

PRODUCT INFORMATION

GeoPaveX STANDARD

Resin System for Bound Aggregate Paving

Description

GeoPaveX Standard is a two-component polyurethane resin system formulated for use in resin bound aggregate surfacing systems.

Resin bound aggregate surfacing systems combine durability and performance with a stunning appearance. Their use will transform the visual appeal of any surface and the wide range of colours and textures available from natural and manufactured aggregates give the specifier many options in designing the built environment.

Uses

GeoPaveX Standard is manufactured for use as the binder within a resin bound aggregate paving system. It is suitable for both external and internal use.

Areas of use include driveways, heritage sites, estate roads, parking areas, footpaths, cycleways, courtyards, pathways, public parks, pedestrian precincts, office buildings, landscaping schemes, schools, walkways, tree pits, patios, conservatories, garden design, playgrounds, swimming pool surrounds, disabled access ramps, roof terraces, and balconies.



GeoPaveX is suitable for use over typically encountered load bearing substrates such as asphalt and concrete.

Benefits

- Highly attractive surfaces
- Suitable for use with wide range of different aggregate blends
- Permeable – SUDS compliant
- Environmentally friendly, biomass-based resin component
- Highly durable and resistant to cracking
- Smooth, easily maintained surface
- No loose stones, restricts weed growth
- Solvent free, so odour free before and after installation
- External or internal use
- Standard and UV resistant grades available
- Adaptable curing times using optional catalyst
- Unique hybrid thermoset resin binder

Technical	Standard
Specific gravity – mixed resin	1.04 kg/l (7.5 lb-ft)
Mixed resin pot life @ 20°C (approx)	25 minutes
Initial set @ 20°C	40 minutes
Full cure in bound system @ 20°C	24 hours
Spread Rate (approx. per 100 kg of typical aggregate, assuming bulk density of 1.67)	
12 mm surface depth (0.5")	4.99 m ² (53 SF)
18 mm surface depth (0.75")	3.32 m ² (35 SF)
25 mm surface depth (1")	2.39 m ² (25 SF)

SUDS

Sustainable Urban Drainage Systems (SUDS) is the name given to the relevant UK Government legislation that came into effect in October 2008. Surface water needs to be removed, particularly in built-up areas, to prevent flooding. SUDS are surface water and drainage management methods and actual devices designed to tackle excess water in a sustainable and economical way compared to conventional systems.

GeoPaveX Standard has been developed as a SUDS compliant permeable system allowing on average 10/Gal/Min/SF of water to soak through the surface, helping prevent the rapid surface water runoff that causes flooding.

A typical base build up is set out in our separate Permeable Driveways (SUDS) guidance note.

PRODUCT INFORMATION - GEOPAWE STANDARD



Tree Pits

GeoPaveX Standard provides the ideal solution to problems commonly associated with open tree pits and metal tree grilles, such as litter and waste, trip hazards, weeds and vandalism.

GeoPaveX Standard is a fully permeable product which allows water to pass through to the roots of the tree without the need for watering tubes, whilst at the same time providing an attractive surface which is flush with its surroundings and which prevents the harbouring of litter and other detritus. It creates a hard wearing, natural finish that compliments any environmental improvement scheme.

Colors

GeoPaveX Standard resin is a neutral amber colour and is particularly suitable for buff, yellow, red and brown aggregates. Some initial darkening of the resin binder may occur through the effects of sunlight in the early life of the finished system. This slight darkening can often be complimentary to the aggregates used.

GeoPaveX UVR, a premium grade which is more resistant to the fading or discolouration which may arise from the naturally occurring effects of ultraviolet waves within sunlight.

Colors, shades and textures achievable from the finished system result from the combination of the aggregate and resin binder system used. A blend of aggregates is typically chosen to give the correct strength and cohesive matrix, as part of this the aggregate size can be as much as 25mm for tree pits. We supply a range of suitable aggregates selected for their appearance, colour and performance.

Aggregates

Natural aggregates such as gravel, flint, quartz, granite and marble can be used to enhance your design. Other special materials such as certain types of glass, plastics, rubbers and crushed ceramics can also be used. Where it is important to maintain the initial color we recommend that GeoPaveX UVR grade is used in conjunction with such materials. If considering using special materials, please call for further advice prior to use.

