



CastlePave

Promenade slabs and supports

FLAT ROOF BALCONY WALKWAY ROOF TERRACE DISPLAY AREA ROOF GARDEN

castle
COMPOSITES

Castle Pave GRC Promenade Slabs

The Castle Promenade Slab System has been developed to provide protection to waterproofing membranes without the need to use adhesives in contact with the surface. The System provides protection from mechanical damage, ultra violet light degradation and temperature extremes. This System also ensures adequate drainage between and under slabs, prevents the build up of top surface standing water and reduces the likelihood of plant growth. Installation is simple, resulting in reduced equipment, on site time and labour requirements.

The Castle Promenade Slab System allows drainage outlets, conduits, pipes, etc. to be concealed below the slabs leaving them safe, accessible and unobstructed. The promenade slab system can be laid to existing falls or, using adjustable supports, the walkway can be laid level taking up drainage falls or general unevenness in the roof surface. Additionally, slabs can be removed at any time to allow access to the substrate or to allow the slabs to be moved, patterns changed, colours changed, etc.

Castle Pave Installation



Below is a very brief description of the installation procedure for Promenade Slabs. For full details please contact us or visit our website.

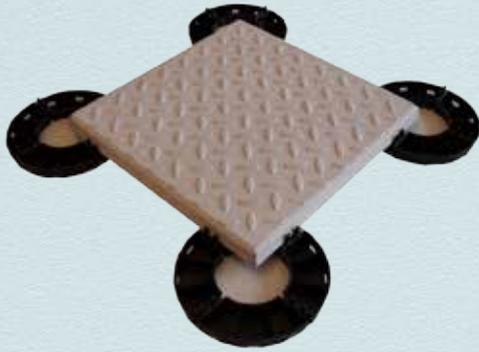
1. Ensure roof surface is sound, clean and has good drainage.
2. Lay out protective cover where required by waterproofing manufacturer.
3. Mark out centre lines in both directions and adjust to ensure any cut slabs at edges are no less than 1/2 slab where possible.
4. If laying slabs to follow the profile of the roof surface then simply lay out Paving Support Pads on, or on both sides of the centre lines and lay slabs on top, working in both directions to ensure straight lines are maintained.
5. If any low areas are encountered use levelling discs or additional stackable Paving Support Pads to bring slab level up to that required. If there are obvious high points then it may be necessary to start from there so that low areas can be lifted by levelling discs and pads.
6. If slabs are to be cut to fit at edges, always place an additional support pad under the centre of the cut slab to reinforce.
7. When working to an open or unrestrained edge it is necessary to ensure sufficient edge restraint to avoid movement of slabs. Please call to discuss your specific layout details or see our Edge Details section of the website and brochure.
8. When laying slabs to achieve a level top surface, start laying slabs at the highest point, checking with a spirit level and adjusting height with support pads and levelling discs as you progress.
9. For areas where higher than 60mm of lift is required (4 no 15mm stackable pads) adjustable support pads should be used.

Castle Pave 300 x 300 Promenade Slabs

The 20mm thick 300 x 300mm Promenade Slabs have been specially designed to be used with Paving Support Pads. They can of course still be fixed direct to the roof surface with PU Adhesive but using the Paving Support Pads allows them to be used in any situation where direct contact with the waterproofing membrane is to be avoided, such as with some single ply membrane systems. This system also gives the freedom of being able to remove the tiles for inspection, services, repairs and many other reasons. The tiles are tested internally and externally and average breaking loads of 300kg are achieved.

Our 300 x 300 range are particularly suited to applications where low threshold level or low weight is required.

Checkerplate



Size: 297 x 297 x 20mm
Weight: 4.1kg Per Slab Approx
No Per m2: 11
Slip Resistance: 52 WET (Low Potential For Slip)



The Checkerplate finish has been available for some years and now is chosen throughout the flat roofing industry when a durable, practical and highly slip resistant surface is required.

Striated



Size: 297 x 297 x 20mm
Weight: 4.1kg Per Slab Approx
No Per m2: 11
Slip Resistance: 58 WET (Low Potential For Slip)



Our Striated finish is a firm favourite with many of our customers and is often described as having a bark like finish. It is the combination of attractive texture, high slip resistance, durability and high strength synonymous with the Striated Promenade Slabs that make them highly popular

Riven



Size: 297 x 297 x 20mm
Weight: 4.1kg Per Slab Approx
No Per m2: 11.5
Slip Resistance: 42 WET (Low Potential For Slip)



The Riven finish is an excellent example of the texture, warmth and practicality of natural stone combining with the durability and strength of Glass fibre Reinforced Concrete to produce a product which gives the very best attributes of both worlds. The use of numerous masters means that the repetitive nature of some products is avoided, giving a more natural appearance.

