

# Ace ResiMesh

## Reinforcement and Stabilisation of Resin Bound Systems

The Ace ResiMesh system offers a revolutionary, faster, and more cost effective solution for resin bound surfacing installations. This system is designed to streamline installation, eliminating the need for a structural base thereby accelerating project completion and reducing labour costs.

Ace ResiMesh is a specially engineered fibreglass reinforced composite that serves multiple functions, such as an isolation layer for overlay installations or as a replacement for traditional structural sub-bases negating the requirement for tarmac or concrete. It is particularly effective in mitigating the risk of cracking.

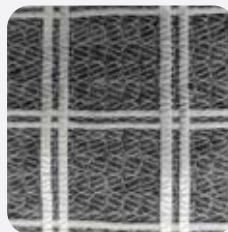


### Features and Benefits:

- **Crack Mitigation:** Ideal for overlaying cracked concrete or tarmac, significantly reducing the risk of reflective cracking.
- **Ease of Installation:** The supple fabric design stays flat with no ripples when rolled out, and is easy to cut and handle on-site.
- **CWA Compliance:** Allows water to permeate through, ensuring Clean Water Act compliance.
- **Section Reduction:** Can be installed directly onto Crush & Run, eliminating the need for additional structural layers such as concrete or tarmac when used for foot traffic.
- **Thickness Efficiency:** No need to increase the depth of the resin bound surface during installation.

### Functional Benefits:

- **Reinforcement (R):** Enhances structural integrity
- **Stress Relief (STR):** Reduces stress within the pavement
- **Specification:** Prevents contamination from soil



### Composition:

- **Material:** Glass filament grid structure stitched onto a polypropylene backing

## Contractor-Friendly Design

Ace ResiMesh is designed to be user-friendly, enabling contractors to manage the entire resin bound installation process independently, reducing the reliance on specialised professionals for tarmac, concrete or other structural base installations.

## Technical Data

Ace ResiMesh is manufactured in accordance with a Quality Management System which complies with the requirements of EN ISO 9001.

Ace ResiMesh is VOC free.

**Summary:** Ace ResiMesh provides a comprehensive, efficient solution for resin bound surfacing, optimizing installation speed and cost-effectiveness while ensuring superior performance and durability.

Characteristic	Unit	Value
Roll Width	Inches	39
Roll Length	Feet	325
Product Weight per roll	Pounds	88
Index Strength (I)	kN/m	100
Typical strain at failure (I)	%	3
Elastic modulus of glass filaments	Gpa	80
Polymer of Paving Fabric		pp

(I) Index property based on testing the individual glass filaments in accordance with ASTM D 3822. Index properties will differ from testing results on the final product (e.g. to ISO 10319).

## Specifications

	New Construction – Foot Traffic	New Construction – Light Vehicular	Overlay Existing Base – Foot Traffic	Overlay Existing Base – Vehicular Traffic
AceBound UVR	@ ¾ inch	@ ¾ inch	@ ¾ inch	@ ¾ inch
Ace ResiMesh	✓	✓	✓	✓
Ace Base	N/A	1 ½ inch	N/A	N/A
Granno Dust (to level)	½ inch to level	N/A	N/A	N/A
Granular base	Crush & Run 6 inches	Crush & Run 7 inches	N/A	N/A
Existing Sub-base	N/A	N/A	Concrete, tarmac, block paving etc	Concrete, tarmac, block paving etc
Ace Foundation Grid	Optional if going on sub-standard soil	N/A	N/A	N/A

## Installation Guide

1. Ensure surface is dry, clean and clear of debris.
2. When installing on top of Crush & Run, apply a layer of grano dust at  $\frac{1}{2}$  inch to provide a level and flat surface.
3. Cut to size and shape (if curves are required).
4. Roll out the Ace ResiMesh, ensuring it's flat with no creases or kinks.
5. When rolling out adjacent fabric, overlap by 2 inches at the edge.
6. Ensure Ace ResiMesh is kept dry as residual moisture could affect the resin.
7. Install AceBound resin surfacing in the normal manor.

