



# GEOHEX™

AUSTRALIA'S FAVOURITE SOIL  
EROSION CONTROL SYSTEM



## Product Information and Installation Guide

# Why GEOHEX™?

The GEOHEX™ Erosion Control System is a unique and innovative ground stabilisation technology that is easy to use and quick to install.

GEOHEX™ is a permeable ground stabilisation technology that has been engineered for use in multiple applications ranging from soil & turf stabilisation for the enhancement of water saving measures, to the reinforcement of roads in and around construction sites.

With a load rating of 1,200 tonnes per square metre, the GEOHEX™ Erosion Control System is a safe and cost effective substitute for concrete in many applications. Made from 100% recycled plastic, it is environmentally friendly and it's lightweight design reduces logistic costs, while at the same time, increasing ground stability and water conservation.

Designed and manufactured in Australia to ISO9001:2014 standards, GEOHEX™ is made from high impact resistant, 100% recycled Reprolene™.

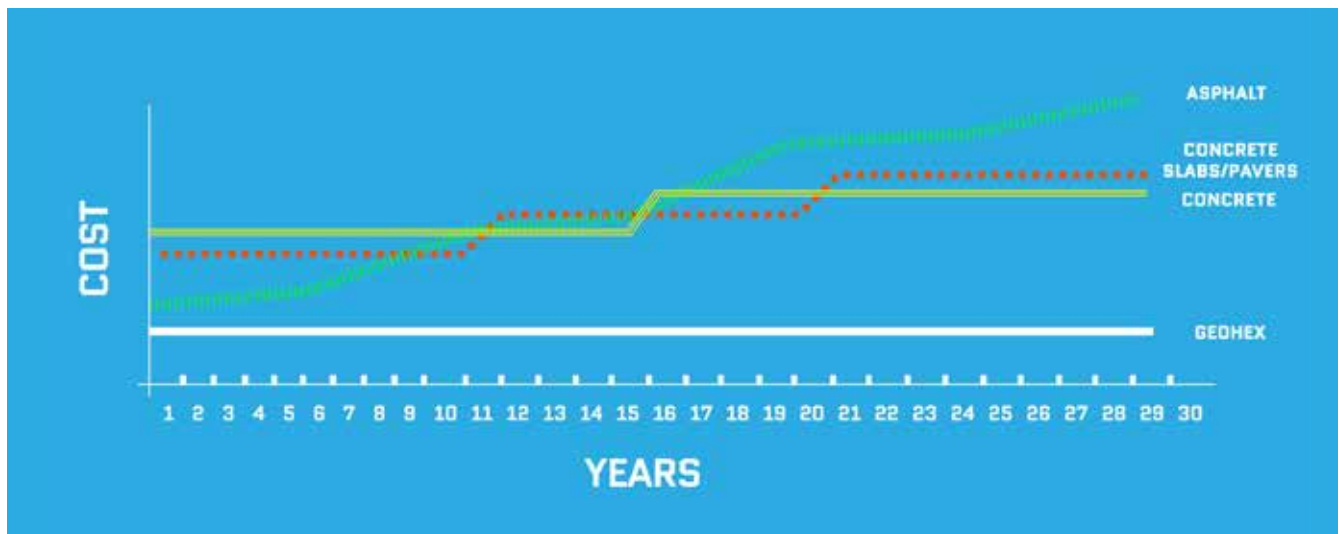
## GEOHEX™ can be used for soil, turf, embankment and road stabilisation in or around:

- Cattle and equine feedlots
- Approaches and exists to livestock yards
- Rural gateways & driveways
- Residential & commercial driveways
- Landscaping applications
- Road works
- Footpaths
- Sportsgrounds
- Golf courses
- Parking areas
- Council landfills
- Civil projects
- Resource development sites
- Tailings and waste dams
- Dump walls



# Competitive Advantage

	GEOHEX™ EROSION CONTROL SYSTEM	CONCRETE	ASPHALT	CONCRETE SLAB/TRADITIONAL PAVERS
Longevity:	15 – 20 years	15 – 20 years	5 – 10 years	10 – 15 years
Materials:	Polypropylene paver	Cement, steel, mesh, formwork	Tar & aggregate mixture	Pre-cast slabs
Maintenance:	Very low Grass/gravel maintenance	Low Prone to cracking & unevenness	High Top seal every 2 years	Low Prone to cracking & unevenness
Cost:	\$	\$\$\$	\$\$\$	\$\$
Appearance:	Various fills to suit landscape requirements	Uniform	Uniform	Uniform, higher cost options available
Permeability:	100%	None	None	15 – 30%
Sustainability:	Low impact Manufactured using 100% recycled material. Product also lightweight and recyclable.	High impact Not recyclable or reusable.	High impact Not recyclable or reusable.	High impact Not recyclable or reusable. Requires waste dump.

