ACTFLEX CRYSTAL BOND.



Technical Data Sheet | Two-Component Crystal-Clear Epoxy Binder and Coating System | Issue date: 22 August 2026

Description

ACTFLEX CRYSTAL BOND is a high-performance, crystal-clear, two-component epoxy resin system engineered as a clear coating, structural binder, epoxy screed resin, terrazzo matrix and decorative casting resin. Formulated on a low-viscosity bisphenol-F epoxy resin cured with a polyamide-amine hardener, it cures to a high-gloss, non-shrinking, chemically resistant solid with high compressive, tensile and flexural strength, high surface hardness and tenacious adhesion to prepared cementitious substrates. Its optical clarity and controlled flow characteristics deliver glass-like decorative finishes with exceptional depth of image, while its extended working time supports large-format decorative pours, seamless screed installation and precision casting. ACTFLEX CRYSTAL BOND is fully compatible with ACTFLEX Pigment Pastes, ACTFLEX Metallic Pearls and graded quartz and terrazzo aggregates, forming the resin backbone of the FORSPEC decorative flooring range - one resin engineered to perform as primer, coating, flooring system, screed binder and casting matrix.

Advantages

- Crystal-clear, high-gloss finish with exceptional depth of image.
- One resin, five systems - penetrating primer, clear coating, pigmented and metallic flooring, epoxy screed binder and casting matrix.
- Self-priming - no separate primer product required.
- Zero-shrinkage cure - dimensionally stable in coatings, screeds and castings.
- High compressive, tensile and flexural strength.
- Excellent chemical and abrasion resistance.
- Extended working time for decorative and screed installations.
- Strong adhesion to prepared cementitious and primed substrates.
- 30 L kit format suited to large-format commercial pours.

Uses and Approved Basis

- Clear epoxy floor coatings and sealers over decorative concrete.
- Decorative, pigmented and metallic epoxy flooring systems.
- Terrazzo and quartz flooring binder matrix.
- Epoxy screeds and repair mortars.
- Countertops and architectural surfaces.
- Casting, art resin and encapsulation works.

Approved basis: manufacturer's research and development data and in-service performance history. Refer to Standards Compliance below for the current certification status.

System Components

ACTFLEX CRYSTAL BOND is applied as part of a complete FORSPEC decorative resin system. Approved system components:

- Pigments - ACTFLEX Pigment Paste (3-5% by weight of mixed resin); ACTFLEX Metallic Pearl (1-3% by weight of mixed resin).
- Aggregates - oven-dried graded quartz and terrazzo aggregates for screed and broadcast systems; ACTFLEX ANTISLIP aggregate for slip-resistant finishes.
- Substrate repair - FORSPEC concrete repair system such as FORBUILD 100 or FORCRETE 100.
- Crack rectification - PROBOND 1100, CRACK PRO 1200PS and CRACKLOCK E400L structural crack repair systems.
- Clean-up - FORSPEC EPOXY CLEANER, or xylene where permitted.

Use only the components above, applied per their current TDS, to maintain system performance and warranty eligibility.

contact.

(02) 8021 3517 info@forspec.com.au 22/872 Canterbury Road, Roselands 2196 NSW (Head Office) www.forspec.com.au

Standards Compliance

STANDARD	TITLE	RESULT	EVIDENCE
Governing product standard	Clear epoxy binder and decorative coating systems	No Australian Standard currently governs this product class - stated plainly per FORSPEC policy	-
ASTM D638 / D790 / C579 / D2240 / D2566 / C267	Referenced test methods for the values in Technical Data	Manufacturer R&D typical values - accredited testing not yet undertaken	Internal R&D data*
Work Health and Safety Regulations (Hazardous Chemicals)	Safety Data Sheets	Current SDS issued for both components	Chemwatch 9041-07 (Part A); Chemwatch 9041-06 (Part B)

Approved Substrates

SUBSTRATE	REQUIREMENT
Concrete	Cured minimum 28 days; minimum compressive strength 25 MPa; surface profile CSP 2-4 by diamond grinding or shot blasting
Renders and screeds	Cured minimum 7 days; sound, non-friable and mechanically prepared
Cementitious toppings and cured epoxy	Fully bonded and sound; cured epoxy abraded, vacuumed and solvent-wiped before overcoating

Not approved: bituminous substrates, flexible membranes, and poorly bonded or friable coatings.

