

Uniclass L815
CI/SfB (90.49)

TECHNICAL GUIDE

PADDOCK SLAB



HAHN Paddock Slab is specifically designed for horses. 100% recycled plastic, it's specially formulated to support and cushion the hoof but is strong enough to take HGVs.

Paddock Slab is 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 hanit® which is 100% recycled plastic and specially formulated to imitate a good equine surface. It cushions and supports the hoof while being strong enough for HGVs. **Paddock Slab** is ideal for:

- » Arena and school surfaces
- » Lunging rings and turnout areas
- » Mud prevention
- » Horseboxes, car parking and HGV parking

OVERVIEW

Material	100% recycled mixed polyolefins
Nominal size	50 cm x 40 cm x 4 cm
Unit weight	2.1 kg (10.5 kg/m ²)
Coverage	5 units/m ²
Compressive strength	3,198 kN/m ² , 326 t/m ² (empty) 9,990 kN/m ² , 1,000 t/m ² (filled)
Connection type	T connector and slots
Cell wall thickness	0.6 cm
Colour	Black
Surface finish	Sand, gravel or grass
Infiltration rate	5,000 mm/hr
Pallet size	1.2 m x 0.8 m x 1.15 m (25 layers of 4)
Pallet details	100 units, 230 kg (64 pallets/load)
Compliant with	Part M (Building Regs) Equality Act (DDA) NBS Q23 (gravel) & Q30 (grass)

TRIED & TESTED

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 wide 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 static load of up to 8.12 kN and a live load of 5 kN. This means that 110–250 mm diameter hoof exert loads up to 1,380 kN/m² or 140 tonnes/m². That's more than the typical HGV tyre loading of around 1,000 kN/m²!

This is why HAHN created **Paddock Slab**. Designed, tried and tested for horses.

» Strength and flexibility

The most common testing for heavy duty loads is **SLW60**. During independent testing, **Paddock Slab** easily met these standards. Even when unfilled, they can bear almost 3,200 kN/m² (326 tonnes/m²) and when filled with sand, gravel, soil or grass, **Paddock Slab** can bear almost 10,000 kN/m² or 1,000 tonnes/m². This is more than enough for large horse boxes, HGVs and other equine requirements.

Of course, strength without flexibility can lead to cracks, breakages and ultimately product failure. When tested, **Paddock Slab** cell walls are able to flex by more than 10% without breaking.



INTRODUCING hanit®

Developed by exclusively by HAHN, **hanit®** is an exceptionally strong, versatile and durable material made from 100% recycled plastic. More than 2,000 HAHN products are made out of **hanit®**, including paving, profiles, fencing, palisades, decking and outdoor furniture – most with a 20-year warranty.

Unlike wood, concrete or steel, weather isn't a problem for **hanit®**. It's also lighter than concrete and cheaper than steel. **hanit®** will not rot or rust, it won't splinter with age or crack in extreme cold. It's easy to work with, looks good all year round and needs little or no maintenance.

hanit® is completely moisture-repellent and loves wet or damp conditions. It's produced without preservatives, is non-toxic and non-polluting. Best of all, it reduces the strain on landfill and is 100% recyclable.

PADDOCK SLAB & MUD!

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 up are the best ways to prevent mud. For mud-prone areas like paddock/turnout entrances, feed/watering areas and sacrifice areas, **Paddock Slab** on a free-draining base will solve the problem.

Ideal for:

- » Riding arenas and schools
- » Paddocks and pastures
- » Lunging rings
- » Feed areas and watering places
- » General stable areas
- » Mud control
- » Parking and access for horse boxes
- » Pasture access areas

Permeable design

Offers excellent water permeation through the surface preventing mud.

Low maintenance

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

Load capacity

Suitable for load class SLW 60 according to DIN1072 taking loads of up to 1,000 tonnes/m².