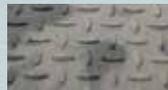
Castle Pave 450 x 450 Promenade Slabs

All our 450 x 450mm Promenade Slabs are manufactured and tested in accordance with BS 1339. This ensures that our slabs are strong, durable and slip resistant and can be installed on a flat roof or balcony with complete confidence. The 450 x 450 range also incorporate a notched side wall detail to accommodate the support pad lugs giving smaller gaps between each slab and a safer and more attractive walking surface.

Our 450 x 450mm Promenade Slabs can be laid using our range of support pads or they can be loose laid as ballast as they exceed the wind uplift requirements of 80kg per m2.

Starting at only 16kg each they are also very easy to handle and are under the 25kg lifting limit recommended by the Health & Safety Executive.

Checkerplate



Grey Marbled



Old Gold



Dark Grey



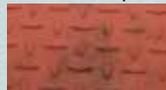
Light Grey



Red



Terra Marbled



Red Marbled



Terracotta



Old Gold Marbled

Size: 445 x 445 x 38mm
Weight: 16kg Approx
Composition: Glass Fibre Reinforced Concrete
No Per m2: 5
Slip Resistance: 52 WET (Low Potential For Slip)
BS EN 1339 Marking: AIKPU4

Striated



Dark Grey



Light Grey



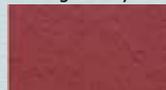
Grey Marbled



Old Gold



Old Gold Marbled



Red



Red Marbled



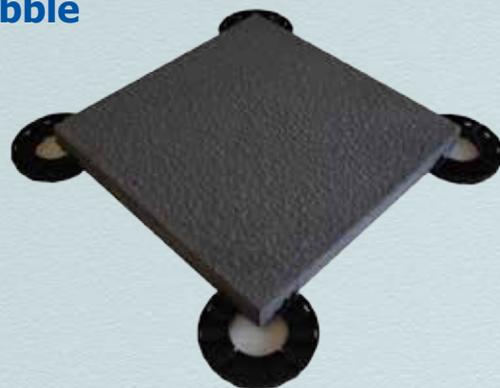
Terracotta



Terracotta Marbled

Size: 445 x 445 x 38mm
Weight: 16kg Approx
Composition: Glass Fibre Reinforced Concrete
No Per m2: 5
Slip Resistance: 58 WET (Low Potential For Slip)
BS EN 1339 Marking: AIKPU4

Pebble



Old Gold Marbled



Dark Grey



Light Grey



Grey Marbled



Old Gold



Red



Red Marbled



Terracotta



Terracotta Marbled

Size: 445 x 445 x 38mm
Weight: 16kg Approx
Composition: Glass Fibre Reinforced Concrete
No Per m2: 5
Slip Resistance: 66 WET (Low Potential For Slip)
BS EN 1339 Marking: AIKPU4

Riven



Slate



Light Grey



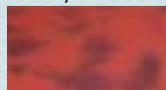
Grey Marbled



Old Gold



Red



Red Marbled



Terracotta



Terracotta Marbled

Size: 445 x 445 x 38mm
Weight: 16kg Approx
Composition: Glass Fibre Reinforced Concrete
Slip Resistance: 42 WET (Low Potential For Slip)
BS EN 1339 Marking: AIKPU4

Castle Pave 600 x 600 Promenade Slabs

The Castle Composites range of 600 x 600 Promenade Slabs are available in both the Striated and Pebble surface finishes. The range of colours on offer ensure that you can find the right colour to blend or contrast with the balcony or flat roof surroundings.

Both 600 x 600 Promenade Slabs have our unique notched edge detail, these notches accommodate the support pad lugs which keeps the gaps between each slab to a minimum, making the surface more attractive and safer to use.

By choosing the 600 x 600 size you will be minimising the number of support pads used. This can offer substantial savings particularly when working with the more expensive adjustable support pads.

As with all our products, samples are available on request to allow comparison and confirmation of colour and surface finish.

