

## Gravelpave2 Binder Options

Potential installations of Gravelpave2 can sometimes be curtailed by the grade limitation of our product. We state that Gravelpave2 cannot be used in areas where the grade exceeds 8% for automobile traffic. This limitation is not due to product functioning or traction, rather, it is the grade at which we have found that the stone fill in Gravelpave2 will migrate during storm events. This stone migration requires more maintenance effort for the owner, and this can become onerous. For this reason, we recommend 8% as being the maximum grade.

### **Portland Cement**

For installations wanting a steeper slope, using a binder in the Gravelpave2 fill will prevent the stone from migrating. The binder that we have used most commonly is Portland Cement. By thoroughly mixing the surface fill of Gravelpave2 with a 10% mix of Portland Cement by volume, this will adhere the stone pieces to each other and will eliminate fill migration during a storm even.

Use of this binder will reduce, but not eliminate the permeability of water through the system. Unfortunately, the use of cement binder will color the surface fill, and thus the area will be light grey. This can be an aesthetic concern, for designers so there is another option.

### **Clear Tree Resin Binder**

There is a clear tree resin binder available. Unlike the cement it totally eliminates porosity, and thus permeability through the product. The good thing is that this is clear and will not result in a grey area. One maintenance concern with this natural product is that with use and time, the tree resin's adherence can break down. Reapplication will be necessary throughout the life of the installation

Information for that option can be found here:

<http://www.midwestind.com/products-services/dust-control-products/soil-sement-stabilizer.html>

### **Polymer Binders**

There are also polymer solutions for achieving a clear binder for the surface material in Gravelpave2. These binders will make the surface look slightly "shiny", but otherwise the natural aesthetic of the stone fill is preserved. Our product has been used in conjunction with TechniSoil, and there is another product which would achieve the same end, Gravel-Lok. One great benefit of both polymer binding options is that they will only slightly reduce, but not eliminate permeability. Further, reapplication of the material is rarely needed.

Information for these options can be found here:

[http://technisoil.com/index\\_home.html](http://technisoil.com/index_home.html)

<http://celltekdirect.com/glok.html>

Whether you choose to use a cement binder, natural tree resin, or a polymer, the surface fill in Gravelpave2 can be held in place for a greatly reduced maintenance installation.