# TURFSTONE LINIA 100 PAVER

## LINIA 100 GRASS PAVER



| | HEIGHT/LENGTH/WIDTH DIMENSIONS (CM) | DIMENSIONS (IN) | |
|---|---|---|---|
| | 10 x 30 x 45 | $3^{15/16}$ x $11^{13/16}$ x $17^{3/4}$ | |
| Units/Surface | 7,41 / $m^2$ | 0,69 / $ft^2$ | |
| Qty/row | 1,08 $m^2$ | 11,63 $ft^2$ | |
| Qty/cube | 7,56 $m^2$ | 81,38 $ft^2$ | 7 rows |
| Weight/unit | 17,6 kg | 38,80 lb | |
| Weight/cube | 1015 kg | 2235 lb | |

55% opening area
ASTM C1319 standard

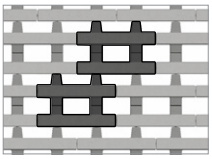
| SPECIFICATIONS | CODES | COLOUR |
|---|---|---|
| Regular Finish | PPU-991L-10 | Grey |

## COLOUR

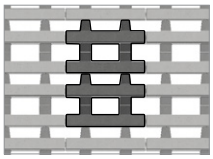


Grey

## PATTERNS



Half paver runner pattern



Checker pattern



Half paver runner pattern with grass



Checker patter with stones

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## SUMMARY - CONCRETE GRASS PAVERS

### CONTEXT

Urban development promotes urban heat and rainwater runoff. Urban heat islands, caused by impermeable pavements and buildings, increase pollution and energy consumption. Runoff erodes waterways and contaminates drinking water sources while reducing groundwater recharge. Concrete grass pavers, designed to mitigate these effects, allow for water infiltration and cool surfaces. Introduced in Germany in 1961 for parking lots, these pavers have since been used in Europe and North America to limit erosion and support infrastructure such as parking areas, boat ramps, and emergency access routes.

### PROPERTIES

Defined by ASTM C1319 standards, concrete grass pavers measure up to 610 x 610 mm (24 in x 24 in) with a minimum thickness of 80 mm (3 1/8 in). They have an average compressive strength of 35 MPa and a water absorption rate of less than 6%, making them resistant to freeze/thaw cycles. These pavers can be grid or scalloped in shape, and their solid surface area ranges from 45% to 75%.

### DESIGN AND CONSTRUCTION

Concrete grass pavers are installed on a compact granular foundation with a sand or stone screening bedding layer. The openings can be filled with topsoil and grass or aggregate depending on use. The choice between grass or aggregate in the openings depends on the intended usage intensity. Most grasses require at least five hours of sunlight per day to thrive. Foundations must be thick enough to support loads; typically, the thickness required under asphalt surfaces is adequate for concrete grass pavers. For foundations on poorly drained soils, it is advisable to use a perforated plastic drainage pipe wrapped in geotextile to remove water accumulation.

### DESIGN FOR REDUCING RUNOFF

Concrete grass pavers effectively reduce rainwater runoff by promoting infiltration into the soil, unlike traditional impermeable surfaces. They have a runoff coefficient between 0.2 and 0.4, much lower than surfaces like asphalt. This simulates conditions close to natural spaces, thereby reducing flood risks and alleviating pressure on drainage systems. Filling the openings with aggregate further enhances this capability. These pavers represent a sustainable solution for rainwater management while contributing to groundwater recharge and ecosystem protection.

### MAINTENANCE AND USAGE

Pavers require normal grass maintenance, such as watering, mowing, weeding, and occasional fertilization. Openings in the pavers can be filled with aggregate in case of intensive use or if the owner prefers not to maintain the grass.

### COMBATING URBAN HEAT ISLANDS

Grass paver surfaces help reduce heat islands by lowering local temperatures, thereby creating more comfortable urban microclimates. Concrete grass paver pavements are a proven solution for cooling urban climates and reducing air pollution.



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