Striated

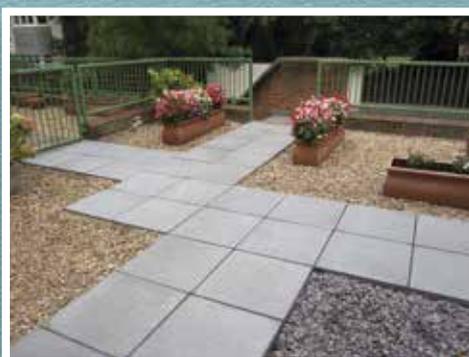


Size: 593 x 593 x 38mm
Weight: 29kg approx
Composition: Glass Fibre Reinforced Concrete
No Per m2: 2.80
Slip Resistance: 58 Wet (Low Potential for Slip)

Pebble



Size: 593 x 593 x 38mm
Weight: 29kg approx
Composition: Glass Fibre Reinforced Concrete
No Per m2: 2.80
Slip Resistance: 66 Wet (Low Potential for Slip)



Paving Support Pads

Plastic Stackable



Support Pad



Levelling Disc

Stackable plastic support pads are manufactured from injection moulded high density polypropylene. They are available in two standard sizes, 12mm and 15mm high. They are designed to stack on top of one another, where applicators wish to increase the height of the cavity at intervals - to work around gutter and service pipes, for example. Although lightweight, they are very tough, with a weight tolerance of 400kg per support pad.

They act as a guide when laying promenade slabs, ensuring uniform position. This saves a considerable amount of time in application and gives an attractive finish.

1, 2 and 3mm levelling shims are also available to allow for undulations in the roof surface and to allow a smooth transition when stacking.

TECHNICAL DATA

Thickness	Diameter	Lug Width	Material	Capacity
10mm	150mm	3mm	Polypropylene	400kg
12mm	150mm	3mm	Polypropylene	400kg
15mm	150mm	3mm	Polypropylene	400kg

Rubber Support Pads



The 9mm Rubber Paving Support Pads are specially designed circular pads manufactured from high quality synthetic rubber.

They are extremely tough and have a high level of elasticity and flexibility. On the upper surface they have four lugs to provide spacing between promenade slabs. The under surface incorporates grooves to allow the drainage of water below the paving into the appropriate drainage outlet.

TECHNICAL DATA

Thickness	Diameter	Lug Width	Material	Capacity
9mm	120mm	5mm	Rubber	8000kg

ASLON Paving Support Pads are a versatile low cost option for supporting paving on flat roofs and balconies. Manufactured from recycled rubber granulate they are also one of the very few environmentally friendly options available.

ASLON support pads also have the unique facility to be able to interlock slabs together as a mat when used with adhesive but without the need to adhere to the waterproofing. This provides additional stability at open edges and areas affected by wind uplift. Edging the layout when using ASLON pads is also straight forward and helps to prevent wind uplift and ingress of debris whilst improving appearance of open edges.

At only 10mm thick ASLON pads are ideal for areas with low threshold issues. Used with our 300 x 300 Promenade Slabs they give an overall thickness of only 30mm.

TECHNICAL DATA

Thickness	Width	Lug Width	Material
10mm	100mm	3mm	Rubber Granulate
10mm	150mm	3mm	Rubber Granulate
10mm	200mm	3mm	Rubber Granulate

Adjustable Support Pads

Adjustable support pads are ideal as the stem pieces can be wound up and down to create level paving, saving a great deal of time and labour.

More roof and balcony designs incorporate a completely flat upper surface in order to utilise them more effectively as leisure areas. Useful, practical areas can be created on decks for leisure or services and maintenance which would have previously been left as exposed waterproofing membranes. Not only does this help protect potentially vulnerable areas, but it increases the yield of the building footprint.

Since this is a suspended system, the promenade slabs can simply be lifted up should the roof deck need to be inspected for damage or leaks. There is also the opportunity to hide unsightly objects such as cables, water pipes and drainage outlets underneath the paving slabs, which could be lifted even just to access items such as hidden electric points or water taps on a regular basis if required.



These fixed head support pads can be used along with slope correctors if required to overcome falls. The head piece of this support also has a rubber coating.

Fixed Head Adjustable Support Pads

Height Range	Head Diameter	Base Plate Diameter	Lug Width	Load Capacity
25-40mm	105mm	200mm	3mm	1200kg
40-70mm	105mm	200mm	3mm	1200kg
60-100mm	105mm	200mm	3mm	1200kg
90-160mm	105mm	200mm	3mm	1200kg
125-160mm	105mm	200mm	3mm	1200kg
150-270mm	105mm	200mm	3mm	1200kg



Designed to adjust for falls without the need for slope correctors using an open ball joint design head piece. Lugs on the head piece can be moved or removed to accommodate paving, decking and many other applications.

Slope Correction Head Adjustable Support Pads

Height Range	Head Diameter	Base Plate Diameter	Lug Width	Load Capacity
40-56mm	130mm	210mm	3mm	2100kg
50-70mm	130mm	210mm	3mm	2100kg
70-110mm	130mm	210mm	3mm	2100kg
110-160mm	130mm	220mm	3mm	2100kg
150-210mm	130mm	220mm	3mm	2100kg
200-300mm	130mm	220mm	3mm	2100kg

Edge Details



When laying Promenade Slabs on Support Pads it is important to consider the edge detail. Where possible we always recommend laying up to a restraining edge or wall.