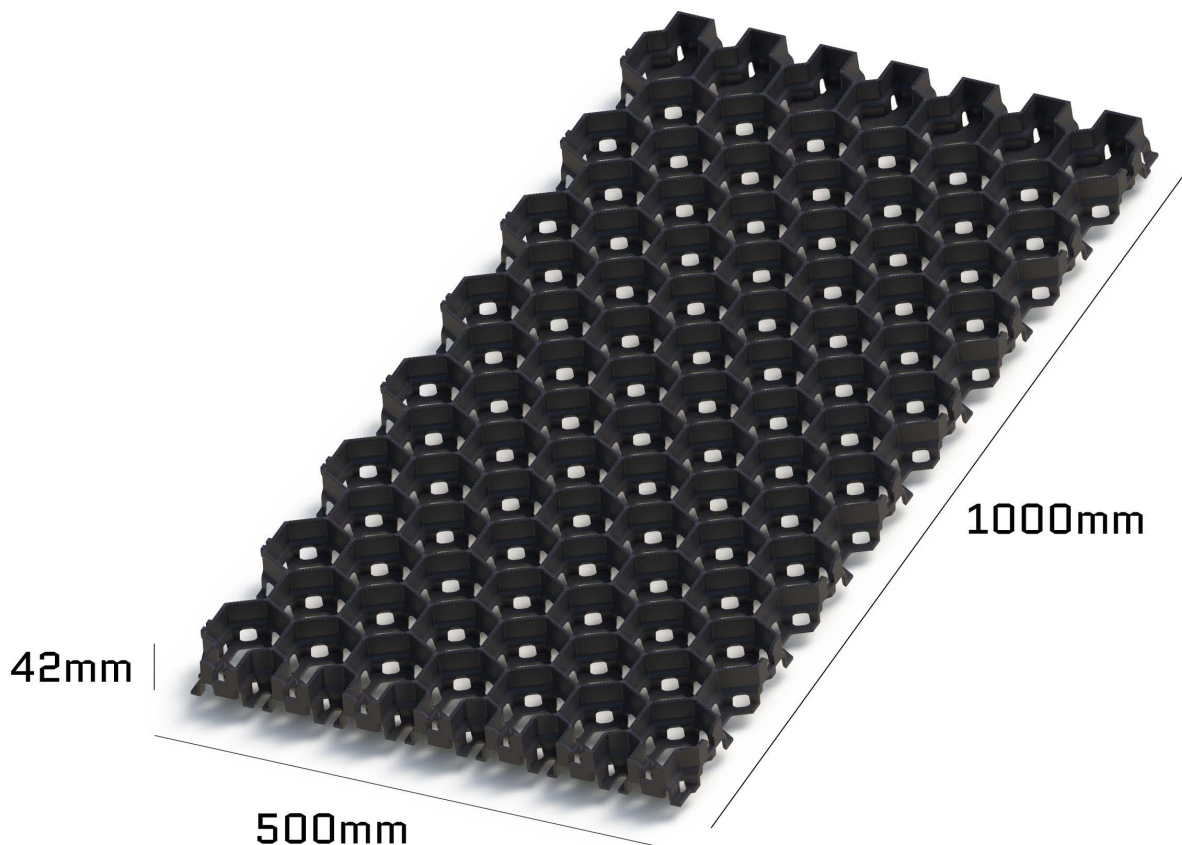


Compared to other ground stabilisation alternatives, GEOHEX™ remains a cost effective, reliable option to prevent soil erosion. Materials like asphalt, concrete and bitumen can require repair and maintenance, increasing it's cost over time. GEOHEX™ requires little to no maintenance and is manufactured to last.



