Ecomerchant FirmGround 70 - Installation Instructions

Subgrade

Excavate to formation level as indicated on the drawing, providing a minimal (1:30 - 1:100) fall to the drainage collection system. Compact subgrade, using either a vibrating roller or vibrating plate, making good soft spots with suitable material.

For Attenuation Systems

If the exposed subgrade surface displays hollows and; or sharp protrusions (and is therefore unsuitable for the direct installation of the geomembrane) then the specified geotextile should be incorporated above and beneath the geomembrane, to afford protection.

Installation of the specified geomembrane system must be by an approved welding technique, with the benefit of a comprehensive on-site CQA (Control Quality Assurance) procedure. Install the specified AquaCrate drainage network in accordance with the detail design.

For Infiltration Systems

Lay the specified geotextile, overlapping the joints by 200mm, ensuring that sufficient geotextile protrudes beyond the anticipated wearing course level to allow final trimming.

Sub-base

Use granular material (crushed gravel. rock or concrete) as specified, which must be sound, clean, non friable and free from clay or other deleterious matter. Install the designed depth of sub-base as specified, in layers not greater than 200mm thick, (taking care not to puncture the underlying membrane within the Attenuation System). Compact each layer in turn with a vibratory plate, type DVP 75/22" plate. or suitable roller. Overlay the sub-base with the specified geotextile, overlapping the joints by 200mm.

Bedding Layer (if required)

Lay, screed and compact to level, a 30mm depth of appropriate bedding layer material (sharp sand). The requirement for, and selection of, the bedding layer material is entirely dependant upon the application and design criteria of the specific project. For grass reinforcement mix the bedding layer 4:1 with a good quality top soil to ensure good root growth.

Wearing Course

FirmGround48 should be laid such that each modular unit abuts its neighbouring units, each being positively interlinked with the others by means of the curved locating lugs within the corresponding slots. Each unit should be mechanically interlocked by means of tapered locking pins (inserted through the locating lugs) to prevent lateral displacement. (N.B. 8 pins/m2 are used for grass and 16 pins/m2 are used with gravel. Once a fully interlocked matrix has been formed, then the specified rootzone/grass seed infill material or natural aggregate should be used to infill each cell such that a continuous, permanently porous, high load bearing structure is thereby created.

Infill Materials (sand and soil mix/aggregate)

The selected infill material should be specified on a project specific basis dependant upon the application and design requirements, but the following could act as a guide:

For Sand Bed

A good quality compacted silica sharp sand should be used approximately 30mm thickness after compaction.

For Gravel Fill

Aggregate size should not exceed 15mm and should ideally not be below 6mm (typically 10mm single sized crushed rock). The use of an angular gravel rather than a river washed rounded gravel will aid compaction and prevent migration from the units.

For Grass Fill

A good quality topsoil should be used to infill the units to the top and allowed to settle; grass seeding followed immediately by a top dressing of a good quality fertiliser should ensure adequate grass growth.

Seeded areas should be regularly watered for a period of 6 weeks following installation

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sales: 01793 847 444
email: info@ecomerchant.co.uk
web: www.ecomerchant.co.uk