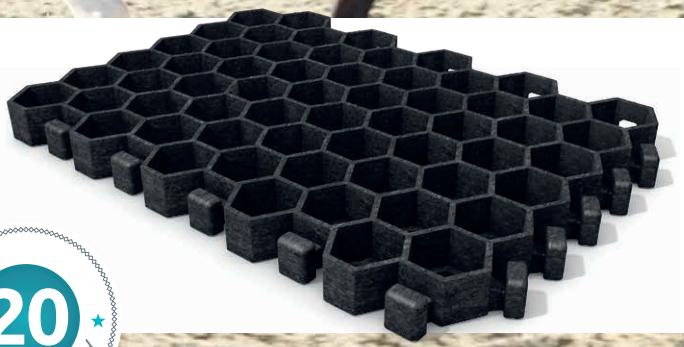
AgTec

TECHNICAL GUIDE AND DATA SHEET

GRAVEL & PADDOCK PAVER



AGTEC Gravel & Paddock Pavers are made from 100% recycled plastic. They are specially designed to support and cushion horse hooves but are strong enough to support the weight of vehicles.

20 YEAR WARRANTY

AGTEC Gravel & Paddock Pavers are specifically designed and tested for horses. The cell wall is thick enough to support large breeds yet the cell aperture is small enough for foal and pony hooves. Paddock Slab is made of 100% recycled plastic and specially formulated to imitate a good equine surface.
It cushions and supports the hoof while being strong enough for trucks. Paddock Slab is ideal for:

- **Arena and school surfaces**
- **Lunging rings and turnout areas**
- **Mud prevention**
- **Horse trailers, car and truck parking**

OVERVIEW

Material	**100% recycled mixed polyolefins**
Nominal size	**19¾" x 16" x 1⅝"**
Unit weight	**4.6 lbs**
Coverage	**2.15 square feet/grid**
Compressive strength *max. load/unit	**465 psi** (empty), **73,090 lbs*** **1,350 psi** (filled), **228,300 lbs***
Connection type	**T connector and slots**
Cell wall thickness	**¼"**
Color	**Black**
Surface finish	**Sand, gravel or grass**
Infiltration rate	**196"/hr for gravel**
Pallet size	**45 x 45 x 88"** (52 layers of 6)
Pallet details	**312 units, 1,485 lbs**
Compliant with	USA: **Americans with Disabilities Act** Canada: **Charter of Rights and Freedoms & The Canadian Human Rights Act**

TRIED & TESTED

Designed, tried and tested for horses. Many standard ground reinforcement grids are simply not up to equine use, the cell walls are often too thin and break and the cells can be too big for smaller hooves. Many standard grids are also made from hard plastics like HDPE that do not cushion the hoof or protect it from impact.

According to the British Horse Society, a horse and rider exerts a greater load than a typical truck due to the much smaller area of a hoof in contact with the ground compared to a truck tire – 185psi compared to a typical truck tire load of 135psi.

Strength and lexibility

The most common testing for heavy duty loads is HS25. During independent testing, AGTEC Gravel & Paddock Pavers easily met these standards. Even when unfilled, they can bear almost 465 psi (73,090 lbs) and when filled with sand, gravel, soil or grass, these pavers can bear 1,350 psi (228,300 lbs). This is more than enough for large horse trailers, trucks and other equine requirements. Of course, strength without flexibility can lead to cracks, breakages and ultimately product failure. When tested cell walls are able to flex by more than 10% without breaking.

AgTec LLC
125 Mayo Road,
Hampden, Maine 04444

1-207-692-0700
sales@agtec.com
www.agtec.com

100% RECYCLED PLASTIC

AGTEC Gravel & Paddock Pavers are made from an exceptionally strong, versatile and durable plastic material made from 100% recycled plastic, that comes with a 20-year warranty.

Lighter than concrete and cheaper than steel, these plastic pavers will not rot or rust, weather, corrode, and won't splinter or crack in extreme cold. These pavers look good all year round and need little to no maintenance.

