FORSPEC PROTECTIVE COATINGS

ACTFLEX EP250.



Technical Data Sheet | **Two-Component Waterborne Epoxy Primer, Sealer and Moisture-Barrier Coating** | **Issue date: 12 November 2026**

Description

ACTFLEX EP250 is a two-component, waterborne epoxy primer, sealer and moisture-barrier coating engineered for prepared concrete, masonry and compatible cementitious substrates. Applied as a single coat it is the epoxy primer and sealer within approved FORSPEC systems; applied as a two-coat system it is the negative-side moisture barrier, damp-proofing and hydrostatic coating specified across the FORSPEC membrane, repair and levelling ranges where elevated substrate moisture is identified, resisting negative-side hydrostatic pressure up to 250 kPa.

Its waterborne chemistry applies to correctly prepared damp substrates, cures to a hard, durable epoxy film, and cleans from tools with water while uncured. With a certified VOC content of 23 g/L, it is the moisture-control backbone of the FORSPEC range beneath membranes, coatings, mortars, levelling compounds and tile systems.

Advantages

- One product, two roles — one-coat primer and sealer, or two-coat negative-side moisture barrier, per the locked FORSPEC coat logic.
- Simple 1:1 Part A : Part B mixing ratio by volume — pre-proportioned 20 kg and 4 kg kits.
- Applies to correctly prepared damp mineral substrates — no standing water or visible water film.
- Hydrostatic coating — negative-side hydrostatic-pressure resistance up to 250 kPa (approximately 25.5 m head) in the approved two-coat system.
- Two-coat system builds the 300 µm minimum dry film thickness nominated in FORSPEC project specifications.
- Controls rising damp and efflorescence before coatings, membranes, mortars, levelling compounds and tile systems.
- Consolidates and seals sound but porous or dust-prone mineral surfaces.
- Hard, durable cured epoxy finish; certified VOC content 23 g/L.
- Uncured material cleans from tools with water and approved detergent.
- Compatible with approved FORSPEC coatings, membranes and floor systems within the specified overcoat windows.

Uses

- One-coat primer and sealer on prepared mineral substrates within approved FORSPEC systems.
- Two-coat negative-side moisture control and damp-proofing on prepared concrete, masonry and compatible cementitious substrates — the specified moisture-control primer across the FORSPEC membrane, repair and levelling ranges where elevated substrate moisture is identified, per each host TDS.
- Control of rising damp and efflorescence before approved coatings, waterproofing membranes, mortars, levelling compounds and tile systems.
- Consolidation and sealing of sound but porous or dust-prone mineral surfaces after all weak and friable material has been removed.
- Hydrostatic coating for approved basement, tunnel, below-grade and water-retaining details exposed to negative-side hydrostatic pressure up to 250 kPa.
- Primer beneath approved FORSPEC liquid-applied and sheet waterproofing membranes, including the certified ACTFLEX 929 HV bond system (XTecGen Report 0242-7).

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Compliance Status

ITEM	STATUS	REFERENCE
VOC content	23 g/L — meets GBCA Green Star Design & As Built V1.3-13.1.1B and Interiors V1.3-12.1.1B (limit 250 g/L)	ASTM D3960 / D2369 — FORAY (NATA 1231) Certificate P22070055; re-certification due
Water vapour transmission	1.63 g/m²/24 h at 0.20 mm mean film — tested at the two-coat system build (nominally 0.3 mm DFT)	ASTM E96 desiccant — XTecGen Report 515-1
Negative-side hydrostatic pressure	250 kPa — approved two-coat system	FORSPEC R&D to ASTM D5385 *
AS/NZS 4020 (potable water)	Complies — manufacturer declaration; not a recommended application; written project-specific FORSPEC approval required	Manufacturer declaration
Hazard classification	Both parts hazardous chemicals; Part B dangerous goods, environmentally hazardous	Component SDS documents

Technical Data

PROPERTY	VALUE	BASIS
Product type	Two-component waterborne epoxy coating	—
Mixed colour	Grey	*
Cured appearance	Semi-gloss, becoming matt with service and exposure	*
Mix ratio	1:1 Part A : Part B BY VOLUME — never by weight	—
Part A relative density	1.38	Part A SDS
Part B relative density	1.26	Part B SDS
Nominal mixed density	1.32 kg/L (equal component volumes)	Calculated from Part A and Part B SDS relative densities
Volume solids	62%	FORSPEC R&D to ASTM D2697 *
VOC content	23 g/L	Certificate P22070055
Water vapour transmission	1.63 g/m²/24 h (0.20 mm mean film; two-coat system build)	Report 515-1
Negative-side hydrostatic pressure	250 kPa (approx. 25.5 m head) — two-coat system	FORSPEC R&D to ASTM D5385 *
Pot life (at 25°C, 50% RH)	Approx. 90 minutes	FORSPEC R&D to ISO 9514 *
Intercoat time (at 25°C, 50% RH)	Minimum 4 hours; maximum 24 hours	FORSPEC R&D to ASTM D1640 *
Consumption	0.32 kg/m² per coat (approx. 3.1 m² per kg)	—
Dry film thickness — two-coat system	300 µm nominal (150 µm per coat)	—
Minimum cure before water-based layers (at 25°C, 50% RH)	24 hours	FORSPEC R&D to ASTM D1640 *