We supply aggregates that have been specifically selected for use in GeoPaveX Standard. You may choose to independently source aggregates elsewhere but when doing so, it is essential that they are dry and free from dust, silt, clay or any other foreign material, as these will seriously affect the ability of GeoPaveX resin to form a bond with the aggregate. It is also important to ensure that the aggregate grading is suitable for the installation.

Mix Designs

The ideal aggregate blends for use with GeoPaveX Standard resin are those of a yellow, buff or dark colour where the known dark-ening of the resin binder will have little visible effect. For other colors GeoPaveX UVR grade may be more appropriate.

The final strength of a resin bound aggregate surfacing system using GeoPaveX resin is determined by the choice of resin, aggregate (and its grading) and degree of compaction during installation. The installer must satisfy himself that the proposed mix is suitable for the intended use. A combination of two or more aggregate grades should be used to achieve a cohesive mix. Where greater strength is needed, a more graded mix using three or more aggregates may be necessary. If so, the percentage binder content may need to be higher to compensate for the increased surface area of the aggregate.

Complete Streets USA offers a range of standard aggregate blends suitable for use with GeoPaveX Standard. Our aggregate range is periodically updated so please contact us for details of the blends that are currently offered.

Additional skid/slip resistance may be achieved by the light broadcasting of suitable grades of fine high PSV and AAV materials onto the surface of the resin bound aggregate paving system while it is still wet and before its initial set, these additional skid/slip resistant materials should be harmonious with the appearance of the aggregate in the GeoPaveX system. We offer a wide range of materials specifically for this purpose.

Application

The procedures set out in our separate GeoPaveX Installation Specifications Method Statement should be followed carefully to ensure the correct application of GeoPaveX. Complete Streets USA can recommend an experienced resin paving contractor or provide application training.

Performance and Aftercare

The final resin bound aggregate surface requires minimal maintenance. To maintain the appearance of the surface, regular sweeping should be undertaken using a stiff brush to keep it clean and free from leaves, berries, general detritus and loose aggregate. Mechanical brushes using steel bristles must not be used. Where it is necessary to remove stains caused by oil spillages, domestic detergents or degreasers may be used with care. The use of cold pressure washing may be used to remove ingrained dirt etc, however close contact high pressure water jetting should be avoided.

PRODUCT INFORMATION - GEOPAVE STANDARD

Whilst resin bound paving using GeoPave Standard resin is and resistant to deformation, it is important to ensure that the surfaces upon which it is laid are free from defects and faults and are capable of withstanding the effects of expected loadings during both summer and winter conditions.

Any spillage of fuel or solvents must be cleaned by the appropriate methods as soon as possible.

Packaging and Storage

Each pack consists of two components, comprising a base and an activator component in sealed containers. GeoPave Standard is currently supplied in a 6.5 kg pack size designed for a typical 100 kg aggregate blend, however the appropriate ratio of aggregate to resin binder that should be used will depend on the nature of the aggregate being used, its bulk density and surface area.

For Tree Pits, smaller packs are available which contain 4 kg of total resin binder.

Store all materials under cover in dry conditions. Do not allow extreme temperature fluctuations.

If Activator components (Part B) are stored at very low temperatures, crystalline deposits may form within it. The Activator must not be used in this condition. However, an Activator that is affected in this way, can be warmed and allowed to remain at room temperature 20°C. The crystalline deposits should dissolve leaving a clear brown liquid once more.

Shelf life is normally 12 months in the above storage conditions.