Our pavers are completely moisture-repellent and do well in wet and damp conditions. They are produced without preservatives, are non-toxic and non-polluting. Best of all, they are 100% recyclable.

MUD REDUCTION & DRAINAGE

Mud is a big problem for horses. It can cause softening of hooves, abscesses, mud fever, tendon/ligament issues, thrush and lost shoes. Good drainage and protecting the ground from being churned are the best ways to prevent mud from developing. For mud-prone areas like paddocks, turnout entrances, sacrifice areas, and feed and watering areas. A free-draining base will solve the problem.

Ideal for:

- Riding arenas and schools
- Paddocks and pastures
- Lunging rings
- Feeding and watering areas
- General stable areas
- Mud control
- Barn parking and access for horse trailers
- Pasture access areas

Permeable design

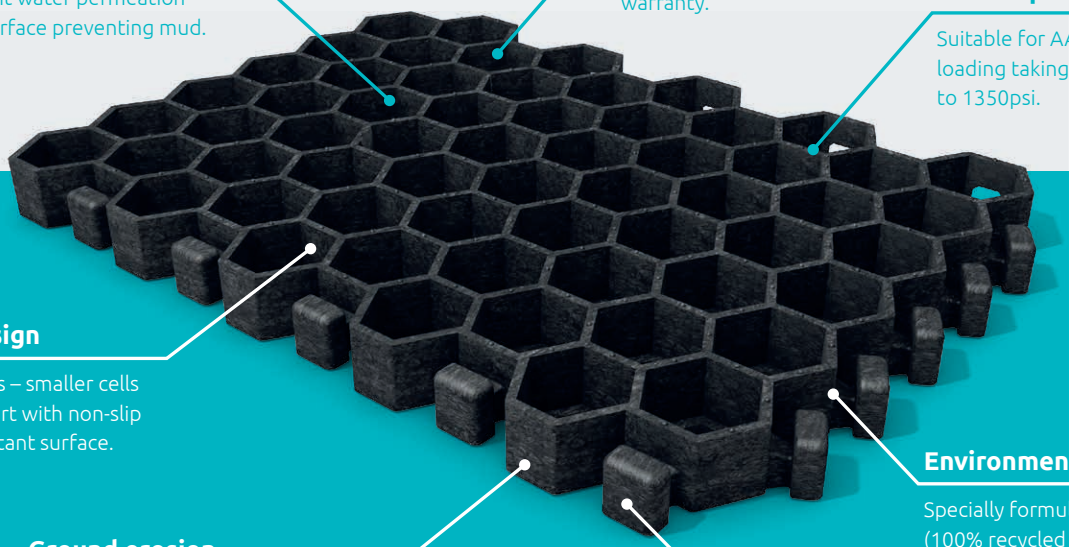
Offers excellent water permeation through the surface preventing mud.

Low maintenance

Quick and easy to install. Comes with a 20-year warranty.

Load capacity

Suitable for AASHTO HS25 loading taking loads of up to 1350psi.



Perfect design

Ideal for horses – smaller cells for hoof support with non-slip ammonia-resistant surface.

Environmentally friendly

Specially formulated (100% recycled plastic).

Ground erosion

Prevents erosion of earth, ideal at gates and feeding points.

Stable

Connection fit improves stability with generous expansion capability.

100% recycled
100% recyclable

TYPICAL INSTALLATION EXAMPLES

Paddock Pavers can be used as a stabilizing layer with a sand tread surface in arenas, pens and walkers; with a gravel fill for general access areas and horse trailer parking; with a grass fill as a mud-prevention measure in paddocks. Whatever application, good drainage is essential.

Installation without a base

If installed on a stable base, pavers can be used directly over leveled mud due to its strength and wide base. Deformation of the stabilized area should be expected as hooves create extensive point loads.

Preparation of the area

Before installation, remove topsoil and level the base.

Infilling the area

You will need approx. 8ft^3 of gravel or topsoil per 100 ft^2.