Technical Data

PROPERTY	VALUE	TEST METHOD
Mix ratio (A:B)	3 : 1 by volume	-
Supply	30 L kit (22.5 L Part A + 7.5 L Part B)	-
Appearance	Crystal-clear, high-gloss	Visual
Pot life (at 25°C, 50% RH)	40-60 minutes*	Internal R&D
Gel time (at 25°C, 50% RH)	2-4 hours*	Internal R&D
Initial cure (at 25°C, 50% RH)	12-24 hours*	Internal R&D
Full mechanical cure (at 25°C, 50% RH)	7 days*	Internal R&D
Shore D hardness	80-85*	ASTM D2240
Tensile strength (neat resin)	23 MPa*	ASTM D638
Flexural strength (neat resin)	50 MPa*	ASTM D790
Compressive strength (mortar basis)	Greater than 70 MPa*	ASTM C579
Shrinkage	Nil*	ASTM D2566

contact.

(02) 8021 3517 info@forspec.com.au 22/872 Canterbury Road, Roselands 2196 NSW (Head Office) www.forspec.com.au

Technical Data (continued)

PROPERTY	VALUE	TEST METHOD
Chemical resistance	Resists commonly encountered dilute acids, alkalis, oils and cleaning agents*	ASTM C267
Service temperature (dry, continuous)	Up to 65°C*	Internal R&D

* Typical R&D characteristic values, not for engineering design without written FORSPEC confirmation. Neat-resin values (ASTM D638 / D790) and mortar-basis values (ASTM C579) are determined on different test bases and must not be interchanged.

Limitations

- Apply only between 10°C and 35°C, with relative humidity below 80%.
- Substrate moisture content must not exceed 4%. Do not apply where condensation, rising damp or negative hydrostatic pressure is present.
- Surface temperature must be a minimum of 3°C above the dew point during application and cure.
- Not suitable over bituminous substrates, flexible membranes, or poorly bonded coatings.
- Maximum 4 mm thickness per pour for decorative and metallic systems; maximum 15 mm per layer in screed applications.
- Dilution is not permitted unless approved in writing by an authorised FORSPEC representative. Do not alter the mix ratio and do not split kits.
- Not a waterproofing membrane. For waterproofing, use the FORSPEC liquid membrane range or FORSPEC sheet membrane range.
- Slight colour variation or ambering may occur under prolonged UV exposure. Consult FORSPEC for UV-stable topcoat options on exposed work.
- Do not apply in direct sunlight or under radiant heat. Protect finished work from dust, moisture and vibration for a minimum of 24 hours.
- Always complete a test area before full application.

Surface Preparation

The substrate must be structurally sound, clean and dry, and free of all bond-inhibiting contaminants including laitance, oils, grease, sealers, curing compounds, release agents, existing unsound coatings, dust and efflorescence. Prepare concrete by diamond grinding or shot blasting to a surface profile of CSP 2-4 and vacuum-clean thoroughly. Reinstate damaged and spalled concrete with the FORSPEC concrete repair system, such as FORBUILD 100 or FORCRETE 100, in accordance with the relevant product TDS, and allow all repairs to cure before coating. Confirm substrate moisture content is 4% or less and that the surface temperature is at least 3°C above the dew point before commencing.

Crack Treatment

Prepare every crack before treatment: remove all loose debris, dust, curing compounds, oils and contaminants from the crack and the surrounding surface.