## On Site Technical Support

Ace Resin representatives are happy to offer on-site technical support and will offer general indication of the correct method of installing an Ace Resin Ltd product. It must be remembered that Ace Resin Ltd is a manufacturer and therefore 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 and not with Ace Resin Ltd.

## Storage Conditions

Ace ResiMesh should be stored in clean, dry environment, away from contaminants. When stored correctly we expect an unlimited shelf life.

## Health & Safety

Refer to health and safety data sheet.

# Ace Base

## Structural permeable base for resin Bound surfacing systems

Ace Resin introduces **Ace Base**, the ultimate environmentally friendly and flood-resistant base for resin-bound surfacing. Designed specifically for compatibility with resin-bound applications, Ace Base offers an innovative, **No-Dig** solution that sets a new standard for permeability, durability, sustainability, and efficiency.



### What is Ace Base?

Ace Base is a high-strength, fully permeable base layer engineered to perform under both pedestrian and vehicular loads. Enhanced with **Ace ResiMesh**, a structural reinforcement mesh with an impressive **100kN tensile strength**, Ace Base ensures exceptional stability and longevity for resin-bound surfaces.

When installed within the recommended inter-coat period, Ace Base forms a seamless, integrated structure that resists movement and cracking. This ground-breaking system delivers unmatched flexural strength, making it resilient to heavy traffic and dynamic environmental conditions and ground movement.

### Key Benefits of Ace Base:

- **Permeability:** Ace Base allows natural water flow through the surface, making it fully compliant with CWA Clean water Act to manage storm-water runoff efficiently and reduce flood risks.
- **No Dig Installation:** By avoiding the need for extensive excavation, Ace Base minimizes waste and earth disturbance, delivering a quicker, cleaner installation with less disruption to surrounding areas.
- **One-Day Application:** With Ace ResiMesh reinforcement and Ace Base's advanced binder system, both the base and resin-bound surface can be installed in a single day, offering unparalleled convenience, reducing project timelines significantly.
- **Long-Term Flexural Resistance:** The high flexural strength provided by Ace ResiMesh 100 kN support structure and the resilient binder ensures a durable and flexible surface that withstands both pedestrian and vehicular stress.

Ace Base's engineered polyurethane system includes a **high-strength aggregate** blend, multi-sized binding quartz, and a durable urethane binder for maximum resilience. Together, these components form a superior base layer that enhances the structural integrity of the entire resin-bound surface, delivering a quieter, smoother, and more durable paving solution.

Designed to outperform conventional materials, **Ace Base** is your gateway to a greener, stronger, and more reliable resin-bound surface.

Ace Resin redefines what's possible in permeable, eco-friendly paving solutions.



# AceBound UVR Technical Data Sheet

## Resin Bound high performance UV stable surfacing system

AceBound UVR is a 2-pack system, part A (resin) part B (hardener). Part A and part B have been tested and provide optimum performance. AceBound UVR is a high performance, solvent free, CWA compliant resin binder suitable for vehicular and pedestrian use. AceBound 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 discolor or degrade when exposed to sunlight (tested to **BS EN ISO 16474-3 method A, cycle 1**)
- High slip resistance
- **CWA** (Clean Water Act) and **ADA** (American with Disabilities Act) compliant water permeability up to 2 gallons/sqft/second
- **Low VOC** (Volatile Organic Compounds)
- Suitable for vehicular traffic, up to 7.0 tons: Driveways, carparks, footpaths, patios, pool surrounds, outdoor kitchens, public realm, schools and care homes
- Restricts weed growth therefore very little maintenance
- Vast range of aggregate blends with bespoke and color matching available
- Optimum resin to aggregate ratio therefore no primer required



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

### Description

**AceBound UVR Resin 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 CWA (Clean Water Act) compliant surface: reducing flood risk (allowing water to flow into water courses).

As an aliphatic resin binder formulation, the coating will not deteriorate or discolor when exposed to typical US weather conditions as tested to **BS EN ISO 16474-3 method A, cycle 1**. Providing a strong high-performance system.

