LA Surfacing UVR Technical Data Sheet

Resin bound optimised performance UVR binder

UVR is a 2-pack system, part A (resin) part B (hardener). Part A and part B have been tested and provide optimum performance. **UVR** is a high performance, solvent free, SuDS compliant resin binder suitable for vehicular and pedestrian use. **UVR** is fast curing and is pre-catalysed for ease of use on site. Should increased curing time be needed or in cooler temperatures, additional catalyst can be added. Please refer to catalyst guidance using QR code on bucket

Benefits

- Aliphatic resin will not discolour or degrade when exposed to sunlight (tested to **BS EN ISO 16474-3 method A, cycle 1**)
- High slip resistance (tested to **BS 8204-62008=A1:2010 appendix B**)
- **Fully SuDS** compliant water permeability up to 90ltrs/m2/second
- **Low VOC** (Volatile Organic Compounds)
- Suitable for vehicular traffic, up to 7.5 tonnes: Driveways, carparks, footpaths, patios, pool surrounds
- Restricts weed growth therefore very little maintenance
- Vast range of aggregate blends with bespoke and colour matching available
- Optimum resin to aggregate ratio therefore no primer required
- Manufactured in the UK using high grade raw materials

Manufactured to **UKAS ISO 9001, 14001** to provide quality assurance.

Description

UVR Resin Bound Surfacing is a resin bound aggregate surface suitable for both vehicular and pedestrian traffic. The open matrix of the surface allows water to freely permeate and therefore provides a fully SuDS compliant surface: reducing flood risk (allowing water to flow into water courses).

As an aliphatic resin formulation, the coating will not deteriorate or discolour when exposed to typical UK weather conditions as tested to **BS EN ISO 16474-3 method A, cycle 1**. Providing a strong high-performance system for both pedestrian and vehicular use.

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Quality and Testing

All products are quality controlled in line with UKAS ISO 9001:2015 Quality Management System standard.

The performance of the resin binder as part of a resin bound system will meet the industry guidance notes 2021.

Resin bound for external application guidance is produced and issued by industry leading experts feRFA (the Resin Flooring Association) www.ferfa.org.uk.

Suggested base Build Up

	Pedestrian	Vehicular	Car Park
UVR Resin Bound Surfacing	15mm resin bound 6mm aggregate	18mm resin bound 6mm aggregate	20mm resin bound 6mm aggregate
Binder Course*	50mm A/C 14 tarmac (porous) Max 100.150 pen BS EN13108-1:2006	70mm A/C 14 tarmac (porous) Max 100.150 pen BS EN13108-1:2006	30mm A/C 14 tarmac (porous) Max 100.150 pen BS EN13108-1:2006
Base Course	N/A	N/A	60mm A/C 20 tarmac (porous) Max 100.150 pen EN13108-1:2006
Type 1/Type 3 Sub-base	150mm type 1/type 3 (non-frost susceptible) in well compacted layers to SHW clause 805 or 4/20mm & 4/40mm crushed aggregate to BS EN12620	175mm type 1/type 3 (non-frost susceptible) in well compacted layers to SHW clause 805 or 4/20mm & 4/40mm crushed aggregate to BS EN12620	300mm minimum type 1/ type 3 (non-frost susceptible) in well compacted layers to SHW clause 805 or 4/20mm & 4/40mm crushed aggregate to BS EN12620

* Use of AC14 open graded asphalt (macadam) maximum 100/150 pen binder is recommended for pathways, driveways and car parks to BS EN 13108-1. This will reduce the risk of cracking.

A capping layer may also be required depending on the sub-grade condition. The build-up may require an impermeable membrane to carry water to infiltration/ storage system/soakaway or a geotextile layer to prevent upward migration of soil.

The above information is for guidance only and the contractor or specifier should satisfy themselves that the construction of the base build up is suitable for the ground conditions and the traffic expected.

Alternative base: Concrete

Whilst concrete bases are not recommended for resin bound surfaces, the following should be considered if constructing a new one:

1. Concrete bay proportions should be ideally 1:1 and should not be greater than 3:2, long narrow strips of concrete will crack across the bay width and these cracks are likely to be mirrored in the surfacing
2. Ensure that the concrete has a minimum design strength of C35 and that the concrete has a minimum compressive strength of 15-20N/mm2 before the surface is prepared. This is likely to be a few days after installation.
3. Prepare the concrete surface to remove laitance and provide a lightly textured surface to ensure adequate adhesion, vacuum shot blasting is the preferred method.