- **Static fine cracks**
  Chase to a clean, square-edged reglet, vacuum, and fill flush with ACTFLEX CRYSTAL BOND mixed with dry fine quartz to a paste consistency. Allow to cure before the field application proceeds.
- **Structural and live cracks**
  Structural and live cracks indicate substrate movement or distress and must be rectified before application proceeds. Select the rectification system to suit the crack: PROBOND 1100 - two-part epoxy paste for high-strength structural filling and bonding; CRACK PRO 1200PS - sealing and bonding of structural cracks and rapid spall repair; CRACKLOCK E400L - fine structural cracks 0.05-3 mm requiring deep penetration, pressure-injected or gravity-fed. Apply each system strictly in accordance with its TDS, available at www.forspec.com.au.

contact.

(02) 8021 3517 info@forspec.com.au 22/872 Canterbury Road, Roselands 2196 NSW (Head Office) www.forspec.com.au

Priming

ACTFLEX CRYSTAL BOND is self-priming: the first coat, applied neat, penetrates and seals the prepared substrate, suppresses outgassing and establishes the adhesion on which the system depends. Do not add pigments, fillers or aggregates to the primer coat. Apply the mixed resin directly to the prepared substrate by rubber squeegee and back-roll with a short-nap epoxy roller, working the material firmly into the surface to achieve full pore penetration at a dry film thickness of 150-250 microns (4.0-6.7 m^2/L depending on substrate porosity). Apply subsequent coats while the primer is tacky - typically 8-12 hours at 25°C and 50% RH. The maximum recoat window is 24 hours; if exceeded, sand the surface lightly and solvent-wipe before recoating.

Mixing

Pre-condition both components to 18-30°C before use. Mix 3 parts Part A to 1 part Part B by volume. Mix with a low-speed drill mixer at 300-400 RPM for 3-4 minutes until fully homogeneous, scraping the sides and base of the container. Decant into a clean container and re-mix for 30-60 seconds (double-pot method) - unmixed material on container walls causes soft spots and surface defects. For pigmented systems, add pre-stirred ACTFLEX Pigment Paste at 3-5% by weight of mixed resin, or ACTFLEX Metallic Pearl at 1-3% by weight, after the base mix and blend for a further 1-2 minutes until uniform; never add dry pigment powders directly to mixed resin and do not exceed the stated ratios. For screed systems, pre-mix the resin, place it in a forced-action mixer, and gradually introduce oven-dried graded aggregate at a binder demand of 8-10% resin by weight of aggregate, mixing until every particle is fully coated. Do not dilute. Mix only full kits and use each mix within its pot life.

Application and Film Build

- **Clear and pigmented coating system**
  Apply by 4-5 mm nap epoxy roller, spreading evenly and cross-rolling for uniform coverage at 0.8-1.2 mm per coat over the tacky primer coat.
- **Metallic and decorative pour system**
  Pour the mixed and pigmented material directly onto the tacky primed surface and spread with a flat squeegee or steel trowel at 1-2 mm, or 2-4 mm maximum per layer for deep-pour metallic systems. Immediately after spreading, lightly mist isopropyl alcohol (IPA 99%) from 300-500 mm above the surface to break surface tension and release entrapped air; do not over-spray. For a maximum-gloss finish, allow to cure, sand lightly with 1200-grit wet-and-dry paper, remove all dust by vacuum and solvent wipe, and apply a final clear coat of ACTFLEX CRYSTAL BOND at 0.5-1.0 mm.
- **Epoxy screed system**
  Apply the mixed screed onto the tacky primed surface, spread with a steel trowel and screed bar to level, and compact firmly to eliminate voids. To form falls, establish guide rails or screed pins and maintain the required gradient during placement. A light mist of isopropyl alcohol on the trowel blade (never flooded onto the surface) prevents epoxy pick-up during finishing. Maximum 15 mm per layer.
- **Anti-slip system**
  Broadcast ACTFLEX ANTISLIP aggregate into the wet pigmented coat to 70-90% refusal. Allow to cure 12-24 hours, remove loose aggregate by vacuum, and apply a pigmented or clear lock coat to fully encapsulate the aggregate.