## 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](http://www.ferfa.org.uk).

## Suggested base Build Up

	New Construction – Foot Traffic	New Construction – Light Vehicular	Overlay Existing Base – Foot Traffic	Overlay Existing Base – Vehicular Traffic
AceBound UVR	@ ¾ inch	@ ¾ inch	@ ¾ inch	@ ¾ inch
Ace ResiMesh	✓	✓	✓	✓
Ace Base	N/A	1 ½ inch	N/A	N/A
Granno Dust (to level)	½ inch to level	N/A	N/A	N/A
Granular base	Crush & Run 6 inches	Crush & Run 7 inches	N/A	N/A
Existing Sub-base	N/A	N/A	Concrete, tarmac, block paving etc	Concrete, tarmac, block paving etc
Ace Foundation Grid	Optional if going on sub-standard. soil	N/A	N/A	N/A

### Alternative base: Concrete

When considering permeable concrete for your base 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 to mitigate this Ace ResiMesh should be installed.
2. Ensure that the concrete has a minimum design strength of C30 and that the concrete has a minimum compressive strength of 15-20N/mm<sup>2</sup> 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.

## Instructions for Use:

### Preparation

1. The surface of the base, whether 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 AceBound 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 AceBound 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 **Aggregate blend** (220 lbs) into a clean, dry, forced action mixer (minimum capacity/power 32 gallon/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 **AceBound UVR Resin binder, component B**, into the larger component A container and mix with a slow speed drill ( $\leq 450$ RPM) and MR2 paddle mixer attachment for **1-2 minutes** until homogeneous.
3. Immediately add the mixed resin binder to the aggregate in the mixer. Mix the aggregate and resin binder 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 color. It is recommend to use a timer when mixing. Inconsistent mixing times may cause color variation.
4. Pour in the 13.75 lb sand and mix for a further **1-2 minutes** until evenly distributed.

### Application

1. Discharge the mixed resin binder 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". To remove tacky built up resin binder on the trowel, soapy water may be used. Ensure the trowel is dried before it comes into contact with the resin binder - the use of white spirit to is not acceptable.
3. For improved slip-resistance on steep gradients, apply **AceBound Anti-Slip Aggregate** to the wet resin at the rate of approximately 3.5 ounces/10 sq feet , 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.

## Application conditions & performance

AceBound UVR Resin Binder has been designed for typical weather conditions associated with the USA. Under these conditions the resin binder will be considered UV light and heat resistant and will not discolor.

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.

## Contractors

**AceBound 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 Ace Resin Ltd approved contractor.

## Slip Resistance

**AceBound UVR** provides high slip resistance BS7976. While it already offers excellent slip values, high slip resistance cannot be guaranteed on areas with inclines once associated additional frictional demands have been taken into account. Resin bound should be carefully considered by the client if appropriate in these instances. The addition of a glass scatter into the wet resin before cure may be considered to increase slip resistance further.

## Mix design & coverage

AceBound UVR Resin	16.5 lbs
AceBound Aggregate Blend	220 lbs
AceBound binder sand	13.75 lbs

Theoretical coverage 37 square foot @ 3/4 inch 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. **AceBound UVR Resin** binder will cure sufficiently to receive foot traffic in 4 – 6 hours at 70°F, between 24 – 48 hours for vehicular traffic and 7 days for full chemical cure.

## Curing

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

## Cleaning Tools

Tools and equipment may be cleaned after use with White spirit or other solvents, such as xylene or toluene, care must be taken to ensure that these chemicals do not come into contact with either uncured or cured AceBound UVR surfacing once installed.

## Shelf Life

Shelf life of AceBound UVR Surfacing:

**Resin:** 6 months if product remains sealed

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

## Health & Safety

Refer to Safety Data Sheet.

## On Site Technical Support

Ace Resin representatives are happy to offer on-site technical support and will offer general indication of the correct method of installing an Ace Resin Ltd product. It must be remembered that Ace Resin Ltd is a manufacturer and therefore 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 and not with Ace Resin Ltd.