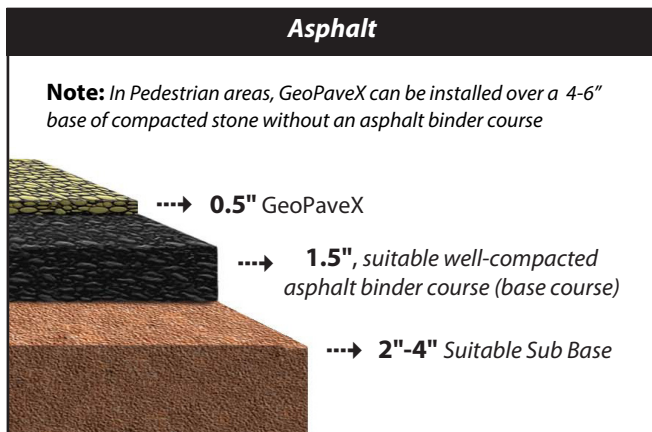
Important: Under no circumstances should damp aggregate be used.

Health & Safety

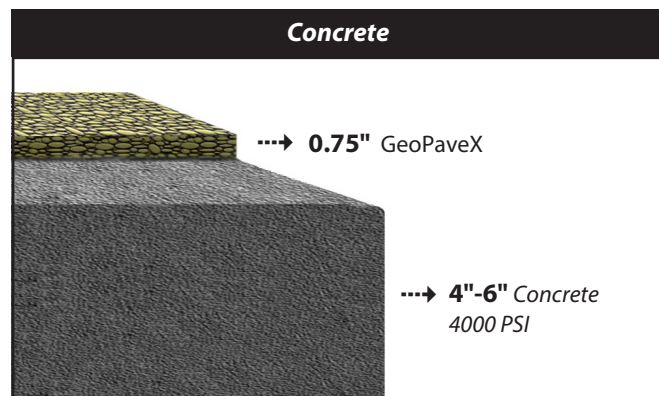
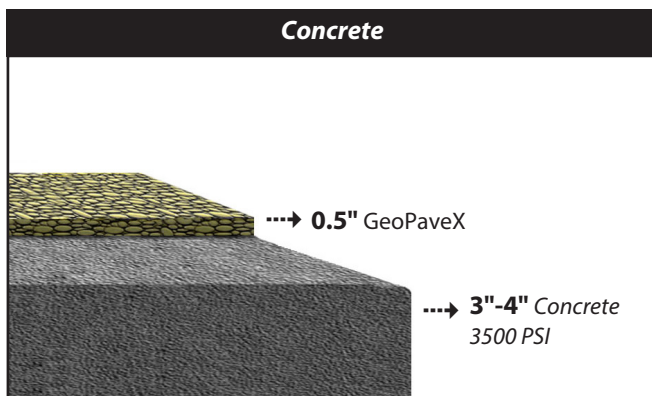
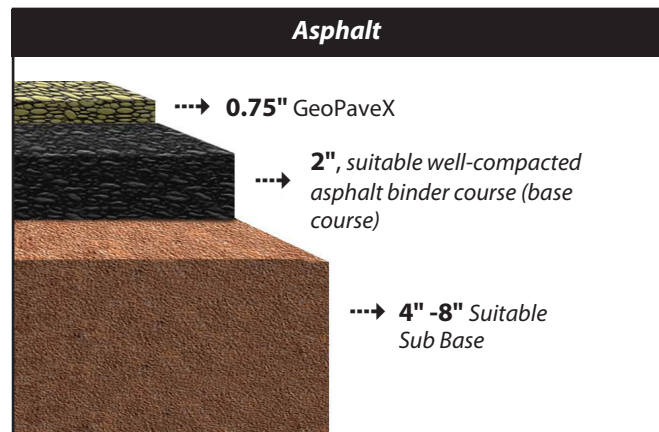
See separate Safety Data Sheet