SYSTEM	THICKNESS PER APPLICATION	MAXIMUM PER LAYER
Primer coat (neat resin)	150-250 microns DFT	-
Clear and pigmented coating	0.8-1.2 mm	-
Metallic and decorative pour	1-2 mm	4 mm
Deep-pour metallic and casting	2-4 mm	4 mm
Epoxy screed	As designed	15 mm

contact.

(02) 8021 3517 info@forspec.com.au 22/872 Canterbury Road, Roselands 2196 NSW (Head Office) www.forspec.com.au

Coverage and Yield

MEASURE	VALUE	BASIS
Primer consumption	4.0-6.7 m^2/L	150-250 microns DFT at approximately 100% volume solids
Primer yield - 30 L kit	120-200 m&#178	;30 L at the consumption above
Coating consumption	1.0 L/m^2 per 1.0 mm DFT	Approximately 100% volume solids
Coating yield at 1.0 mm - 30 L kit	Approximately 30 m&#178	;Theoretical, before wastage
Screed binder demand	8-10% resin by weight of dry aggregate	Worked estimation method - confirm by site trial

Coverage varies with application technique, substrate porosity and surface profile. Porous substrates and textured profiles increase consumption.

Drying, Curing and Testing Times

STAGE (AT 25°C, 50% RH)	TIME
Primer - touch dry	6-8 hours
Primer - overcoatable (tacky)	8-12 hours
Maximum recoat window (all coats)	24 hours
Decorative pour - touch dry	12-16 hours
Sandable	24 hours
Light foot traffic	24 hours
Overcoating a fully cured film (after abrading)	24-48 hours
Full mechanical cure and full service	7 days

Low temperature and low humidity extend all times. No stage may commence before the preceding stage is complete.

Protection and Finishes

Protect finished work from dust, moisture, foot traffic and vibration for a minimum of 24 hours after placement. Do not expose the system to chemical spill or immersion before full mechanical cure at 7 days. Clean cured floors with pH-neutral cleaners; avoid aggressive solvents and abrasive pads that dull the gloss. Where enhanced UV stability is required on exposed work, consult FORSPEC for an approved topcoat system.

Clean Up

Clean tools, rollers, mixers and application equipment immediately after use, while the product is still wet, using FORSPEC EPOXY CLEANER or xylene where permitted, handled in accordance with the Work Health and Safety Regulations and the solvent manufacturer's SDS. Do not allow mixed material to cure on tools - cured material can only be removed mechanically. Product residue, solvents and wash water must not be discharged to sewers, stormwater systems or waterways; manage and dispose of all washings in accordance with the relevant State or Territory environment protection legislation and local council requirements.

contact.

(02) 8021 3517 info@forspec.com.au 22/872 Canterbury Road, Roselands 2196 NSW (Head Office) www.forspec.com.au

Container and Waste Disposal

Dispose of product and containers in accordance with the WHS Regulations, the relevant State or Territory EPA requirements and local council regulations. Uncured (liquid) product is classified waste - do not dispose of to landfill, sewers, stormwater or waterways; deliver to an authorised hazardous or special waste collection point in accordance with local regulation. Part B is a Class 8 corrosive liquid (UN 2735) and must be handled and transported accordingly until fully reacted. Small quantities of residual mixed product may be cured in an open container in a ventilated area and, once fully cured, disposed of as solid waste where permitted by local regulation. Fully drained, dry, empty containers may be recycled through approved container recycling programs - do not reuse containers, and do not burn containers or residue. Refer to Section 13 of each SDS for detailed disposal requirements.

Quality Records

Record the batch numbers of all FORSPEC products used, together with application dates, ambient and substrate conditions, mix quantities, film thickness readings and test-area results, as part of the project quality assurance records. Batch numbers are printed on the container and provide full manufacturing traceability.