## Storage Conditions

Shelf life of AceBound UVR Resin Bound Surfacing Resin is 6 months, aggregates have an unlimited shelf life. Store materials in clean, dry, frost free warehouse conditions between 40°F and 80°F away from direct sunlight.

The information detailed in this document is liable to modification from time to time. Customers are advised to check that they possess the latest version by contacting Ace Resin Ltd and quoting the version number. Any person or company using the product without first enquiring as to the suitability of the product for the intended use, does so at their own risk. Ace Resin Ltd can accept no responsibility for the performance of the product, or for any loss or damage arising out of such use.



# Resin Bound Installation Guide

**AceBound** resin bound surfacing is a cold applied clear polyurethane resin, designed to bind natural aggregates to create a highly decorative surface.

It is a permeable, attractive & slip resistant system. Resin bound is growing in popularity for commercial projects and homeowners alike.

Although relatively simple to install, many things can go wrong at various stages. This guide is to assist you in the installation of Acebound Resin Surfacing and help you to reduce the likelihood of any issues that may occur which could be detrimental to your project.

## Key Contact Details

### Customer Service & Sales

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Great Braxted, Witham CM8 3EU - United Kingdom

[www.aceresin.us](http://www.aceresin.us)



# Preparation

## Sub-base

**Whether you are installing a new sub-base or overlaying an existing one, preparation is key for a long-lasting surface.**

The sub-base should be excavated to 9 inches and increased if solid ground is not reached. Crush & Run should be installed at a minimum of 6 inches (pedestrian) & 7 inches (vehicular) if AceBase or Concrete is being used as the structural base. The hardcore will need to be well compacted to limit movement which may cause subsequent cracking.

Edgings, such as bricks or blocks are required to act as a retainer for your binding and surface course.

It is important to secure them into position well, using sharp sand and cement. This will provide you with a firm & solid edge to work to. Now that your area is framed, it is important to leave the edging proud from your finished sub-base, to allow for a flush finish once the resin has been installed.

If installing concrete, consideration should be given to water run-off, and ensure that the concrete is laid to falls and does not have any low points that could cause puddling.

## New Installation

The sub-base should be excavated to 9 inches and increased if solid ground is not reached. Crush & Run should be installed at a minimum of 6 inches (pedestrian) & 7 inches (vehicular). The Crush & Run will need to be well compacted to limit movement which may cause subsequent cracking.

Edgings are required to act as a retainer for your binding and surface course. It is important to secure them into position well, using sharp sand and cement. This will provide you with a firm & solid

edge to work to. Now that your area is framed, it is important to leave the edging proud from your finished sub-base, to allow for a flush finish once the resin has been installed.

We suggest Acebase permeable base. It is installed to a depth of 1 1/2 inches (pedestrian) and the same for (vehicular). If installing concrete, consideration should be given to water run-off, and ensure that the concrete is laid to falls and does not have any low points that could cause puddling.

## Existing

Many 1000's square feet are installed over existing bases successfully, however care should be taken to ensure the stability of the surface which is to be covered. It must be stable; any patch repairs or wide cracks should be repaired prior to the application of the resin bound surfacing.

It is advised that resin bound surfacing is not tapered at the edges, this will cause cracking and deterioration of the surfacing. Therefore, when installing over existing sub-bases it is essential to create an edge detail to abut to, this can be paver's, granite sets, trims and more.

Any manhole covers will need to be raised to prevent a trip hazard. Recessed manhole covers are available from builder's merchants and will allow you to create a seamless finish.

It can be advisable to apply a weed killer to prevent any moss or weed growth.

Preparation creates dust and debris on the site. This needs to be removed prior to the application of resin bound. This can be achieved by jet washing the area, ensuring a clean dry and dust free surface to adhere to.

