

# Gravelpave2 vs Concrete Pavements

## **Porosity**

As an alternative to traditional impervious pavements like concrete and asphalt, the runoff volumes generated by the Gravelpave2 surface will be greatly reduced. Indeed, as much as 35% of the compacted porous base course and porous wearing course pavement section is air (void), which will be the first area for stormwater to occupy as it falls upon the surface. Assuming a native soil of clay (not true in your case), with a depth of pavement 12" thick, then 35% of void would absorb a 4.2" rainfall before becoming saturated and beginning to create runoff. Variables: runoff from roofs and other hard surfaces directed to the porous pavement would diminish the rainfall capacity, but porous surfaces below the pavement would increase rainfall capacity.

## **Strength**

Gravelpave2 is designed to support 220 psi when empty, and when filled with fine gravel will support in excess of 5700 psi. These numbers relate directly to vehicular tire pressures, and are nearly twice as strong as standard site concrete materials. It must be remembered however, that the base course must receive the load transferred by the rings and grid, and must be designed accordingly to match design loads with capabilities of native soils below to avoid rutting (standard pavement design). Poor soils such as clay and silt should always use a geotextile filter fabric between the subsoil and the base course to prevent pot holes from developing.

## **Speed**

Gravelpave2 is expected to be used in secondary access pavement areas where traffic speeds are relatively low (15-20 mph max.). Surfaces subject to higher speeds may require use of a binder (10% cement by weight with fill stone).

## **Dust**

To maintain porosity objectives and criteria, we utilize gravel materials which have little (<5%) to no fines (passing #200 screen), in either the base course or filling the rings. Maximum size stone in the base course is 1" (25 mm), while maximum fill material size is 5/16" (8 mm). This surfacing will not have materials light enough to be lifted into the air by vehicle tires, so dust is eliminated.

## **Longevity**

Gravelpave2 can be expected to perform in service for upwards of twenty years in most climates, due to the UV inhibitors added to the resin prior to molding, and the thin (.25") layer of loose stone remaining above the rings after compaction. This material will shift around the surface with random traffic, and may require occasional brooming to recover the rings when consistent traffic patterns exist, such as at entry/exit points.

If you have further questions related to this comparison, please direct them to Invisible Structures, Inc., ph: 800-233-1510, fax: 800-233-1522.