



Sustainable Porous Paving Solutions

KBI Flexipave Surfacing

Technical specification.



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www.kbiuk.co.uk

flexipave

OVERVIEW

KBI Flexipave surfacing is a solvent free, Polyurethane based, cold lay resin material, which is designed to bind recycled SBR Rubber granules from used tyres with natural decorative aggregates to create a hardwearing, highly porous & sustainable surface. KBI Flexipave uses a unique polyurethane-based resin which is manufactured on licence in the UK . It is highly flexible, resistant to cracking and can be supplied in a range of colours. When constructed on a suitable substrate, KBI Flexipave is highly porous and meets all the requirements of SUDs (Sustainable Urban drainage systems).

Technical Information

Product:	KBI Flexipave HD1000, HD1500, HD1750 & HD2000 - Unique Polyurethane Resin based system. <i>(SUDs compliant)</i>
Pot Life:	70 minutes at 20°C
Application Atmospheric Conditions:	+5 °C to 30 °C, Maximum 80% relative humidity.
Surface Temperature:	Above 5°C and must be 3°C above the dew point temperature
Minimum Curing Time:	6 Hours at 20°C – (Varies dependant on temperature)
Full Curing Time:	24 Hours for Foot traffic. Full strength may not be reached for two days after installation. (Varies dependant on temperature)
Packaging:	XFP-74 & XFP-75 - Pre-weighed vessels (1-Pack system)
Storage:	Unopened: 6 months at 5 - 30°C. Store inside, away from direct sunlight, wind and rain.

Product Information

Product	Thickness	Coverage per kit	The total coverage per one mix will depend on the application and depth required. ONLY XFP74 or XFP-75 Binder to be used within the KBI Flexipave system at the specified ratios given by KBI UK Ltd
HD1000	25mm	2.0 m2	
HD1500	35mm	1.5 m2	
HD1750	40mm	1.35 m2	
HD2000	50mm	1.0 m2	

Suitable Subbase: Type 1 MOT, Type 3 MOT, porous concrete or porous tarmac.

Test Certificate: Our KBI Flexipave surface has been Independently tested for slip resistance, porosity, flexural strength, Leachate, and Shock absorbency.

Test Certificates and copies of the full reports can be requested from KBI UK Ltd. The test certificates are only applicable where ALL the constituents are purchased directly from KBI UK Ltd, with our product been mixed and installed in accordance with our Installation Manual.

Stability and ecology: Once KBI Flexipave has been installed and cured, the surface is considered inert and non-toxic. Our product uses a large amount of recycled passenger tyres and therefore has excellent environmental credentials

Product Benefits

KBI Flexipave is the original, sustainable, highly porous, flexible surfacing system, which utilises a blend of recycled SBR Rubber crumb and natural decorative aggregates, bound together by our unique Polyurethane binder.

KBI Flexipave is suitable for:

- Pedestrian walkways
- Cycle paths
- Equestrian traffic / Bridleways
- Canal & Tow paths
- Rural trails
- Prams & DDA compliant surfaces
- Tree surrounds
- Jogging / exercise routes
- Golf Club pathways
- Cemetery Pathways



KBI Flexipave can be installed on top of the following Substrates:

- **Type 1 MOT** (compacted granular stone & fines with slight fall)
- **Type 3 MOT** (compacted, No Fines stone with slight fall)
- **Porous Concrete**
- **Porous Tarmac**

**Other substrates maybe suitable but would need to be checked with the technical department before installation is started.*

Some of our recent installations KBI Flexipave can be seen at:

- **Murrayfield Golf Club**
- **Edinburgh Zoo**
- **Legoland**
- **Chessington World of Adventure**
- **Trans Pennine Trail** (South Yorkshire, Lymm, Sefton)

**Please speak to the head office or your area sales manager for specific site addresses.*



KBI Flexipave Benefits:

- **Excellent porosity of both water and air**
- **SUDs compliant** (Sustainable Urban Drainage Systems)
- **Very low maintenance**
- **Easy, cold lay installation method**
- **Highly Flexible, slip resistant surface**
- **Kinder to ankle, knee and hip joints**
- **Aesthetically pleasing**



Mixing & Application

The materials **MUST** be bound using KBI unique XFP-74 polyurethane binder in accordance with our manufacturer's guidance.

Surface Preparation

1. Substrate surface must be, dry and free of laitance, oil, grease and loose friable particles which could affect adhesion.
2. A suitable edging can be installed and could be specified using either brick, stone, concrete, aluminium or timber as required to provide a high-quality finish detail. However, Flexipave material can be installed without edging, and the material can be performed to a 45-degree angle during the install.