## Specifications

	New Construction – Foot Traffic	New Construction – Light Vehicular	Overlay Existing Base – Foot Traffic	Overlay Existing Base – Vehicular Traffic
AceBound UVR	@ ¾ inch	@ ¾ inch	@ ¾ inch	@ ¾ inch
Ace ResiMesh	✓	✓	✓	✓
Ace Base	N/A	1 ½ inch	N/A	N/A
Granno Dust (to level)	½ inch to level	N/A	N/A	N/A
Granular base	Crush & Run 6 inches	Crush & Run 7 inches	N/A	N/A
Existing Sub-base	N/A	N/A	Concrete, tarmac, block paving etc	Concrete, tarmac, block paving etc
Ace Foundation Grid	Optional if going on sub-standard soil	N/A	N/A	N/A

### Site Set Up

**A clean and tidy site is very important when installing resin bound surfacing.**

Ensure your mixing station is not too far away from the point of application. The mixing station should also be set up on tarpaulin to ensure any spillages are contained and do not contaminate or stain the existing surface.

The leading edge of the block or brick edge detailing will require duct tape to protect them from any marks or contamination, as once the resin has cured it is very difficult to remove.

Remember to organise your mixes prior to application. The correct bags for each mix should be stacked in piles to minimise mixing mistakes. This is generally 4 x 55 lbs bags of aggregate along with a 13.3/4 lbs bag of sand. This mix will cover approximately 37 sf @ 3/4 inch.

Every care is taken to ensure your order is from the same batch. However, it is good practice to check batch numbers. If there are discrepancies, different batches will need to be evenly distributed through the mix to ensure no colour differentiation.

Accurate measurements of the area and depth are important to avoid running short on site and having to introduce a join line. We would recommend allowing for a 5% contingency when placing your orders.

### Tools Required

You are now on site; your materials have arrived all preparation and bases have been constructed. You need to make sure you have the correct tools for the job.

- Forced action mixer
- Trowel
- Plasterers mixing paddle
- Drill
- Spazzle or rake
- Wheelbarrow
- Cleaning solution for tools and mixer
- Rags
- Gloves
- Tape
- Timer

# Mixing & Application

## Mixing AceBound UVR

**For ease on site, Acebound Resin is a pre-catalysed.**

Additional catalyst may be added to control the curing time and speed up the process during the colder months. For addition rates, please contact Ace Resin Ltd for the latest catalyst addition chart or scan our QR code on AceBound UVR kits.

**1)** Place AceBound UVR Resin Bound Surfacing Aggregate blend (220lbs) into a clean, dry, forced action mixer (minimum capacity/ power 32 gallon/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 AceBound UVR Resin Bound Surfacing B component into the larger A component container and mix with a slow speed drill ( $\leq 450$ RPM) 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 13.3/4 lbs sand and mix for a further **1-2 minutes** until evenly distributed.

Discharge the material into a suitable wheelbarrow and move immediately to the point of application.

Always work to a wet edge. Care should be taken to ensure consistent mixing times, unequal mixing times can cause stone grind and will result in a patchy surface. This may not be obvious until the project has been completed and cured.

## Application of AceBound UVR

Pour the whole contents of the mix out of the wheelbarrow and spread with a spazzle or a rake.

Leave the mixture slightly above the required depth. Apply firm pressure on the trowel, flatten and close the surface with forward and backward strokes.

The edge should be left un-trowelled to allow for the next mix to blend seamlessly into the previously one.

Only when the resin is still wet or tacky can any errors be rectified. It is therefore important to check your work for level consistency and any colour inconsistency.

Please refer to our technical data sheet for suitable installation conditions, working times and more.



# The Sustainability Benefits of AceBound UVR Resin Bound Surfacing

AceBound UVR resin bound surfacing is designed to align with sustainable development goals, offering a host of environmental, social, and economic benefits. Its innovative composition and performance make it an ideal choice for projects that prioritize eco-friendly solutions.