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Instructions for use:

Preparation

1. The surface of the base, whether asphalt, concrete or any other sub-base must be clean, dry and free from loose materials.
2. Ensure that falls are in place to provide adequate drainage when applying to an impermeable base.
3. Protect all edges abutting soft landscaping with brick, concrete, aluminium trims or other such edge detail to prevent damage to the surfacing. Edgings should be securely fixed to prevent movement.
4. A flexible joint filler should be used at edgings where there is potential for movement to create separation.
5. Where UVR Resin Bound Surfacing is to be applied to a non-permeable base, gaps or weep holes should be created in the edging, to allow drainage of water.
6. When applying UVR Resin Bound Surfacing to concrete bases, all movement joints, stress relief joints and day joints must be expressed in the resin bound surfacing.

Mixing

1. Place **UVR Resin Bound Surfacing Aggregate blend** (100kg) into a clean, dry, forced action mixer (minimum capacity/power 120 litres/1.8kW). Mix until the aggregate is evenly blended. Do not over mix the aggregate as this may cause grinding, creating dust and could result in a patchy surface. Approximately **30 seconds** will suffice.
2. Scrape all the contents of **UVR Resin Bound Surfacing B** component into the larger A component container and mix with a slow speed drill (≤ 450RPM) and MR2 paddle mixer attachment for **1-2 minutes** until homogeneous.
3. Immediately add the mixed resin to the aggregate in the mixer. Mix the aggregate and resin together until all the aggregate is evenly coated. Mix for approximately **1-2 minutes**. Over mixing will increase heat generation, reduce working time and may affect the colour. It is recommend to use a timer when mixing. Inconsistent mixing times may cause colour variation.
4. Pour in the 6.25kg sand and mix for a further **1-2 minutes** until evenly distributed.

Application

1. Discharge the mixed resin and aggregate onto the prepared surface, level and smooth using a steel trowel. Excessive compaction will reduce permeability.
2. Finish the surface with a suitable float avoiding overworking which may result in "trowel burn". **Tool Cleaner/Trowel Finishing Aid** should be used if required, the use of white spirit is not acceptable.
3. For improved slip-resistance on steep gradients, apply **Resin Bound Surfacing Anti-Slip Aggregate** to the wet resin at the rate of approximately 0.1kg/m2, avoid a patchy appearance by scattering evenly.
4. Always ensure that a wet edge is maintained, joints between mixes will be visible unless the older mix is still workable.

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Application conditions & performance

UVR Binder has been designed for typical weather conditions associated with the UK. Under these conditions the resin will be considered UV light and heat resistant and will not discolour.

Although **UVR** contains moisture scavengers', application during or before rain is not recommended. Rain on the surface may affect the bond between the molecules during the cross-linking process, reducing the strength of the system. This may also cause blooming. Note that application to a damp substrate will reduce bond strength. Ensure unmixed aggregate is always kept dry, wet aggregates will cause the same effect. Care must be taken to keep the mixing station dry, to avoid moisture/water becoming entrapped in the mix.

Mix design & coverage

UVR Resin	**7.5kg**
Aggregate Blend	**100kg**
binder sand	**6.25kg**

Theoretical coverage 15mm = 4m2, 18mm = 3.5m2 this does not take into account compaction, undulation of the sub-base or wastage.

Working/Curing Time and Temperatures

Temperatures can affect both the curing time as well as working time. Increased temperatures will speed up these processes, lower temperatures will decrease both. **UVR Resin** will cure sufficiently to receive foot traffic in 4 – 6 hours at 20°C, between 24 – 48 hours for vehicular traffic and 7 days for full chemical cure.

Contractors

UVR 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 an approved contractor.

Curing

Allow to cure and open to traffic as described in **"Working Times and Temperatures".**

Cleaning Tools

Tools and equipment may be cleaned with Tool Cleaner/ Trowel Finishing Aid, which will remove uncured resin.

Shelf Life

Shelf life of UVR Surfacing:

Resin: 6 months if product remains sealed

Aggregate: Unlimited shelf life if kept dry and free from condensation

Health & Safefty

Refer to Safety Data Sheet.

On Site Technical Support

Representatives are happy to offer on-site technical support and will offer general indication of the correct method of installing the product. It's 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. Liability for its correct installation lies with the contractor.

Please refer to latest mix blend sheets for all Blends.

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