Expansion

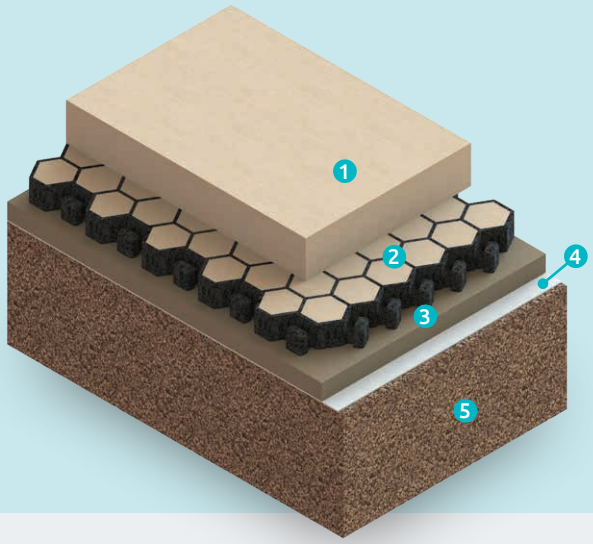
Our pavers are made with T connectors that can absorb up to 1/16” of movement/expansion, eliminating the need for expansion joints. Although separate expansion gaps are not necessary, a 1” gap (filled with gravel or topsoil) should be left between pavers and curbs or hard edging.

Arenas, schools, exercise areas, round pens & walkers

For a firm yet giving surface, install as a supporting layer onto an area with adequate drainage. Then overlay the slabs with a 3–4” tread layer of sand, rubber, fleece or a purpose-designed riding surface.

» Typical construction

1. 3-4” tread layer (sand, rubber, fleece etc.)
2. 1 1/2” Paver filled with angular sand
3. 1 1/4” compacted sharp sand or grit
4. Non-woven 3 oz needle-punched geotextile
5. 4–12” free-draining sub-base

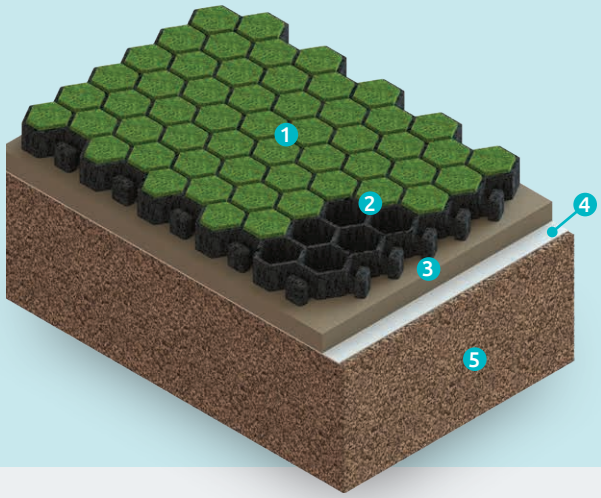


Paddocks, exercise areas, sacrifice areas, feeding spots, tethering/ mounting areas & paddock gates

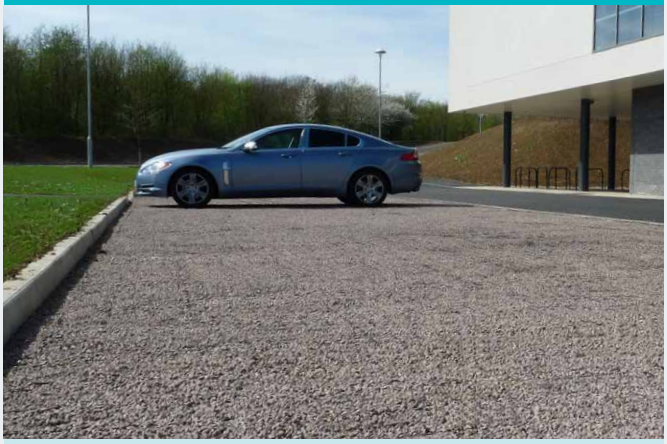
For an all-weather grass surface with excellent mud control, install on a free-draining sub-base, backfill the area with topsoil and then seed or turf for use instead of a sacrifice area. For soil-protection and mud-prevention in areas like paddock entrances, extend the paved area by approximately 16 ft into the paddock – maintenance and mowing are unaffected.

