

## EcoGrid UV Resin Bound Surfacing System

Eco friendly resin bound porous system for pedestrian traffic and drives



EcoGrid UV Resin Bound Surfacing System is a resin bound aggregate surface for pedestrian and vehicular traffic. EcoGrid UV surfaces are decorative and functional, seamless and slightly flexible.

The open matrix allows water to drain through to the base, eliminating water ponding and allowing water to drain to planted areas or land drains. The system is designed to be SuDS compliant reducing the impact of urban development on flood risk and allowing water to flow into water courses. Edgings created from brick, stone, timber or steel should be installed to retain and protect the resin bound surfacing.

### Areas of use

- Footpaths, playgrounds, pool and pond surrounds
- Driveways
- Patios, terraces and water features

### Features

- Natural appearance
- UV stable non yellowing resin surfacing
- Recycled aggregates available
- Highly permeable
- No hot applied materials
- Slip resistant

### Description

EcoGrid UV Resin Bound Surfacing System comprises a surface layer of Eco Resin Bound UV Surfacing Resin, a two component polyurethane hybrid resin which binds a range of selected decorative kiln-dried aggregates and a base layer of 6-10mm EcoGrid washed aggregate retained in Ecogrid EH40, a 40mm thick grid made with 100% re-cycled plastic. The design of this resin bound aggregate system provides a surface which is attractive, strong enough for foot and light vehicle traffic, and highly porous. The EcoGrid base is equally porous and provides a thin alternative to asphalt or concrete.

### Traffic

The EcoGrid system is designed for foot traffic and vehicle traffic on domestic driveways. It is not designed for road surfacing or for car parks.

### Scuffing

Due to the destructive scuffing forces created by power steering (e.g. three point turns) in car parks or on driveways where cars will repeatedly turn within a confined area, localised wear is more likely. It is therefore recommended that when the product is used in such locations, the surface is regularly inspected by the client or installer and maintained as required.

### Non yellowing UV stable resin

Eco Resin Bound UV Surfacing Resin is UV resistant, it will not yellow on exposure to UV light. This is a more attractive option than other types of resin which can yellow and dramatically alter the appearance of the finished surface.

### Aggregate

The performance and appearance of the finished surface is dependent on the aggregate used. The aggregate blends used with Eco Resin Bound UV Surfacing Resin have been designed to achieve strength, resilience, porosity and decoration.

Some aggregates can contain small amounts of iron which can produce rust staining. This naturally occurring iron cannot be identified before use and Eco Resin Bound Ltd cannot accept any responsibility for any loss or damage suffered as a result of staining.

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#### Appearance

The appearance of samples and of materials supplied by Eco Resin Bound Ltd are based on the colour, shade and grading of individual aggregates supplied to Eco Resin Bound Ltd by its suppliers. Being largely natural aggregates, the appearance will vary from bag to bag and batch to batch, a uniform appearance should not be expected and cannot be achieved. Where appearance is important, darker aggregate blends are less likely to show wheel marks and accumulated debris.

#### Reflective Cracking

Angular intrusions into resin bound surfacing by walls; edgings etc may cause formation of reflective cracks in the surfacing. Intrusions into the surfacing should be avoided whenever possible and when unavoidable, intrusions should be curved rather than angular.

#### Maintenance

It is possible to repair localised damage by cutting out and replacing, ideally using the same aggregate as originally supplied. Ageing and weathering of the original may prevent an invisible repair. "Picking out" of some stones is possible but is likely to be minimal and localised. Any major loss of stone should be reported.

#### Slip Resistance

Application of EcoGrid UV Resin Bound Surfacing System Anti-Slip Aggregate will significantly increase the slip resistance of the surface in the wet without substantial change to appearance and its use may help comply with Health and Safety obligations. See Table 4.

#### Contractors

EcoGrid UV Resin Bound Surfacing System is a specialist product and must only be applied by specialist applicators. Do not apply or allow it to be applied by contractors who do not possess the necessary skills and experience. You should consider appointing a Eco Resin Bound Ltd Approved Contractor.

#### Sub-base Requirements

The EcoGrid UV Resin Bound Surfacing System is designed for light to medium foot traffic and drives only, a suggested form of paving construction is shown below.

### Suggested Construction SuDS Compliant Permeable Construction for Footpaths

#### Eco Resin Bound UV Surfacing Resin & Aggregate

EcoBound Resin Bound UV Surfacing, minimum 20mm thickness, with optional Eco Resin Bound UV Surfacing Anti-Slip Aggregate.

#### EcoGrid Base

40mm depth of Ecogrid EH40

#### Geotextile Layer

#### Granular Sub-base

175mm minimum well compacted Type 3 granular sub-base or similar approved

#### Optional Impermeable Membrane

Impermeable membrane to carry water to infiltration/storage system

or

#### Optional Geotextile Layer

Geotextile layer to prevent upward migration of soil

#### Capping Layer

If required, depending on sub-grade condition

#### Sub-grade

The above information is produced for guidance only. The designer / contractor should be satisfied that the construction is suitable for the expected traffic and ground conditions.