Here's a detailed look at its sustainable features:

- **Groundwater Recharge:** AceBound's permeable design allows rainwater to flow through its surface, recharging local groundwater levels. This process helps sustain water resources, especially in areas facing water scarcity, reducing dependency on artificial water systems.
- **Reduction in Urban Heat:** Permeable surfaces like AceBound contribute to cooling urban environments by allowing water to evaporate naturally from the ground. This helps mitigate the urban heat island effect, where dense, built-up areas retain heat, improving overall comfort and air quality.
- **Enhanced Durability and Longevity:** By preventing water pooling and reducing freeze-thaw cycles, AceBound surfaces minimize water-related damage and erosion. This durability extends the lifespan of pavements and reduces the need for frequent repairs or replacements, lowering resource consumption over time.
- **Erosion Prevention:** AceBound's permeability reduces surface water runoff, mitigating soil erosion and preserving the integrity of surrounding landscapes. This is especially beneficial for sloped areas and developments near water bodies.
- **Pollution Filtration:** As rainwater passes through the permeable surface, pollutants are naturally filtered out. This process helps improve the quality of water entering nearby rivers, lakes, and groundwater systems, contributing to healthier ecosystems.





- **Integration with Green Infrastructure:** AceBound surfaces complement sustainable landscaping solutions like rain gardens, bioswales, and porous planting beds. This integration creates visually appealing, environmentally friendly spaces that manage stormwater effectively and support local biodiversity.
- **Compliance with Environmental and Accessibility Standards:** AceBound UVR resin is CWA (Clean Water Act) compliant, ensuring effective stormwater management and reduced environmental impact. It is also ADA (American with Disabilities Act) compliant, supporting inclusivity by creating accessible pathways and surfaces for all users.
- **Plant-Based Resin Composition:** Over 50% of AceBound UVR resin is derived from sustainable, plant-based sources. This significantly reduces the product's reliance on fossil fuels and lowers its carbon footprint, making it a leader in green innovation.
- **Locally Sourced Aggregates:** AceBound utilizes naturally occurring aggregates sourced as close to the project location as possible. This practice minimizes transportation emissions and supports regional industries while maintaining the high quality of the surfacing.
- **Incorporation of Recycled Materials:** AceBound surfaces can include recycled aggregates or materials, diverting waste from landfills and giving them a second life. This further reduces environmental impact and promotes a circular economy.
- **Support for Sustainable Development:** AceBound contributes to responsible land use and reduces strain on traditional drainage infrastructure. Its use supports sustainable urban planning by creating functional, eco-conscious spaces that benefit both people and the planet.
- **Aesthetic and Functional Versatility:** In addition to its environmental benefits, AceBound enhances the visual appeal of spaces with its customizable designs. Its seamless integration into both modern and natural landscapes makes it a versatile choice for sustainable projects.

By choosing AceBound UVR resin bound surfacing, contractors, architects, and planners can create resilient, eco-friendly projects that align with modern sustainability goals while delivering exceptional performance and aesthetic appeal.

# AceBound UVR Resin Bound Surfacing

## Base Build-Up Guidance Document

### 1. Introduction

- 1. Purpose:** This document serves as a comprehensive guide to the essential base build-up process required for optimal installation of AceBound UVR resin bound surfacing. Properly structured base layers ensure durability, stability, and a longer lifespan for AceBound UVR installations.
- 2. Importance of Base Build-Ups:** The quality of the base structure is crucial to the long-term performance of resin-bound surfaces. A robust base minimizes risks such as cracking, movement, and poor water drainage, all of which can compromise the integrity of the surface. With AceBound UVR, investing in a well-prepared base is vital to achieve a resilient, permeable, and visually appealing finish.

### 2. Key Components of AceBound UVR Base Build-Ups

- This guide introduces Ace ResiMesh and Ace Base, two proprietary materials that significantly enhance the performance and longevity of AceBound UVR surfaces.
  - Ace ResiMesh:** A high-strength reinforcement layer that prevents movement in the underlying surface, reducing the risk of cracking and extending the surface's lifespan.
  - Ace Base:** A specially formulated base material that complements AceBound UVR's permeability and strength, providing a stable and compatible foundation layer.

### 3. Understanding Layered Base Structure

To ensure a high-quality installation, each layer in the base build-up must fulfil a specific role. Below is an overview of the recommended layered structure.