Storage

Store in original, unopened containers in a cool, dry, well-ventilated area at 10-30°C, protected from direct sunlight, moisture ingress and frost. Part B is corrosive to aluminium, copper, copper alloys, brass and bronze - keep it only in its original packaging and never decant to non-approved containers. Store the two components so that cross-contamination is impossible - accidental off-ratio mixing may cause a violent exotherm. Do not stack pallets more than two high. Shelf life is 24 months from the date of manufacture when stored as above, unopened. Reseal partially used containers immediately and use them as soon as possible. Never return mixed material to the original containers.

Safety Precautions and First Aid

ACTFLEX CRYSTAL BOND is a two-component hazardous chemical system - read both Safety Data Sheets before use, available at www.forspec.com.au. Part A (Chemwatch SDS 9041-07) - WARNING: causes skin and eye irritation, may cause an allergic skin reaction, may cause respiratory irritation. Part B (Chemwatch SDS 9041-06) - DANGER: causes severe skin burns and eye damage, may be corrosive to metals, toxic to aquatic life; classified dangerous goods UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S., Class 8, Packing Group III; Poisons Schedule S5.

Use only in well-ventilated areas. Wear chemical splash goggles (add a face shield when handling Part B), and chemical-resistant gloves in nitrile, neoprene or butyl rubber - never latex. Wear protective overalls, a PVC apron and safety footwear. Where ventilation is insufficient, use a Type A filter respirator for Part A and a Type AK-P filter respirator for Part B (AS/NZS 1716). Ensure an eyewash unit and safety shower are accessible before work commences. Change contaminated clothing immediately and wash thoroughly before breaks and after finishing work.

First aid - Eyes: hold eyelids apart and flush continuously with running water for at least 15 minutes; for Part B contact, transport to hospital or doctor without delay. Skin: remove all contaminated clothing including footwear and flush skin with running water; treat Part B contact as a chemical burn and seek medical attention. Inhalation: move the affected person to fresh air, keep warm and rested, and seek medical attention - lung effects from Part B vapours may be delayed up to 24 hours. Swallowed: do NOT induce vomiting; rinse the mouth, give water slowly, and seek urgent medical attention. In an emergency, dial 000.

POISONS INFORMATION CENTRE: 13 11 26 (Australia-wide, 24 hours)

contact.

(02) 8021 3517 info@forspec.com.au 22/872 Canterbury Road, Roselands 2196 NSW (Head Office) www.forspec.com.au

Safety Precautions and First Aid (continued)

KEEP OUT OF REACH OF CHILDREN

Warranty

Standard Product and Performance Warranty: Forspec Protective Coatings Pty Ltd as Trustee for Forspec Protective Coatings (ABN 11 204 033 631) warrants that ACTFLEX CRYSTAL BOND will be free from manufacturing defects and will not fail under normal usage for a period of ten (10) years from the date of purchase, when installed and used strictly in accordance with this Technical Data Sheet and Forspec's written instructions. This warranty covers the supply of the product only; it does not cover installation, application or workmanship. Remedies are limited, at Forspec's discretion, to replacement of the defective product (or defective portion) or a refund of the purchase price. The full terms, conditions and exclusions are set out in the Forspec Standard Product and Performance Warranty, available at www.forspec.com.au - key conditions include application by a suitably qualified and, where required by law, licensed applicator; use within shelf life; and installation as part of a Forspec approved system without non-approved third-party products.

Project and system warranties: extended project-specific warranties are available at the request of the applicator and must be applied for using the Forspec Warranty Request Form prior to commencement of works. Issue is subject to Forspec approval and is conditional on the use of the complete specified FORSPEC system, application in strict accordance with the current TDS by suitably qualified applicators, and completion of the project quality records described above. The warranty period and terms are as stated in the issued warranty certificate.

