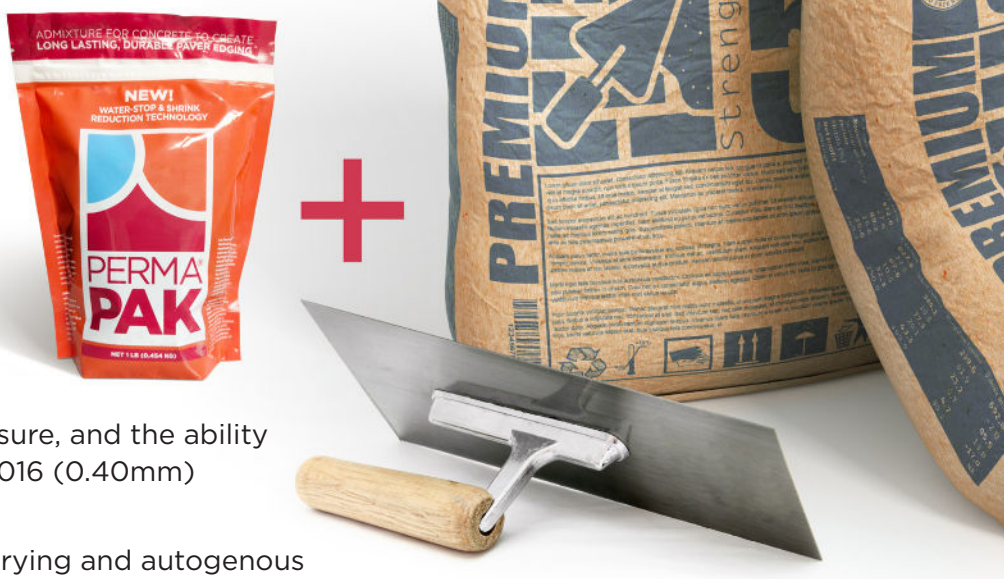
R A®

Perma Pak is designed to be blended with concrete on the job site BEFORE ADDING WATER. When Perma Pak, standard concrete (minimum 3000 psi recommended) and water are combined you end up with a Paver Edging that is designed to float and flex with dense or clear paver bases. With a proprietary blend of 5 admixtures in the perfect ratio, Perma Pak blended with concrete provides a durable, flexible and water tight paver edge restraint. Many years of field and lab testing has proven Perma Pak Paver Edging over all of our competitors.



(1) Perma Pak when combined with standard concrete is designed to provide these benefits:

- **Extreme flexural strength:** Makes standard concrete approximately 783% more flexible
- **Water stop technology:** Waterproofing throughout the entire concrete volume, improved resistance against hydrostatic pressure, and the ability to seal non-moving cracks up to 0.016 (0.40mm)
- **Shrink control:** Greatly reduces cracks related to drying and autogenous shrinkage, substantially improves impermeability improving concretes durability & life cycle.
- **Void Reduction:** Increased compressive & flexural strength, reduces permeability to increase the life of concrete
- **Macro Synthetic Fibers:** Reduces shrinkage & settlement cracking. Improves residual strength of concrete, improves impact resistance, and enhances durability of concrete.

PRODUCT USE

- Dense or Crushed bases (with a sand/screenings bedding layer)
- Clear or open graded bases (with a chip bedding layer)
- Concrete slabs, wet cast, and natural stone (flagstone)
- Residential and Commercial Pedestrian traffic
- Driveways (in conjunction with Drive Grid or Bilateral Geogrid)

NOTE: ICPI recommends a poured concrete curb for all driveway applications. Perma Paver Edging offers an economical solution when a concrete curb is not supported.

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YIELDS/MIXING/INSTALLATION
Open graded base: 1 Perma Pak/50-60# bag of concrete will produce 12'-16' open graded/clear base (chip bedding)
Dense Base: 1 Perma Pak/50-60# bag of concrete will produce 17'-21' dense/crushed base (sand bedding)
NOTE: yields may vary depending on the thickness of the bedding layer used. E.g.-a thicker bedding layer will take more product, therefore yielding less linear feet of edging.

1- Perma Pak per 50-60 lb. bag of concrete
3-Perma Paks per 2-80 lb. bags of concrete

We recommend 3000 psi or greater concrete for maximum results. We do not recommend mixing with mortars or plain portland cement, although a Perma Pak would add much benefit, a standard concrete consisting of gravel, sand and portland cement should be used.

PACKAGING/SHIPPING
1 Perma Pak (1 lb. per packet)
1 Box of Perma Paks (30 packets per box – 31 lbs.)
1 Skid (32 boxes/960 packets – 1030 lbs.)

BLENDING/MIXING
We recommend blending the Perma Pak with dry concrete for approximately (1) minute prior to adding water.

Once thoroughly blended with the dry concrete, add the concrete manufacturers recommended amount of water, then mix to a thick oatmeal consistency.

INSTALLATION
- Prepare the pavers to be edged by removing the bedding layer (sand/chips) thoroughly along the pavers edge.
- Using a scoop/flat shovel, distribute the Perma edge evenly along the edge.
- Using a 4" hand trowel smooth the Perma edge at approxmately a 36° pitch along the pavers edge. STAY LOW on the paver paver do not exceed more than 1/3rd of the paver thickness from the bottom.
- We recommend compacting the pavers when the edge is still wet for optimal performance. Pavers can be compacted after the edge is dry if needed.
- Proceed with fine grading around the pavers edge using topsoil, mulch, or stone.

FOR BEST RESULTS
- Blending the Perma Pak thoroughly with the concrete is very important assuring the admixtures are blended and well distributed into the concrete.
- It is very important to thoroughly remove the bedding layer and stay low on the paver with the Perma edge. This will produce the best performance, avoiding separation due to frost heaves, and allow maximum topsoil for grass growth. On a Standard 2 3/8 (60mm) paver only come up on the paver approxmately 1/2", on a 2 3/4" (70mm) paver come up approx. 3/4", and a 3" (80mm) come up approximately 1".
- When sowing grass seed or sod along the pavers, compress as much topsoil as possible along the pavers edge on top of the Perma edge to successfully grow grass in a dense soil bedding.
- When using open graded chips for the bedding layer the chips can undermine from the edge of the pavers when removed. Be sure to fill this void using Perma edge prior to troweling out the edge.
- Perma edge can be installed wider than 4" in areas of concern, but do not go beyond the paver base into the native soil.
- In below freezing application you can add a 3/4 cup of calcium chloride per 50-60 lbs of concrete/Perma pak blended to help the edge cure in below freezing conditions. Please keep in mind this will greatly speed up the curing process and your working time will be shortened.
  NOTE: You can also use insulation tarps or native soil to pull over the edge to hold in the ground heat while curing

DRIVEWAY APPLICATIONS:
Perma edge should be used with a drivegrid or bilateral geogrid. Using a 4' wide roll minimum, place the grid on top of your base, leaving approx. 6" of the grid beyond the pavers edge with approx. 3'6" of the grid under the pavers. Install the bedding layer (chips/sand) over the grid, and install the pavers. Remove the bedding layer, lifting the 6" portion of the grid as needed thoroughly remove the bedding layer and install the Perma edge as normal.

NOTE: ICPI recommends a poured concrete curb for all driveway applications. Perma Paver Edging offers an economical solution when a concrete curb is not feasible.