Base Build-Up

Pedestrian



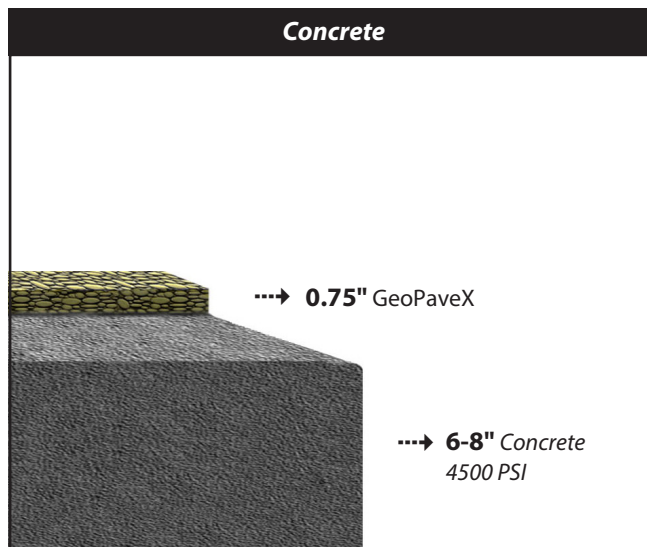
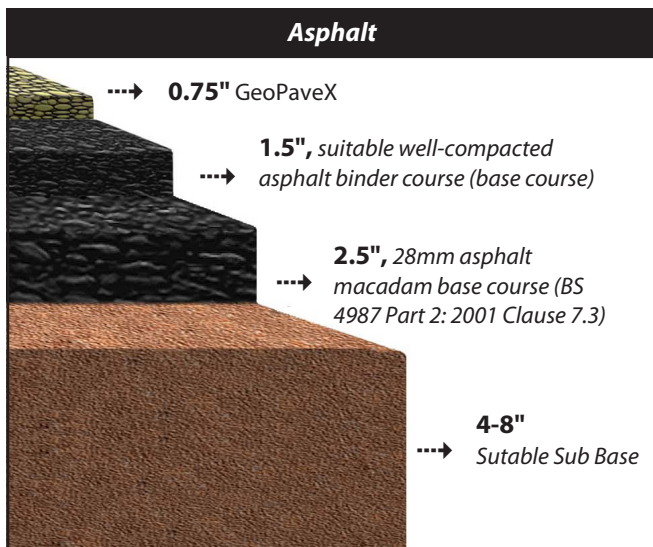
Residential Driveway



PRODUCT INFORMATION - GeoPaveX STANDARD

Base Build-Up

Parking Lot



Please note that any technical information or advice given by CompleteStreetsUSA is based on laboratory conditions/testing and practical experience. Application techniques and site conditions are beyond our control and we can therefore not be liable for any anomalies that may arise.

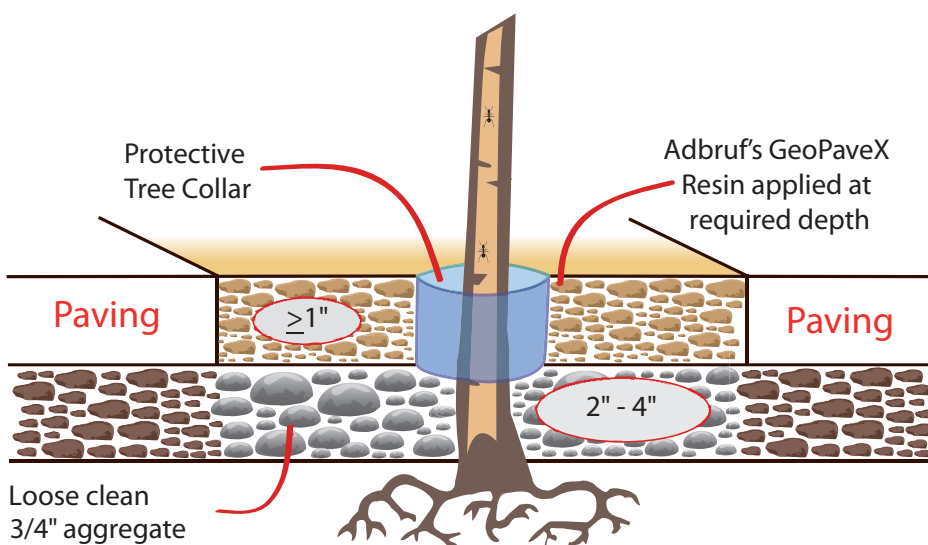
All base build-up details are intended as a guide only and the information stated does not constitute a specification.

Tree Pits

GeoPaveX Tree Pit packs are designed to provide an attractive and aesthetically pleasing permeable paving system using a variety of natural or recycled aggregates.