# Technical Specifications

<b>Material:</b>	Recycled high impact, co-polymer polypropylene
<b>Specifications:</b>	L 1000mm x W 500mm x H 42mm - 2 GEOHEX™ pavers = 1 square metre
<b>Maximum Load Bearing Capacity:</b>	1200 t/sqm (filled) 300 t/sqm (unfilled)
<b>Weight:</b>	2.3 kg
<b>Temperature Range:</b>	- 45°C to 100°C
<b>Pallet Quantity:</b>	170 units or 85m <sup>2</sup> to a standard pallet (2.1m)
<b>Colour:</b>	Black (custom colours available on request)
<b>Water Permeability:</b>	99.7%
<b>Sustainability:</b>	100% Recyclable
<b>Infill Requirements:</b>	1m <sup>3</sup> per 20m <sup>2</sup> of GEOHEX™
<b>Connection Method:</b>	Clip lock system
<b>Applications:</b>	Equine yards, cattle yards, livestock feedlots, cattle troughs, stables, rural roads & driveways, walkways, car parks, turf and grass driveways, residential driveways, garden landscaping solutions, hardstand areas, public spaces, sloped land* and more.



\*For best results, we recommend installing on a maximum slope of 10mm.

# Why use GEOHEX™



100% recyclable



Can be laid in any weather



Non-toxic to humans, animals & plants



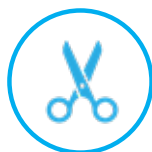
Easy DIY install



More cost effective than concrete



Lightweight & durable



Can be cut to size



Custom colours available



Nests neatly for efficient storage & transportation



Non-reactive to solvents, oils, chemicals and water



Reduces maintenance costs

FILL MATERIAL	PROCEDURE	TIPS
Lime (crushed/granular)	Use at a diameter of up to 15mm and ensure medium to high levels of compaction.	Avoid lime with a high clay content as the surface will become excessively slippery.
Pumice	Great for drainage and soft surface requirements.	Ensure good compaction and low sand content.
Blue metal and recycled crusher/cracker dust	Very good compacter and useful for exits and entry roads.	Needs thorough and uniform compaction.
Rotten stone (also known as riverstone)	Good for bovine hooves and is also preferable for many other livestock.	Must be no bigger than 15mm in diameter. Can get slippery when wet. Must be soft enough to avoid damaging the GEOHEX™ Erosion Control System.
Soil	Only use where extremely soft surfaces are required. Ensure a very high level of compaction. Also good for areas where the promotion of turf growth is required.	Ensure the soil is clean and free of contaminants such as large rocks, metal or glass. Can be mixed with 10% to 15% washed sand.
Other	Fine, rock or soil like material that is less than 15mm in diameter.	Avoid any fillings that have high stone content or sharp edges.

# Installation Guidelines

The GEOHEX™ Erosion Control System is a unique ground stabilisation and sediment control technology with a multitude of uses and easy installation. An ideal solution for rural and farming, civil construction, commercial and residential applications, GEOHEX™ can be used for temporary roads, walkways, car parks, landscaping and more. GEOHEX™ is a cost-effective, simple, and sustainable alternative to concrete or asphalt.



## Step 1. Prepare the site by excavating a depth of 50mm to 200mm.

GEOHEX™ works most effectively when sitting flush with the surrounding ground level. Please allow for the height of GEOHEX™ pavers (42mm) when excavating pre-installation.

Please note, depending on the weight GEOHEX™ will be withstanding in your installation, excavating an additional 10mm to allow for the installation of an aggregate drainable road base may be beneficial. Please see weight guide below for more information.

Installing a quality edging can also support installation best practices of GEOHEX™. Existing earth can be used as a natural edge, as can a number of other edging materials like timber, metal, and concrete.

When installing edging for your GEOHEX™ installation, allow 15mm on the surrounding edges for expansion.

See **GEOHEX™ Base Depth Guide** on Page 10 for correct depths required for your application.



## Step 2. If the base is a reactive soil or sand, lay a geofabric over the leveled base before installing an aggregate drain-able road base. Lightly compact the site to ensure a level installation of GEOHEX™

Please note, the thickness of your base depends on type of traffic travelling over the GEOHEX™ pavers. It's important the base is level with no pot-holes, high spots or large rocks sticking up through the base.