Perfect design

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

Ground erosion

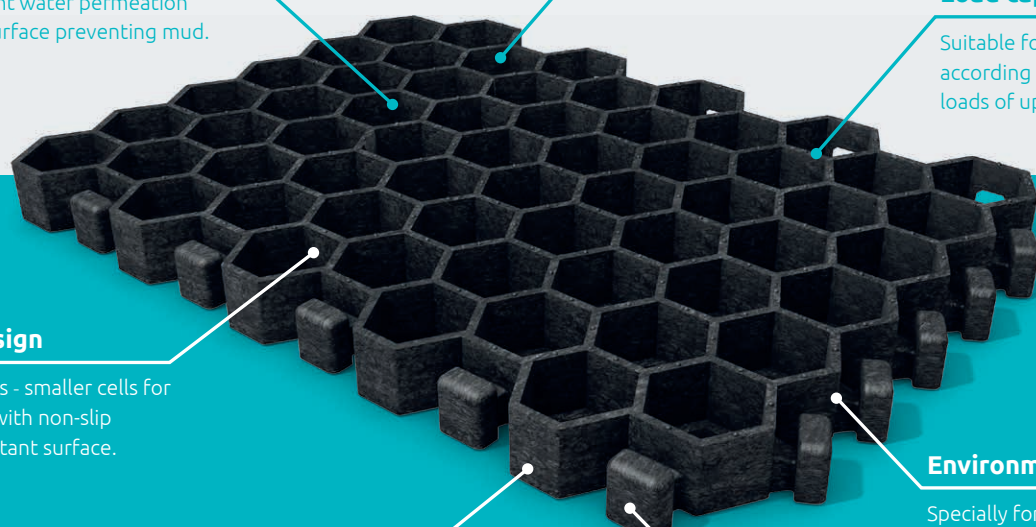
Prevents erosion of earth, ideal at gateways and feeding points.

Environmentally friendly

Specially formulated **hanit®** (100% recycled plastic).

Stable

Connection fit improves stability with generous expansion capability.



TYPICAL INSTALLATION EXAMPLES

Paddock Slab can be used: as a stabilising layer with a sand tread surface in arenas, pens and walkers; with a gravel fill for general access areas and horse box parking; with a grass fill as a mud-prevention measure in paddocks. Whatever purpose **Paddock Slab** serves, good drainage is essential to prevent excessive water mixing with the infill.

Installation without a base

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

Preparation of the area

Before installation, remove topsoil and level the base.

Expansion

Paddock Slab has integral T connectors that can absorb up to 2 mm of movement/expansion, eliminating the need for expansion joints. Although separate expansion gaps are not necessary, a 25 mm gap (filled with gravel or topsoil) should be left between **Paddock Slab** and kerbs or hard edging.



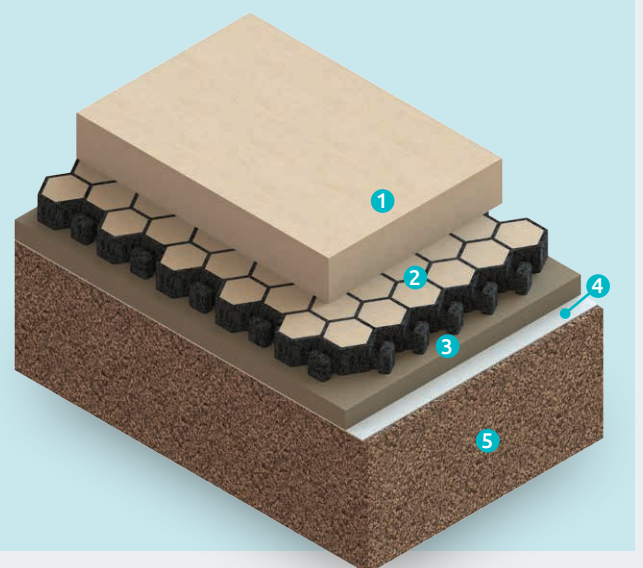
Arenas, schools, exercise areas, round pens & walkers



For a firm yet giving surface, install **Paddock Slab** as a supporting layer onto an area with adequate drainage. Then overlay the slabs with a 75–100 mm tread layer of sand, rubber, fleece or a purpose-designed riding surface.

» Typical construction

- 1 75–100 mm tread layer (sand, rubber, fleece etc.)
- 2 40 mm **Paddock Slab** filled with sharp sand
- 3 30 mm compacted sharp sand or grit
- 4 Non-woven 100 g needle-punched geotextile
- 5 100–300 mm free-draining sub-base