Mixing

1. Rubber crumb and aggregate to be added to the mixer, which shall be dry mixed until there is a consistent 50/50 ratio of colour against the rubber and stone
2. Measure out and Mix the polyurethane thoroughly until all the mixture has been coated in the PU binder.
3. Mix the polyurethane, rubber and aggregate for a time specified by KBI UK Ltd
4. A Catalyst can be added to the system to speed up the cure time. The amount of catalyst will be dependent on the weather, temperature and humidity. **Please speak to KBI technical department for ratios required**

Application

1. Place the mixed Flexipave material into a suitable, lined, wheelbarrow and transport immediately to the application area.
2. Flexipave has a seventy-minute pot-life once the polyurethane has been mixed together.
3. Evenly spread the mixed Flexipave material across the substrate at the required depth using a screed, rake or straight bladed squeegee.
4. The surface should then be hand trowelled to a smooth compacted finish as required.
(KBI recommend a magnesium trowel)
5. Leave the surface to cure for a minimum of six (6) hours before subjecting to traffic.

(KBI UK Ltd recommend leaving all new surfaces for a minimum of 24 hours to cure. A full cure may take up to 36 hours depending on temperatures and humidity. If the area is heavily used, then a minimum of 48 hours is advised before being subject to use.)

NOTE All new installed areas should be protected until fully cured. Curing periods may vary dependant on the temperatures and climate conditions. Typically, you can expect the surface to cure between 6-24 hours.*

Health & Safety

MSDS Sheets

Material Safety Data Sheets will be provided by KBI UK Ltd before Flexipave is installed. Avoid prolonged contact with eyes and skin. For detailed information refer to relevant safety data sheet.

Check to make sure that all Flexipave polyurethane kits and containers show the relevant hazard labels and information.

Precautionary Statements

P260 – Do not breathe dust / Fume / gas / mist / vapours / spray

P280 – Wear protective gloves

P501 – Dispose of contents / containers in accordance with national regulations

Cleaning of equipment & skin

Mechanical Mixer, mixing Tools, Trowels & brushes etc... should be cleaned immediately after use in KBI UK Ltd.'s PU Mixture. Trowels may be left to soak in this if removal of excess polyurethane is stubborn. When cleaning hands and skin, use a deep cleaning soap with water. See O&M Guide for further information

Safe Disposal of Residually Empty Containers

KBI Flexipave, when fully mixed rely on atmospheric moisture to cure as the components react together relatively quickly to form the inert polyurethane. As the inside surface of the PU tub may be easily accessible, it is recommended that the tubs are well scraped out at the point where liquids are being mixed or the mixture is added to the aggregate.

This prevents wasting material and leaves minimal residue. The residual contents of the PU tub will cure within a few hours certainly overnight maximum when left in a secure, well-ventilated area at higher than 5°C. This polyurethane film will now be inert and non-hazardous.

Recommended Thickness

HD1000 – (25mm) For foot traffic ONLY & installed over an engineered substrate *(Tarmac, concrete)*

HD1500 – (35mm) For standard foot traffic, Cycle routes, DDA Compliant surfaces

HD1750 – (40mm) For Bridleways, heavy foot traffic, Installation on TRP Substrates

HD2000 – (50mm) For Tree Surrounds, Bridleways & Cycle routes with steep gradients.

***Depths above based on installing over an engineered sub-base layer – Type 1 or 3 MOT, Open tarmac, porous concrete etc.*

Mix Details & Colour Options

Mix Detail example

- One Flexipave mix consists of:
- 1x 25kg bag of SBR Recycled rubber crumb
 - 1x 25kg bag of dried natural aggregate
 - 1x XFP-74/75 PU Binder (25kg kegs, 220kg drums, 1090kg IBCs)

Stone Age Bronze	Size	Weight	Qty
Rubber Crumb	2-6mm	25kg	x1
Gold Aggregate	2-5mm	25kg	x1
Polyurethane Binder	Aromatic	Specified ratio by KBI	x1

Colour Range

KBI Flexipave is available in a variety of colours. Further colour options available on enquiry.



Stone Age Bronze



Elegant Green



Signal Red



Coral Pink



Silken Black



Golden Pea

Eight standard colours available from stock. Flexipave XFP74 and XFP-75 is an MDI based polyurethane and therefore may amber or be subject to yellowing initially. This may be visible on lighter coloured aggregates but will clear after abrasion and further UV exposure.

Please contact KBI UK Ltd. Technical department on alex@kbiuk.co.uk for further information

For any technical information please contact your nearest representative:

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