well as create potential safety concerns. GAP-Patch can be raked, pulled or pushed into all voids within the open joint. The joint void is to be filled to the top of the joint walls, creating a smooth, even surface when the material cools.

For joints deeper than 5 inches, material should be distributed in 2- to 2 ½-inch lifts. This will allow the joint to cool faster and prevent aggregate from settling unevenly. On extra deep joints, bulking stone can be used to create extra stability, but must be thoroughly mixed into plug material so that separations are not created between individual lifts.

GAP-Patch is somewhat self leveling and does not require a lot of hand tool work but may require some smoothing. Once placed, allow the material to set and cool.

(STEP 3: Continued)

If adding topping stone, apply it while plug materail is still hot, within a few minutes of application. Any surface tape used on the joint should be removed right after the topping stop application.

Once the joint has been poured, it must cool to 100° F or less before opening the bridge to vehicular or pedestrian traffic. In situations where the joint remains too hot (high ambient temperatures or high pavement temperatures), water or ice can be placed on the joint surface to more quickly cool the material.

NOTICE: GAP materials do not require compaction.