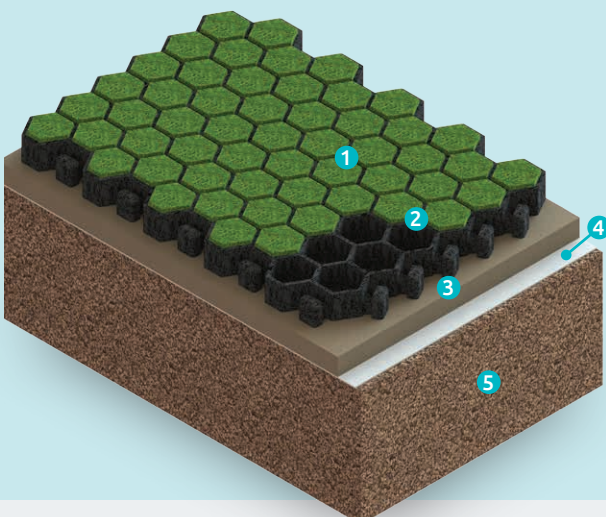
Paddocks, exercise areas, sacrifice areas, feeding spots, tethering/ mounting areas & paddock gates



For an all-weather grass surface with excellent mud control, install **Paddock Slab** on a free-draining sub-base, backfill the area with topsoil and then seed or turf for use instead of a sacrifice areas. For soil-protection and mud-prevention in areas like paddock entrances, extend the **Paddock Slab** area by approximately 5 m into the paddock.

» **Typical construction**

- 1 Grass finish (seeded or turfed)
- 2 40 mm **Paddock Slab** with 4:1 topsoil/sand fill
- 3 30 mm compacted sharp sand/soil
- 4 Non-woven 100 g needle-punched geotextile
- 5 100–300 mm free-draining sub-base



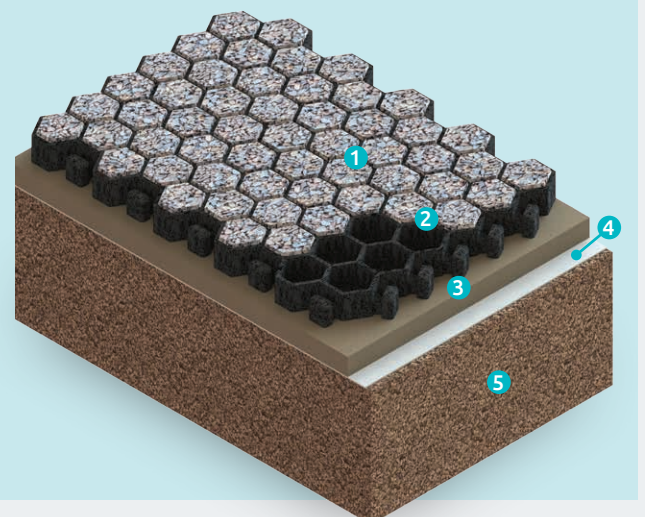
Access and bridle paths, general stable areas, car parking & horse box access



For a gravel finish that's suitable for horses, install **Paddock Slab** on a free-draining base. Fill the cells with a well-graded angular gravel (5–15 mm) and compact. A fine-grit top-dressing will maintain drainage levels and provide good hoof support. **Paddock Slab** is suitable for all horse boxes, including HGVs.

» **Typical construction**

- 1 Gravel finish (5–15mm angular with grit blinding)
- 2 40 mm **Paddock Slab** filled with 5–15mm gravel
- 3 30 mm compacted sharp sand or grit
- 4 Non-woven 100 g needle-punched geotextile
- 5 100–300 mm free-draining sub-base



INSTALLATION

Whether using **Paddock Slab** 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 **Paddock Slab** 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 table below 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 DoT Type 3 sub-base can be calculated (note: DoT Type 1 sub base material is not free-draining and not suitable for free-draining areas). Using a suitable geogrid between the subgrade and the sub-base can reduce the depth of sub-base as shown below.

Typical use	CBR (%) of subgrade	DOT Type 3 depth (mm) inc. geogrid	Use of geogrid
<ul style="list-style-type: none"> • Small stable areas • Gateways • Feeding areas • Around water troughs 	Not normally measured	100	n/a
	>6	100	n/a
<ul style="list-style-type: none"> • Indoor and outdoor arenas • Warm-up • Round pens • Paddocks • Yards • Stables 	4–6	150	30/30
	2–4	225	30/30
	1–2	260	30/30
	>6	150	n/a
<ul style="list-style-type: none"> • Car parking • Loading areas • Horse box areas 	4–6	175	30/30
	2–4	275	30/30
	1–2	475	30/30
	>6	150	n/a

Note: If no Geogrid is utilised the sub base thickness's indicated above should be increased by 50%.

OTHER GROUNDWORK & SURFACING PRODUCTS BY HAHN

Hanpave



Heavy Duty Ground Grid



EcoSlab



Decking