<b>Final Layer:</b> AceBound UVR Resin Bound Surfacing	The AceBound UVR resin-bound layer is the finishing surface, providing the desired aesthetic and functional properties. It relies on the stability and permeability provided by the underlying layers to perform optimally. Proper base build-up ensures that this top layer remains visually appealing and durable over time.
<b>Layer 3:</b> Ace ResiMesh	Positioned between the Ace Base and the resin-bound layer, Ace ResiMesh provides reinforcement to further stabilize the surface, reducing movement and the likelihood of cracking. This layer distributes any potential stress across the surface, contributing to the longevity of the AceBound UVR installation.
<b>Layer 2:</b> Ace Base	Ace Base is a crucial layer that offers a smooth, stable, and permeable platform for the application of AceBound UVR. This layer provides both structural integrity and drainage capacity, essential for reducing pressure on the resin-bound surface. It is typically installed at a thickness of 1 1/2 inch . Using Ace Base ensures optimal compatibility with AceBound UVR, enhancing both strength and permeability.
<b>Layer 1:</b> Sub-Base	The sub-base forms the foundational support and must be compacted thoroughly to provide stability. Recommended materials include Crush & Run aggregate, compacted to a depth suitable for the specific load requirements of the project. Typically, the sub-base should be a minimum of 6 inches for pedestrian areas and 7 inches for vehicular surfaces. This layer acts as the primary load-bearing support.

## 4. Technical Performance Metrics

To illustrate the importance of proper base build-up, we have included key performance metrics based on data collected from Ace Resin’s technical sheets. These graphs show the impact of correct base layering on various aspects of performance:

Permeability	When combined with Ace Base, AceBound UVR achieves an optimal permeability rate, allowing efficient drainage and compliance with environmental standards like the Clean Water Act. The graph on page X of the data sheet shows the flow rate improvements gained from Ace Base in comparison to standard sub-base materials.
Load-Bearing Capacity	Ace Base offers superior load distribution compared to traditional base materials. The graph on page Y illustrates the enhanced load-bearing capacity achieved with Ace ResiMesh and Ace Base, making AceBound UVR suitable for both pedestrian and vehicular applications.
Longevity	Using Ace ResiMesh reduces surface movement and minimizes cracking under stress. The data sheet on page Z highlights the significant improvement in surface stability when Ace ResiMesh is incorporated, prolonging the life and aesthetic quality of the AceBound UVR surface.

## 5. Installation Best Practices

Following recommended installation practices for each layer is essential to achieve the intended results:

Correct Thickness	Each layer should be applied according to specified thickness guidelines. The sub-base should meet project-specific load requirements, while Ace Base is typically installed at 50mm and Ace ResiMesh directly beneath the resin layer.
Compaction and Stability	Proper compaction of the sub-base and Ace Base layers ensures a stable and supportive foundation. Use appropriate equipment to achieve uniform compaction.
Mesh Placement	Position Ace ResiMesh with care to cover the entire surface area beneath the resin layer. This will maximize its reinforcement properties, effectively reducing stress and preventing surface movement.

## 6. Compliance and Standards

Proper base build-up is key to ensuring compliance with relevant standards for resin-bound surfaces. AceBound UVR installations that follow these guidelines are designed to meet ADA accessibility requirements and Clean Water Act regulations, as well as provide environmentally friendly, permeable surfacing solutions for a variety of applications.

## 7. Summary and Benefits

The advantages of a well-prepared base structure for AceBound UVR installations include:

Increased Durability	Enhanced resistance to movement, cracking, and environmental wear.
Superior Permeability	Ace Base and ResiMesh promote optimal drainage, reducing water pooling and contributing to environmental compliance.
Extended Lifespan	Proper base layering improves structural stability and preserves the aesthetic appeal of AceBound UVR over time. Ace Resin is committed to providing quality products that enable long-lasting, compliant, and sustainable surfaces. By following these guidelines, contractors and architects can achieve the best possible performance from AceBound UVR resin-bound surfacing.

### Appendix

- **Graphs & Data Sheets:** For specific data points, refer to the following pages in the Ace Resin technical sheets.
- **Additional Resources:** For further guidance on Ace Resin’s installation techniques, please contact our support team or refer to our online resources.