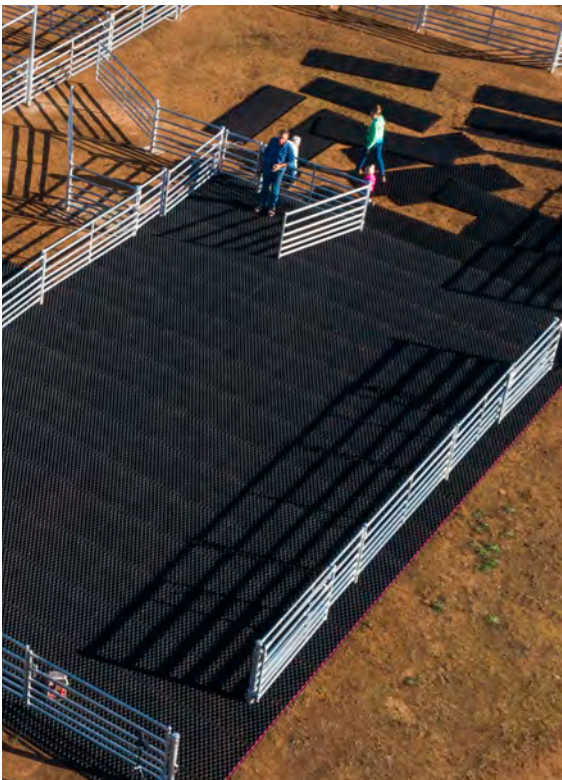
# Installation Guidelines



**Step 3. Once the drainage base has been lightly compacted, start laying the GEOHEX™ pavers. When laying GEOHEX™, be sure that the male lugs are facing towards the outer edges of the install. This ensures the next piece you lay aligns the male lugs and female joints.**

To be sure GEOHEX™ pavers are correctly connected, stand on the connection point of the pavers, on the male lug side to be sure you feel it clip into the female joints. Once connected, there is a small amount of flexibility in the pavers, allowing for some movement to make minor adjustments and for the pavers to follow ground contours.

Remember, GEOHEX™ can be cut with a number of different tools for a clean and safe install. A circular saw is quick and will deliver reasonably straight edges, while a reciprocating saw will allow trimming around curves.



**Step 4. Once you have laid GEOHEX™ as outlined in Step 3, fill GEOHEX™ with the aggregate of your choice.**

Please note, depending on your installation, different aggregate choices may suit your install better than others. Once you have installed your choice of aggregate for best results, compact the aggregate or soil as much as possible.

1m<sup>3</sup> of aggregate is required per 20m<sup>2</sup> of GEOHEX™.

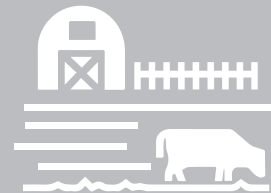
# Aggregate Base Recommendations

**Driveways** – Any aggregate choice will suit, provided the aggregate is no larger than 10mm-15mm in diameter. For sloped driveways, please see Slopes for more information.

**Horse Stables** – Any aggregate choice will suit, provided the aggregate is no larger than 10mm-15mm in diameter.

**Cattle Yards** – Any aggregate choice will suit, provided the aggregate is no larger than 10mm-15mm.

**Lawns** – Compact soil to the top of the GEOHEX™ pavers before watering and filling in any spots that are uneven. Turf can then be laid over the top of the GEOHEX™ pavers. Alternatively, seed or spray grass can be used.



Pictured Cattle Yard

# Installing GEOHEX™ on sloped surfaces

When installing GEOHEX™ on any slope, it is best practice to secure the pavers with 150mm - 300mm landscaping screws with a 17mm bugle head. The number of screws per needed per panel is relative to the angle of the sloped surface the product is being installed on.

Please note when laying GEOHEX™ on a slope, it is important not to overfill the GEOHEX™ paver. Overfilling may result in aggregate being lifted from within the honeycomb cell. We recommend using an aggregate of 10mm -15mm in diameter to allow for ample drainage.

For adjoining areas on sloped installations, divert high levels of runoff water away from the GEOHEX™ installation site to prevent erosion forming under the product.

For subterranean installations, 100mm x 200mm plinths may be used at a depth of 200mm to stabilise ground movement beneath GEOHEX™. Refer to your current state building codes for more detailed reference information.

**Important note** – For best results, slopes over 15 degrees we recommend a certified engineering evaluation and site report prior to installation.

For all sloped installations or more detailed advice on your specific GEOHEX™ installation, contact our team of Territory Sales Managers on (02) 9603 5322.



# GEOHEX™ Base Depth Guide

Base depth			
0mm – 50mm	Foot traffic only		
50mm – 100mm	Turf stabilising	Horse stables	Feeders & troughs
100 – 150mm	Driveways	Horse yards	Sheep & cattle yards
150mm – 200mm	Commercial driveways	Equine arenas	Mining applications

This table is based on non - reactive soils only. For advice on reactive soils, please contact the GEOHEX™ team on (02) 9603 5322.