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Technical Data (continued)

PROPERTY	VALUE	BASIS
Minimum cure before solvent coatings and adhesives (at 25°C, 50% RH)	24 hours	FORSPEC R&D to ASTM D1640 *
Full cure (at 25°C, 50% RH)	7 days	FORSPEC R&D to ASTM D3363 *
Application temperature	10–26°C (ambient and substrate)	—
Maximum relative humidity	85%	—
Shelf life	24 months, unopened, stored as specified	—

Values with certificate or report citations are tested results. * Typical Forspec characteristic values on standard production material — not to be relied upon for engineering design without written confirmation from FORSPEC Technical Services.

Coverage and Yield

ACTFLEX EP250 ships in 20 kg and 4 kg pre-proportioned kits, mixed 1:1 by volume. Because Part A (RD 1.38) is denser than Part B (RD 1.26), equal volumes are NOT equal weights — the kits are factory-proportioned so the full contents of both containers mix to exactly 1:1 by volume. All application rates and yields are given by mass, at the rate required to build the 300 µm two-coat dry film thickness nominated in FORSPEC project specifications:

KIT	COMPONENT SPLIT (WORKED)	MIXED MASS	ONE COAT AT 0.32 KG/M²	TWO-COAT SYSTEM AT 0.64 KG/M²
20 kg kit	Part A approx. 10.45 kg (7.58 L) + Part B approx. 9.55 kg (7.58 L)	20 kg	Approx. 62.5 m^2	Approx. 31.3 m^2
4 kg kit	Part A approx. 2.09 kg (1.52 L) + Part B approx. 1.91 kg (1.52 L)	4 kg	Approx. 12.5 m^2	Approx. 6.3 m^2

APPLICATION RATE	COVERAGE	THEORETICAL FILM BUILD
Per coat: 0.32 kg/m²	Approx. 3.1 m^2 per kg	242 µm WFT → 150 µm DFT at 62% volume solids
Two-coat system: 0.64 kg/m² total	Approx. 1.6 m^2 per kg of total material	484 µm WFT → 300 µm DFT

Check: at the nominal mixed density of 1.32 kg/L, 0.32 kg/m^2 lays 0.242 L/m^2 → 242 µm wet film → 150 µm dry film at 62% volume solids per coat; the two-coat system builds 300 µm DFT — meeting the 300 µm minimum DFT nominated in FORSPEC project specifications. Kit yields: 20 kg ÷ 0.32 kg/m^2 = 62.5 m^2 one coat; 4 kg ÷ 0.32 = 12.5 m^2. All figures reconcile. Coverage reduces with substrate profile, porosity and first-coat dilution.

First Coat Dilution

METHOD / SUBSTRATE	FIRST COAT	SECOND COAT
Brush or roller — porous substrate	Up to 5% clean water by mixed volume	Never diluted
Brush or roller — dense substrate	Up to 20% clean water by mixed volume	Never diluted
Approved spray application	10% clean water by mixed volume	Never diluted

Dilution beyond this table is prohibited unless approved in writing by an authorised FORSPEC representative.

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Limitations

- Apply only between 10°C and 26°C (ambient and substrate) and at 85% relative humidity or below; never where condensation can form.
- Never apply over active leakage, running water, standing water, visible water film, weak or friable substrates, moving cracks or movement joints.
- Not UV resistant — protect from direct ultraviolet exposure.
- Not a trafficable membrane — limited access after 24 hours does not establish a traffic classification.
- Not for unapproved chemical exposure — confirm compatibility before applying any coating, membrane, mortar, adhesive or floor-covering system.
- Potable-water storage is not a standard application — written project-specific FORSPEC approval required.
- Never alter the 1:1 by-volume ratio, batch by weight, over-dilute, retemper, or add fillers, solvents or unapproved materials.
- Applying below the specified rate of 0.32 kg/m² per coat will not achieve the 300 µm two-coat dry film thickness — rates are verified by wet film gauge during application.
- Protect from water, contamination and premature service until the applicable cure period is complete.

