



## RESIN BOUND STONE

### CONTINUOUS PERMEABLE STONE CARPET

#### SIERRA GEM

2437

### TECHNICAL SPECIFICATION & INSTALLATION GUIDE

#### UVR RESIN

| PROPERTY              | VALUE      | UNIT OF MEASURE   |
|-----------------------|------------|-------------------|
| Density (at 25°C)     | 1.09       | g/cm <sup>3</sup> |
| Viscosity (at 25°C)   | 2600       | mPas              |
| Mix Ratio             | 100:95     | x:x               |
| Hardness              | 62         | Shore D           |
| Tensile Strength      | 20.3       | MPa               |
| Elongation at Break   | 51         | %                 |
| Flexural Strength     | 4          | MPa               |
| Operating Temperature | -10 to +60 | (±5) °C           |
| Curing Time (at 21°C) | 60         | (±10) Minutes     |

#### STONE BLEND

| PROPERTY                    | VALUE | UNIT OF MEASURE |
|-----------------------------|-------|-----------------|
| PSV                         | 43    | —               |
| AAV                         | 2     | %               |
| AIV                         | 17    | %               |
| ACV                         | -     | %               |
| Hardness                    | 6     | Mohs            |
| Flexural Strength           |       | MPa             |
| TRL(55) Slip Test Dry / Wet |       | PTV             |
| 4S(96) Slip Test Dry / Wet  |       | PTV             |

Resin bound gravel kits typically cover approximately 4m<sup>2</sup> at 15mm



#### SIERRA GEM

Marble: 0% | Granite: 0% | Quartz: 100%  
Size 1-5mm | Permeability: ●●●

#### COMPONENTS (MIX)



**PERMABOUND UVR RESIN**  
Weight: 6.5 / 7.0 / 7.5 Kg



**BINDING QUARTZ**  
Weight: 5 Kg



**Staffordshire Pink**  
Size: 2–5mm  
Weight: 25kg



**Staffordshire Pink**  
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Weight: 25kg



**Haze**  
Size: 2–5mm  
Weight: 25kg



**Oyster Quartz**  
Size: 1–3mm  
Weight: 25kg

### EMBEDDED CARBON – Emissions per 1 Square meter (Kg CO<sub>2</sub> e)

| RESIN BOUND GRAVEL DEPTH | COMPONENTS |        | WHEN INSTALLED ON |          |         |        |
|--------------------------|------------|--------|-------------------|----------|---------|--------|
|                          | GRAVEL     | BINDER | TARMAC            | CONCRETE | MESH&GO | X-GRID |
| 15mm                     | 0.11       | 4.86   | 12.43             | 13.35    | 10.35   | 12.27  |
| 18mm                     | 0.13       | 5.83   | 13.99             | 14.9     | 11.37   | 13.26  |
| 21mm                     | 0.15       | 6.80   | 15.54             | 16.46    | 12.92   | 16.14  |
| 25mm                     | 0.18       | 8.10   | 23.19             | 25.03    | 14.82   | 16.71  |
| 30mm                     | 0.21       | 9.72   | 25.41             | 27.25    | 17.04   | 18.93  |

# INSTALLATION STEPS

## MIX RATIO:

**UVR Resin (Part A + B)**  
6.5–7.5 kg (one full kit)

## Decorative Stone:

100 kg (4 × 25 kg bags), 1–3 mm or  
2–5 mm blends, clean and kiln-dried

## Binding Quartz:

5 kg (1 full bag), typically 0.2–0.5 mm

A solid, clean base is essential for a successful resin bound installation. Any moisture, dust, or instability in the surface can affect adhesion and impact the finish. Careful preparation helps the resin bond properly and supports long-term performance of the system.

## BEFORE STARTING:

- ◆ Check the forecast to avoid rain or high humidity during installation and curing. Once cured, it is weatherproof.
- ◆ Ensure the surface is fully dry, clean, and free from dust, oil, or loose debris.
- ◆ Confirm that the base is firm and stable, no cracks, movement, or flexing.
- ◆ Seal porous or absorbent areas first to avoid uneven curing or resin soaking in.

## 1. MIX THE RESIN

- ➔ Stir Part A for 10–20 seconds to loosen contents.
- ➔ Add Part B and mix both together for 60 seconds.
- ➔ Mix until smooth and even throughout.
- ➔ Always use full kits, do not split batches.

## 2. ADD AGGREGATES AND SAND

- ➔ Add 4 full bags of clean, dry aggregate to mixer.
- ➔ Add full resin mix and binding quartz.
- ➔ Mix evenly for 3–4 minutes until fully coated.
- ➔ Transfer mix immediately into a lined wheelbarrow.

## 3. SPREAD THE MIX EVENLY

- ➔ Tip mix onto surface in small, manageable sections.
- ➔ Use lute or rake to roughly level to 15–18 mm.
- ➔ Check from all angles to spot any surface issues.
- ➔ Work in sequence to maintain a consistent finish.

## 4. TROWEL AND FINISH THE SURFACE

- ➔ Mark working areas in squares before trowelling.
- ➔ Compact and smooth with a clean trowel.
- ➔ Trowel edges firmly and leave slightly rough.
- ➔ Apply crushed glass on top if slip resistance is needed.

## KEY NOTES:

- ◆ Always use clean, dry, and dust-free aggregates for consistent results.
- ◆ Always use a forced action mixer. Never use a cement mixer.
- ◆ Keep batch times consistent (ideally 3 to 4 minutes) and avoid overmixing.
- ◆ Use full resin kits and full bags of aggregate. Do not adjust ratios.
- ◆ Most resins are pre-catalysed and moisture-curing. Only add catalyst if advised.
- ◆ Lay each batch immediately. Clean the trowel regularly to avoid dragging.

# RESIN BOUND SURFACE MAINTENANCE

Resin-bound surfaces are designed to withstand harsh weather conditions, including strong sunlight and heavy rain, while maintaining performance and appearance. Regular upkeep helps ensure long-term visual quality, surface function, and SuDS compliance.

## GENERAL CARE:

- ◆ Sweep frequently and clean with cold water at low pressure (max 150 bar, nozzle 200 mm from surface).
- ◆ Use resin-compatible cleaners such as BOUNDCLEAN for algae, moss or surface marks.
- ◆ Avoid corrosive chemicals, de-icing salt, impact damage or placing hot equipment directly on the surface.
- ◆ Reapply a sealer (e.g. BOUNDSEAL) if the surface becomes dull or exposed to preserve lifespan.



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**DISCLAIMER:** Figures contained within are representative figures and cannot be wholly relied upon for accuracy. If empirical data is required, we highly recommend testing be carried out by an approved and certified test house. Installation directions are for guidance only and do not replace official product instructions or proper training. Always refer to the full installation manual and technical data sheets. Seek appropriate training or appoint suitably trained individuals before carrying out any installation work.