### Suggested Construction SuDS Compliant Permeable Construction for Drive on-Drive off Drives

#### Eco Resin Bound UV Surfacing Resin & Aggregate

Eco Resin Bound UV Surfacing Resin & Eco Resin Bound UV Surfacing Aggregate minimum 20mm thickness with optional Eco Resin Bound UV Surfacing Anti-Slip Aggregate.

#### EcoGrid Base

40mm minimum depth of EcoGrid 6-10mm aggregate laid and compacted in Ecogrid EH40, a 40mm thick grid made with 100% re-cycled plastic

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#### Geotextile Layer

##### Granular Sub-base

200mm minimum well compacted Type 3 granular sub-base or similar approved

##### Optional Impermeable Membrane

Impermeable membrane to carry water to infiltration/storage system  
or

##### Optional Geotextile Layer

Geotextile layer to prevent upward migration of soil

#### Capping Layer

If required, depending on sub-grade condition

#### Sub-grade

The above information is produced for guidance only, the designer/ contractor should be satisfied that the construction is suitable for the expected traffic and ground conditions.

#### Installation Procedure

1. Place EcoGrid EH40 on a suitable Geotextile layer, fill the grid with 6-10mm washed round gravel and fully compact the aggregate.
2. Before mixing resin and aggregate, ensure that the mixing station is fully waterproof when rain is expected, discontinue mixing when fog or mist are anticipated. Light rain on the surface of the system is unlikely to damage or affect the surface, see later reference to application in rainy conditions. Ensure that the gravel fill of the base is surface dry.
3. Place Eco Resin Bound UV Surfacing Aggregate into a clean, dry, forced action mixer minimum pan capacity 120 litres, Baron E120 mixer or similar.
4. Scrape all of the contents of Eco Resin Bound UV Surfacing Resin Part B into the larger Part A container and mix with a drill and helical paddle mixer attachment for 30-45 seconds. Keep mixing time to a minimum to avoid a build up of heat.
5. Immediately add the mixed resin to the aggregate in the mixer. Mix the aggregate and resin together until all the aggregate is evenly coated with resin. Keep mixing time to a minimum to avoid a build up of heat.
6. Discharge the mixed resin and aggregate onto the prepared surface, level and smooth. Excessive compaction will reduce permeability.
7. Finish the surface with a suitable float.
8. If required, immediately cast Eco Resin Bound UV Surfacing Anti-Slip Aggregate onto the top surface of the wet resin and aggregate, at the rate of approximately 0.1kg/m<sup>2</sup>. Ensure even coverage to prevent a patchy appearance.
9. Allow to cure. At 20°C protect against damage by heavy rain for 1 - 2 hours (see Rain during application) and open to traffic as described in Table 2.

#### Shelf Life and Storage

Shelf life of EcoGrid UV Resin Bound Surfacing System Resin is 6 months, aggregates have an unlimited shelf life. Store materials in clean, dry, frost free warehouse conditions between 5°C and 25°C. Protect from sunlight.

#### Health and Safety

EcoGrid UV Resin Bound Surfacing System Resin contains small amounts of isocyanates and is harmful by ingestion and skin contact. It is not considered harmful for transportation. Protective clothing such as goggles, overalls and gloves is recommended to prevent any effect from prolonged skin contact, inhalation or ingestion. Refer to Health and Safety Data Sheets.

#### Temperature

Working time is affected by temperature including material, air and substrate temperature. At temperatures above 25°C the pot life and working time may be insufficient to allow its proper application.

Work should therefore not proceed when product, air or substrate temperature exceed 25°C. The temperature of the substrate must therefore be measured and monitored during application and work should stop when temperature is above 25°C.

At low temperatures Eco Resin Bound UV Surfacing Resin will not flow sufficiently to achieve a smooth finish and work should not proceed when air, material or substrate temperature is below 5°C. Whilst it is possible to mix and apply at temperatures down to 0°C, the cure rate and rate of strength gain will be retarded; the surface must not be trafficked until it has gained sufficient strength.

#### Rain during application

Light rain on the surface of the system is unlikely to cause damage to or affect the surface. Heavy rain is likely to spoil the appearance of the surface. Very heavy rain could wash out resin and aggregate. Therefore application during rain or when rain is anticipated during the cure period is not recommended. Care must be taken to keep the mixing station dry, thus avoiding entrapment of moisture between aggregate and resin. The surface of the EcoGrid Base should be dry when Eco Resin Bound UV Surfacing is applied, the bond strength will be reduced if the substrate is damp.