# Frequently Asked Questions

**Q: Can the GEOHEX™ Erosion Control System be used anywhere?**

A: Yes, the GEOHEX™ Erosion Control System can be used in any type of soil or geological configuration.

**Q: How big are the GEOHEX™ pavers?**

A: The GEOHEX™ pavers come in a standard size of 0.5sqm, however, panels can be cut to size to suit your specific installation if required.

**Q: How does the GEOHEX™ Erosion Control System promote safety?**

A: The GEOHEX™ Erosion Control System stabilises turf and ground areas, meaning there is a lot less potential for accidents to occur. It also minimises the risk of machinery or livestock getting bogged in muddy areas. By using the GEOHEX™ Erosion Control System in landscape applications, embankment subsidence and large movements of soil and rock can be easily prevented.

**Q: How does the GEOHEX™ Erosion Control System promote water conservation?**

A: The unique, hexagonal and porous design of the GEOHEX™ Erosion Control System means that water is captured in the soil which can then be diverted into storage and detention tanks. This lowers the amount of surface water runoff, meaning less soil erosion and allows rainwater to be used for secondary purposes.

**Q: How heavy are the GEOHEX™ pavers?**

A: Each GEOHEX™ standard 0.5sqm pavers weigh 2.3kg (unfilled).

**Q: Is the GEOHEX™ Erosion Control System strong?**

A: Yes, the GEOHEX™ Erosion Control System is very strong, and has a maximum load bearing capacity of 1,200 t/sqm when filled. This is far more than a standard semi-trailer truck for instance, which has a nominal wheel load of about 5/t.m<sup>2</sup> per axle.

**Q: Is the GEOHEX™ Erosion Control System safe to use in the ground?**

A: The GEOHEX™ Erosion Control System is non-toxic to humans, animals and plants and also non-reactive to solvents, oils, chemicals and water.

**Q: How far down do I need to excavate to lay the GEOHEX™ pavers?**

A: We recommend excavating down to a minimum of 200mm however, final excavation will need to be determined by the existing material in the installation area. For example, water soaked mud and very sandy soils will require a thicker base than solid clay or rock bases. We also recommend laying a 150mm compacted road base sub-layer prior to installing the GEOHEX™ pavers.

# Frequently Asked Questions

**Q: What is the best way to lay the GEOHEX™ pavers once the base has been prepared?**

A: We recommend laying the GEOHEX™ pavers starting in one corner with the male lugs facing outward and female lugs facing the next paver to be laid on both sides. Once you've determined the start point, lay the pavers in a staggered pattern for strength and durability, and simply click into place.

**Q: Can I adjust or move the GEOHEX™ pavers once installed?**

A: There is a small amount of flexibility in the GEOHEX™ pavers to allow for movement if you need to make minor adjustments or follow any ground contours.

**Q: Can the GEOHEX™ Erosion Control System be used on sloped ground?**

A: Yes, the GEOHEX™ Erosion Control System can be used on sloped ground. For best results we recommend laying on inclines of 10mm or less but for inclines greater than 10mm we recommend the use of ground pins to secure the paver. Type 17 Bugle Head Screws, galvanised and a minimum of 300mm long can be screwed into the sub-grade without the need for hammering through the cell material.

**Q: What infill material can I use with the GEOHEX™ Erosion Control System?**

A: While excess material from the excavation is acceptable for infill, a granulate material made up of a mix of size and grade that packs down into the matrix will deliver the best result. For roads, we recommend cracker dust, road base or limestone. Please note that aggregate larger than 15mm will not settle well into the void.

**Q: How much infill is required to fill a GEOHEX™ paver?**

A: 1m<sup>3</sup> of aggregate will cover approximately 20m<sup>2</sup> of Geohex.





Disclaimer: The information provided herein is for reference purposes only. It is intended as a guide and will not apply to every circumstance as both site conditions and intended use varies. Determination of the suitability of use of the product given the site conditions and intended function is the sole responsibility of the user. We recommend the user seek the advice of a Civil Engineer to assess site conditions and recommend a suitable site preparation procedure using locally available materials and machinery to ensure a successful installation. We accept no responsibility for failure to seek appropriate installation advice prior to the installation of GEOHEX™.



[www.geohe.com.au](http://www.geohe.com.au)

*A part of the Holloway Group*  
**HOLLOWAY**  
REDEFINING POSSIBILITY