The GeoPaveX Standard resin binder is mixed with a suitable natural or recycled aggregate with a typical grading of 6-10 mm, (certain colored aggregates up to 25 mm have been used). The aggregate selected must be clean, free of fines and dry.

The open texture achieved when using the combination of GeoPave Standard resin and a suitable aggregate provides a highly permeable surface allowing surface water to drain away and yet still reach the roots.



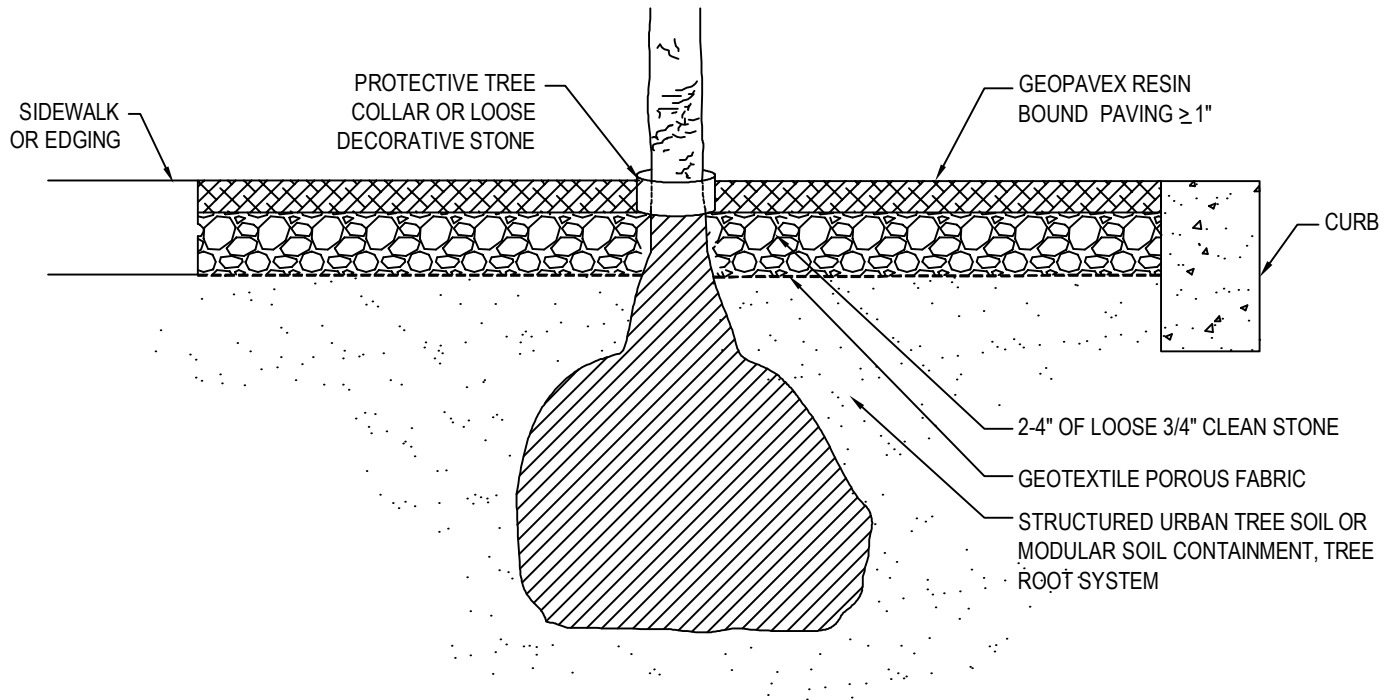
Planting:

The tree should be planted and anchored in urban tree soil or similar.

Kerb edging and collar detail:

A suitable edging material and collar should be installed around the base of the tree and at the edges as required.

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SECTION VIEW

RESIN BOUND TREE PIT SYSTEM

POLYURETHANE RESIN PAVING TREE PIT SYSTEM IS A COLD TWO-PART POLYURETHANE RESIN PAVING SYSTEM. THE POLYURETHANE RESIN BASE BONDS NATURAL AGGREGATES OR RECYCLED MATERIAL TO CREATE PERMEABLE, FLEXIBLE, AND LONG-LASTING SURFACES.