» Typical construction

1. Grass finish (seeded or turfed)
2. 1 1/2” Paver filled with topsoil/sand fill
3. 1 1/4” compacted sharp sand or grit
4. Non-woven 3oz needle-punched geotextile
5. 4–12” free-draining sub-base



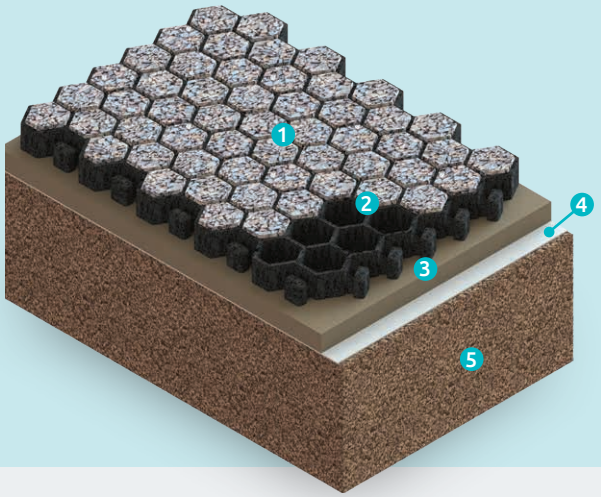
Access and trails, general stable areas, car parking & horse trailers



For a gravel finish that’s suitable for horses, install on a free-draining base. Fill the cells with a well-graded angular gravel (3/16–5/8”) and compact. A fine-grit top-dressing will maintain drainage levels and provide good hoof support. These pavers are suitable for all horse trailers, including trucks.

» Typical construction

1. Angular gravel finish (3/16–5/8”)
2. 1 1/2” Paddock Slab filled with 3/16–5/8” gravel
3. 1 1/4” compacted sharp sand or grit
4. Non-woven 3 oz needle-punched geotextile
5. 4–12” free-draining sub-base



100% recycled
100% recyclable

INSTALLATION

Whether using AGTEC Gravel & Paddock Pavers for an Olympic arena, a local stable or private yard, good drainage is essential . If the area does not have good drainage, supplementary drainage should be installed. If the subgrade is good, the topsoil can be removed and pavers laid directly onto the graded surface – an ideal method for heavy traffic areas like paddock entrances.

Most areas will need a base-layer that supports the surface and lets water drain through to the subgrade. The depth of this base-layer depends on the strength of the subgrade. Subgrade strength is measured by the CBR (Californian Bearing Ratio) and the adjacent table shows CBRs of typical soils.

Soil classification	Relative permeability	Typical CBR	Free-draining
Well graded gravels	Pervious	30 to 80	Yes
Poorly graded gravels	Pervious	20 to 60	Yes
Well graded sand	Pervious	10 to 40	Yes
Poorly graded sand	Semi pervious	10 to 40	Yes
Sandy clay	Impervious	5 to 20	No
Heavy clay	Impervious	3 to 6	No

SUB-BASE DESIGN

When the subgrade CBR is known and the permeability assessed, the depth of free-draining angular stone base can be calculated (note: standard base materials with a high degree of fines are not suitable for free-draining areas). Using a suitable thin plastic geogrid between the subgrade and the granular base can reduce the depth of base as shown below.

Typical use	CBR (%) of subgrade	Angular stone base depth inc. geogrid	Use of geogrid
• Small stable areas • Gates • Feeding areas • Around waterers	Not normally measured	4”	n/a
• Indoor and outdoor arenas • Warm-up • Round pens • Paddocks • Yards • Stables	>6	4”	n/a
	4–6	6”	30/30
	2–4	9”	30/30
	1–2	10”	30/30
• Car parking • Loading areas • Horse trailer areas	>6	6”	n/a
	4–6	7”	30/30
	2–4	11”	30/30
	1–2	19”	30/30

Note: A geogrid is a thin plastic grid used to reinforce soils – if no geogrid is utilized the angular base thicknesses indicated above should be increased by 50%.