Claims: notify Forspec in writing within thirty (30) days of discovery of the alleged defect and within the warranty period, by post to 22/872 Canterbury Road, Roselands NSW 2196 or by email to info@forspec.com.au, including proof of purchase, installation details (date, location, installer), a description of the defect with supporting evidence, and your contact details. Forspec may inspect the site, perform testing and collect samples before determining a claim.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Data Sheet Currency

This Technical Data Sheet (TDS) and the corresponding Safety Data Sheet (SDS) are subject to revision as necessary to ensure compliance with relevant Australian Standards and to incorporate technological advancement. Read the most current versions before use, as application and performance data may be updated. For the latest technical information, contact Forspec Protective Coatings on (02) 8021 3517 or info@forspec.com.au. The information provided is representative and does not serve as a comprehensive specification. For specific projects, consult directly with Forspec Protective Coatings for tailored specifications. This data sheet was issued on 22/08/2026 and is valid for three years from the date of issue unless superseded by a later revision - always confirm the current version at www.forspec.com.au before use.

Conditions of Use, Product Disclaimer, and Statement of Responsibility

1. Accuracy of information. The information in this document is provided in good faith by Forspec Protective Coatings Pty Ltd as Trustee for Forspec Protective Coatings (ABN 11 204 033 631) ('Forspec Protective Coatings') and is, to the best of its knowledge, true and accurate at the date of issue. Forspec Protective Coatings reserves the right to amend this document without notice as part of its continuous product development.

contact.

(02) 8021 3517 info@forspec.com.au 22/872 Canterbury Road, Roselands 2196 NSW (Head Office) www.forspec.com.au

Conditions of Use, Product Disclaimer, and Statement of Responsibility (continued)

2. Suitability and user responsibility. Substrates, site conditions, workmanship and conditions of use are beyond Forspec Protective Coatings' control. No representation or warranty is made as to the suitability of the product for any particular application. The user must determine the suitability of the product for the intended use by their own assessment and, where appropriate, testing prior to application.

3. Currency of document. It is the responsibility of the customer and the applicator to confirm that this document and the corresponding Safety Data Sheet are the current versions, available at www.forspec.com.au. This document supersedes all previous versions.

4. Compliant use and application. The product must be used strictly in accordance with this document, the relevant Australian Standards, the National Construction Code and all applicable laws and regulations, and must be applied by suitably qualified personnel.

5. Statutory guarantees. Nothing in this document excludes, restricts or modifies any consumer guarantee, right or remedy conferred by the Australian Consumer Law (Schedule 2 of the Competition and Consumer Act 2010 (Cth), ss 64 and 64A) or any other statutory right that cannot lawfully be excluded.

6. Limitation of liability. To the fullest extent permitted by law: (a) all other warranties, conditions and representations, express or implied, are excluded; (b) the total liability of Forspec Protective Coatings for any claim arising out of or in connection with the supply or use of the product is limited, at its election, to the replacement of the product, the supply of an equivalent product, or the refund of the purchase price paid; and (c) Forspec Protective Coatings will not be liable for any indirect, special or consequential loss, including loss of profits, arising from the use of, or inability to use, the product.

7. Advice and recommendations. Any advice, recommendation, information or assistance provided by Forspec Protective Coatings, whether verbal or written, is given in good faith but without liability beyond that stated in clause 6.

8. Governing law. This document, and any claim arising out of or in connection with the supply or use of the product, is governed by and interpreted in accordance with the laws of New South Wales, Australia. Any disputes arising from or relating to this document or the product are subject to the exclusive jurisdiction of the Courts of New South Wales, consistent with the Forspec Standard Product and Performance Warranty.



Your Trusted Partner.



FORSPEC PROTECTIVE COATINGS

contact.

(02) 8021 3517 info@forspec.com.au 22/872 Canterbury Road, Roselands 2196 NSW (Head Office) www.forspec.com.au