Fusion-Bound

Resin bound surfacing system

TECHNICAL PRODUCT DATA | 01 NOVEMBER 2026

Two-component UV-stable polyurethane binder for selected kiln-dried decorative aggregates. For driveways, patios, paths and commercial landscaping, with a project-specific substrate, drainage and loading design.



01 System and batching information

Binder chemistry	Two-component, UV-stable polyurethane
Combined binder kit	7.5 kg
Decorative aggregate	100 kg kiln-dried aggregate per standard binder kit
Binder / stone ratio	7.5% by mass relative to 100 kg decorative stone; excludes any specified sand addition
Fine aggregate / sand	Type and quantity to the approved blend mix design
Component A : B ratio	Use current kit labels and written mixing instructions; do not infer from combined kit weight
Finished thickness	Specify for aggregate grading, traffic and complete pavement design
Drainage	Open texture alone does not establish full-system permeability

Indicative yield per standard mix

4.0 m²
at 15 mm nominal depth

3.5 m²
at 18 mm nominal depth

Approximate ordering yields. Blend, base texture, compaction and wastage affect actual consumption. These depths are not universal traffic specifications.

02 Installation controls

Use this guide with the current kit instructions, approved blend mix design and project method statement. Confirm the following hold points before work starts.

SUBSTRATE, EDGES AND DRAINAGE

Confirm base construction, load capacity, condition and compatibility. Repair defects and remove contamination. Resolve cracks, movement joints, levels, falls, outlets and edge restraints before laying. Base movement can reflect through the finish. A permeable specification requires a compatible base, sub-base and drainage route.

MATERIALS AND BATCHING

Check kit identity, batch numbers, expiry and approved aggregate grading. Use kiln-dried materials protected from moisture. Keep the selected blend and sand addition consistent. Use complete matched binder kits; part kits require an approved weighing procedure and confirmed component ratio.

MIXING AND PLACEMENT

Use the supplier-approved binder pre-mixing procedure, then a forced-action mixer for the resin/aggregate blend. Follow the stated addition order and mixing times; coat the aggregate uniformly. Place and trowel to the specified compacted depth with controlled batch-to-batch working times. Plan bay sizes and stopping points to avoid cold joints.

WEATHER, WORKING TIME AND CURING

Record air and surface temperature, humidity, dew risk and forecast. Apply only within the current written temperature/moisture limits. Confirm catalyst dose, pot life, working time and return-to-traffic schedule for the actual conditions. Protect from rain, condensation, contamination and traffic during cure. Do not infer readiness from surface appearance alone.

Quantity planning example - 100 m² at 18 mm

100 ÷ 3.5 = 28.6 standard mixes; round up to 29 complete mixes before any project allowance. This equates to 217.5 kg binder and 2,900 kg decorative aggregate, plus the specified fine aggregate. Allow separately for substrate texture, edges, losses and wastage.

Calculation uses the indicative yield on page 1; confirm the final mix and coverage before ordering.

03 Inspection and handover

PRE-START RECORD

Record project location, intended use/loading, approved colour sample, blend reference, aggregate grading, nominal thickness, base acceptance and drainage details. Keep the current method statement, kit instructions, component SDS and COSHH assessment available to the laying team.

BATCH AND INSTALLATION RECORD

Log binder A/B and aggregate batch references, quantities, sand/catalyst additions, mixing start/end times, placement times, weather readings and area laid. Check depth during placement and record any interruptions, joints or deviations from the agreed method.

RELEASE TO USE

Inspect uniformity, finished levels, edges, joints, drain connections and curing condition. Record actual curing conditions and the agreed pedestrian/vehicle release times. Restrict access until the responsible installer confirms readiness under the current curing guidance.

STORAGE AND MAINTENANCE

Store unopened kits in original labelled containers, protected from moisture and contamination, within the temperature and shelf-life limits on the current label/SDS. Keep finished surfaces clear of leaves and debris. Agree suitable cleaning methods and seek advice before using chemicals, heat or resealing products.

Technical evidence to obtain for specification

Request product-specific documents for the chosen blend and build-up. No measured values or certification are assigned by this sheet.

Installation parameters	A:B ratio, mixing times, application limits, catalyst schedule, working and curing times
Material properties	Density / viscosity and shelf life, where required
System performance	Strength, slip resistance, permeability, abrasion and fire performance, where relevant
Evidence scope	Test method, report date, specimen blend/depth and applicable base construction

04 Safety and COSHH

Read the current Part A and Part B safety data sheets before use, plus SDS for any catalyst, cleaner or other additive. This section supports a task-specific COSHH assessment; it is not a Safety Data Sheet or a completed risk assessment.

ASSESS THE ACTUAL TASK

Review component hazards and exposure during decanting, mixing, trowelling, cleaning and spill response. Include nearby workers and the public. Assess aggregate dust and cutting/grinding separately, including respirable crystalline silica where present. Confirm any isocyanate-related controls, training and health surveillance from the actual formulation and work method.

CONTROL EXPOSURE

Minimise splashing and open handling, restrict access and provide suitable ventilation. Select chemical-resistant gloves by material compatibility, permeation and task duration; use suitable eye protection and protective clothing. Provide washing facilities; do not use solvents to clean skin. Select RPE through the assessment if other controls are insufficient; a particulate dust filter alone does not protect against vapours.

FIRST AID AND SPILLS

Keep the SDS emergency instructions accessible. Stop exposure, provide first aid in accordance with the relevant component SDS and seek medical assistance as directed; breathing difficulty needs urgent help. Contain spills only when safe, keep people away and prevent entry to drains. Use the SDS-specified spill method, absorbent and disposal route.

STORAGE, WASTE AND SITE BRIEFING

Follow SDS requirements for compatible storage, temperature, containers, fire response and waste disposal. Do not discharge uncured resin or washings to soil or drains. Brief workers on controls, PPE, spill arrangements and reporting symptoms. Review controls when materials, methods or conditions change.

SDS checklist: Sections 2-3 hazards/composition; 4 first aid; 5-6 fire/spills; 7-8 handling, exposure controls and PPE; 10 stability; 13 disposal; 14 transport. Record each component name, revision/date and assessment reference.

Safety references / further guidance

HSE: safety data sheets and COSHH assessment

HSE construction isocyanate guidance: hse.gov.uk/construction/healthrisks/hazardous-substances/isocyanates.htm