GENERAL SPECIFICATIONS:

1. WARRANTY REQUIRES APPLICATION IS COMPLETED BY A TRAINED AND CERTIFIED APPLICATOR
2. GEOPAVEX IS APPLIED TO CLEAN DRY SURFACES WITH A MINIMUM OF 4 INCHES OF SOIL ABOVE THE GRADE OF THE TOP OF THE ROOT BALL. THIS HELPS TO ENSURE PROPER DRAINAGE AND DISCOURAGE THE ROOT SYSTEM FROM GROWING UPWARD. IF USING MODULAR SOIL CONTAINMENT, OR TREE ROOT SYSTEM, PLEASE FOLLOW MANUFACTURER INSTALLATION INSTRUCTIONS FOR THESE COMPONENTS.
3. CLEAN AND LIGHTLY COMPACT THE SOIL IN THE AREA TO BE PAVED, AND PLACE GEOTEXTILE FABRIC TO KEEP SOIL FROM MIGRATING UPWARD.
4. ADD LOSE BASE ROCK TO A RECOMMENDED MINIMUM OF 4 INCHES OF 3/4" CLEAN STONE WITHOUT FINES, LEAVING A MINIMUM OF 2 INCHES BELOW THE FINISHED GRADE FOR RESIN PAVING. LEVEL AND COMPACT THE BASE AGGREGATE.
5. PLACE A PROTECTIVE TREE COLLAR, OR LOOSE DECORATIVE AGGREGATE AT THE BASE OF THE TREE TRUNK TO ALLOW FOR TREE GROWTH.
6. MIX AND INSTALL GEOPAVEX PER THE MANUFACTURERS SPECIFICATIONS.

NOTES:

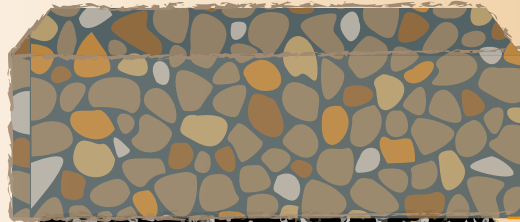
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.



Permeable Driveways (SUDS)

Typical base build up

Surface Course
Hand trowelled to a smooth finish by approved installers.



The typical depth of GeoPave resin bound paving surface.
 $\frac{3}{4}$ " for Driveways

Binder Course
Well compacted layer.



$2\frac{3}{4}$ - 3" depth open graded porous asphalt base course .

Sub-base
Well compacted layer.

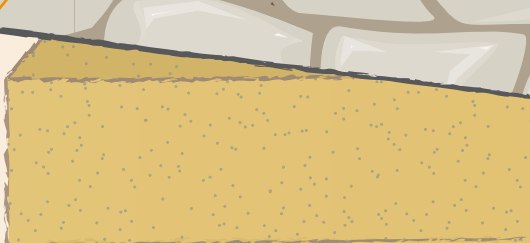
Recycled aggregates can be used if it complies to DOT sub-base specification



A geotextile membrane to prevent downward migration of fine soil particles (optional).

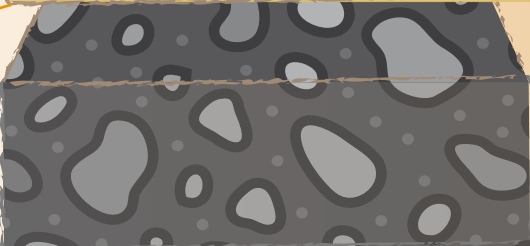
8" well compacted crushed stone or local DOT specifications.

Capping Layer
If required.



Optional geotextile membrane to prevent upward migration of fine soil particles

Sub-grade



Important : It is advisable to use suitable steel, wood, brick, stone or aluminium edging to ensure a perfectly finished edge is achieved. Any advice, recommendation or information given by Adbruf Limited is based on practical experience and laboratory testing. We believe that this information is accurate at the point of publication, no liability or responsibility of any kind (including liability for negligence) is accepted in this respect by the company, its Servants, or Agents.

The figures quoted do not constitute a specification, they represent typical values obtained for this product under laboratory conditions.