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### Site Attendance

When on site Eco Resin Bound Ltd representatives are able, if asked, to give a general indication of the correct method of installing a Eco Resin Bound Ltd product. It is important to bear in mind that Eco Resin Bound Ltd is a manufacturer and not an application contractor and it is therefore the responsibility of the contractor and his employer to ensure he is aware of and implements the correct practices and procedures to ensure the correct installation of the product and that liability for its correct installation lies with the contractor and not with Eco Resin Bound Ltd.

**Table 1. Mix Designs**

EcoGrid EH40 grid 333mm x 333mm x 40mm	Approximately 9 units per m <sup>2</sup>
EcoGrid Aggregate 6-10mm	Approximately 1.65m <sup>2</sup> per 100kg
Surfacing Mix	114.5kg
Eco Resin Bound UV Surfacing Resin	7.5kg
Eco Resin Bound UV Surfacing Resin Aggregate	107kg
Coverage (approx) *	3.5m <sup>2</sup> @ 20mm
Coverage (approx). Eco Resin Bound UV Surfacing Anti-Slip Aggregate (cast into wet resin/aggregate surface for increased slip resistance) *	0.1kg per m <sup>2</sup>
* Coverage is based on application to a smooth flat surface and will vary when applied to undulating surfaces, according to compaction, and to the aggregate grading, which can change from batch to batch.	

**Table 2. Performance Data**

Minimum depths of EcoBound Resin Bound UV Surfacing over grid or aggregate high points	20mm when using 6mm max. size aggregate
	25mm when using 10mm max. size aggregate
Foot traffic after	4 hours at 20°C
Light vehicle traffic after	1-2 days at 20°C

**Table 3. Packaging**

EcoGrid EH40 grid 333mm x 333mm x 40mm	660 units per pallet
EcoGrid Aggregate	25kg bags
Eco Resin Bound UV Surfacing Resin	7.5kg
Eco Resin Bound UV Surfacing Aggregate	107kg
Eco Resin Bound UV Surfacing Anti-Slip Aggregate	5kg

**Table 4. Minimum Thickness and Slip Resistance**

Blend	Max aggregate size (mm)	Minimum application thickness (mm)	Potential for Slip (Wet)	Potential for Slip (dry)
Autumn Harvest (1.17)	5	20	Low	Low
Terracotta Gold (3.21)	5	20	Low	Low
Terracotta Snow (4.26)	5	20	Low	Low
Harvest Crunch (9.32)	5	20	Low	Low
Rustic Bronze (10.33)	5	20	Low	Low
Silver Moon (11.34)	5	20	Low	Low
Sesame Gold (12.35)	5	20	Low	Low
Golden Glow (13.36)	5	20	Low	Low
Autumn Forest (14.37)	5	20	Low	Low
Golden Harvest (15.38)	5	20	Low	Low
Quartz Parallel (16.39)	6	20	Low	Low
Midnight (17.40)	6	20	Low	Low
Maple Harvest (18.55)	5	20	Low	Low
Lunar (19.69)	6	20	Low	Low
Choc Chip Harvest (20.70)	6	20	Low	Low
Terracotta Medium (21.80)	5	20	Low	Low
Beige Pearl (22.92)	6	20	Low	Low

All of these blends are suitable for foot and light domestic vehicle traffic.

Aggregates **must** be dry (typically with a moisture content no more than 0.5%)

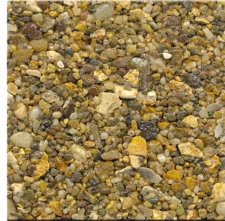
Slip resistance tested in accordance with BS 8204 Part 6

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*Autumn Forest 14.37*



*Autumn Harvest 1.17*



*Beige Pearl 22.92*



*Choc Chip Harvest 20.70*



*Golden Glow 13.36*



*Golden Harvest 15.38*



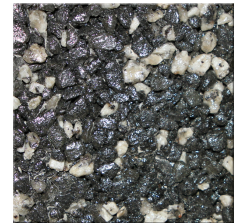
*Harvest Crunch 9.32*



*Lunar 19.69*



*Maple Harvest 18.55*



*Midnight 17.40*



*Quartz Parallel 16.39*



*Rustic Bronze 10.33*



*Sesame Gold 12.35*



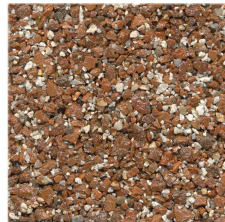
*Silver Moon 11.34*



*Terracotta Gold 3.21*



*Terracotta Medium 21.80*



*Terracotta Snow 4.26*

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The information detailed in this leaflet is liable to modification from time to time in the light of experience and of normal product application, and before using, customers are advised to check with Eco Resin Bound Ltd, quoting the reference number, that they possess the latest issue. Any person or company using the product without first making further enquiries as to the suitability of the product for the intended use does so at his own risk, and Eco Resin Bound Ltd can accept no responsibility for the performance of the product, or for any loss or damage arising out of such use. All goods supplied subject to our Terms and Conditions of Sale see [www.ecobound.co.uk](http://www.ecobound.co.uk)