This means that the Promenade Slabs will be positioned so they cannot move over time due to trafficking or vibration. However, laying to a parapet wall is not always possible due to balustrade and open edges.

There are many methods to restrain the edges of a layout and they vary based on the size of Promenade Slab, waterproofing and balcony or flat roof design. There is always a solution so please call us to discuss your requirements.

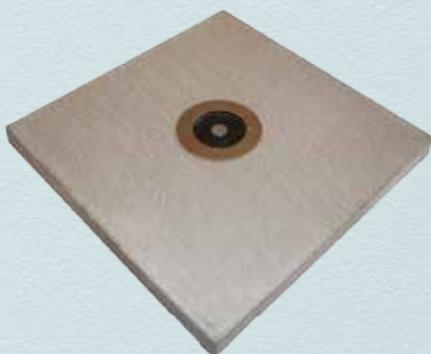
We also offer a range of edge angles in a range of colours. As well as improving the aesthetics of open edges they can help prevent debris from getting under the layout and stop gravel migration when using a gravel infill at the edges. White, Black, Grey, Silver and Red colours are available.

For further details, please contact us or visit our website.



The above picture shows Link Pads with release tape in place for ease of demonstration.

Pre-Installed Lights



450 x 450 and 600 x 600 Promenade Slabs are now available with pre-installed solar lights.

These can be used to delineate borders or walkways during the evening.

The lights contain white, solar powered LEDs which turn on automatically at dusk. This avoids unsightly wires and cables and minimises maintenance and running costs.



SAMPLES



As photographs cannot always show the true colour and texture of our products we are always happy to supply samples, including half treated with Promseal, to ensure suitability.

If you would like some samples please contact us via phone or email to arrange delivery.

Samples are sent via 24hr courier to keep delivery time to a minimum.

Samples are free of charge for UK Mainland for the first order.

Castle Promenade Slabs are manufactured to the highest quality standards and are produced from a blend of Sand, High Strength Granite, Top Quality Cement, Glass Fibre and product enhancing additives. This attention to the mix constituents ensures, through a regime of regular testing, that the slabs delivered to you are strong, durable and can be used with complete confidence.

USING CASTLE PROMENADE SLABS:

1. Ensure surface to be covered is free from dust, grease and all loose materials.
2. Where appropriate ensure efficient drainage to area - recommended minimum 1:80 maximum 1:40.
3. Inspect existing surface or roof covering and ensure that all necessary remedial works are carried out prior to work commencing.
4. When cutting slabs ensure that the dust created is not allowed to build up on completed areas as staining may occur. Cut slabs may require additional support, please call for details.
5. Due to the high cement content of Castle Promenade Slabs there is the possibility that efflorescence or staining may appear on tiles if water has been allowed into the stack but evaporation has been restricted. The strength and other properties of the slab will not be affected.
6. Promenade Slabs are manufactured from naturally occurring materials and are therefore liable to colour differences caused through variation in the raw materials and differential drying conditions. These variations are beyond the control of the manufacturer. Promenade Slabs displaying unacceptable degree of variation should not be laid and the advice of the manufacturer should be sought. No responsibility will be accepted for the consequences of variation in slab colour.
7. Care should be taken to allow for any variations in shade and for manufacturing tolerances in size and thickness when laying slabs.
8. Promenade Slabs are stacked on pallets and shrink wrapped soon after manufacture to provide optimum curing conditions. As a result they may not display their true colour until they have been exposed to weathering and sunlight.
9. Promenade Slabs are supplied from our works on wooden pallets and are covered with plastic shrink-wrap bags. Pallets must not be stored more than two high and point loading must be avoided or damage to slabs will occur. Pallets of slabs must be protected and stored in dry conditions or efflorescence, discolouration and staining may result.
10. Do not allow dirt and other contaminants to build up in the gaps between slabs as this can cause staining. If contamination of slabs is likely to occur it may be advisable to seal with Promseal when laid. Acid based cleaners or high pressure water sprays must not be used on slabs.
11. This information and any recommendations or suggestions contained herein are given in good faith without warranty or guarantee as conditions of use are outwith our control. Product development is continuous and slabs are subject to change without notice. Please ensure that our products will be suitable for use by requesting samples for your evaluation relating to colour and working conditions.
12. All slabs are sold in accordance with our Terms and Conditions of Sale which are available on request.
13. Castle Composites Ltd. are pleased to Guarantee our Promenade Slabs against manufacturing fault for a period of 10 years from date of supply. Full terms and conditions available on request.

SUPPLIED BY:

**Castle
Composites
Limited**

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