Surface Preparation

- Substrates must be sound, stable and free from laitance, dust, friable material, coatings, adhesives, curing compounds, efflorescence, oil, grease, wax, standing water and active leakage.
- Mechanically prepare dense or contaminated mineral surfaces to expose a clean, open texture, then remove all dust by industrial vacuum.
- Repair defects and non-moving cracks with an approved compatible FORSPEC repair system — such as FORBUILD 100 or FORCRETE 100, or the FORSPEC epoxy crack repair range (PROBOND 1100, CRACK PRO 1200PS, CRACKLOCK E400L) — and allow it to reach its overcoat condition.
- The surface may be damp but must be free from condensation and visible water film.

Mixing

- Pre-mix Part A and Part B separately.
- Measure 1 part Part A and 1 part Part B BY VOLUME into a clean container — never batch equal weights: the components have different densities (Part A 1.38, Part B 1.26), and the factory kits are proportioned so full kits mix to exactly 1:1 by volume.
- Mix at 300–500 rpm for 2–3 minutes with a clean low-speed paddle, scraping the sides and base, until uniform and streak-free.
- Mix only the quantity that can be applied within the pot life — approximately 90 minutes at 25°C, 50% RH.
- Dilute the first coat only as permitted by the First Coat Dilution section — the ratio is never altered and the second coat is never diluted.

Application and Film Build

- **Primer and sealer — one coat**
  Confirm substrate, temperature, humidity, ventilation, dilution, coverage and system compatibility before mixing. Apply one continuous coat at 0.32 kg/m² (approximately 3.1 m² per kg) by roller, stiff nylon broom, squeegee or approved spray equipment, working the coating firmly into the prepared surface to full, even coverage without ponding. Verify the rate with a wet film gauge — 0.32 kg/m² lays a 242 µm wet film.
- **Moisture barrier — two coats**
  Apply two coats at 0.32 kg/m² per coat (0.64 kg/m² total system), the coats in opposing directions, verifying complete pinhole-free coverage. The two coats build the 300 µm dry film thickness nominated in FORSPEC project specifications. Apply the second coat after a minimum of 4 hours and within a maximum of 24 hours at 25°C, 50% RH. Where the 24-hour intercoat window is exceeded, mechanically abrade the cured coating, remove all dust, and recoat only once the surface is clean and suitable.
- **Under FORSPEC membranes**
  Allow ACTFLEX EP250 to cure a minimum of 24 hours at 25°C, 50% RH before over-coating with approved FORSPEC membranes, coatings and adhesives — water-based and solvent-based alike, including the FORSPEC moisture-cured polyurethane membranes — always per the membrane TDS and the approved system detail. Exception — ACTFLEX ULTRA TC: apply 12 to 24 hours after the final EP250 coat; beyond 24 hours, mechanically abrade, remove all dust and re-prime.

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Application and Film Build (continued)

- **Tiling**
  Apply two coats. While the final coat remains wet, broadcast clean, dry 0.5 mm silica sand at 700 g/m² to achieve at least 90% coverage. After a minimum of 24 hours, remove all loose sand by sweeping and industrial vacuuming. Apply the approved tile adhesive within 5 days; if the window is exceeded, abrade and re-prepare the surface.
- **Flooring**
  Assess concrete moisture in accordance with AS 1884:2021 and the specified floor-covering and adhesive system. Do not apply a moisture threshold unless it is approved for the complete system.

ACTFLEX EP250 is applied at one coat as a primer and two coats for moisture control. Film build derives from the specified rate of 0.32 kg/m² per coat at 62% volume solids.

PARAMETER	COAT 1	COAT 2	TOTAL SYSTEM
Consumption	0.32 kg/m²	0.32 kg/m²	0.64 kg/m²
Theoretical WFT	242 µm	242 µm	484 µm
Theoretical DFT	150 µm	150 µm	300 µm
Coverage	Approx. 3.1 m²/kg	Approx. 3.1 m²/kg	Approx. 1.6 m²/kg
Yield — 20 kg kit	Approx. 62.5 m²	—	Approx. 31.3 m²
Intercoat time (at 25°C, 50% RH)	Minimum 4 hours — maximum 24 hours		

One coat as a primer; two coats for moisture control. Mandatory two-coat application at substrate moisture of 4.5% or above. The second coat is never diluted.

Drying, Curing and Testing Times

STAGE	TIME (AT 25°C, 50% RH)	CONTROL
Intercoat	4–24 hours	Surface clean and suitable for bonding
Limited access	After 24 hours	Protect from damage — not a trafficable membrane
Water-based overcoat	Minimum 24 hours	Approved compatible products only
Solvent coating or adhesive	Minimum 24 hours	Confirm full-system compatibility
ACTFLEX ULTRA TC overcoat	12–24 hours after the final coat	Beyond 24 hours abrade and re-prime
Tile-over window	24 hours to 5 days	Approved sand-broadcast system
Full cure	7 days	Before water exposure or full service

System Compatibility

Use only approved FORSPEC coatings, waterproofing membranes, mortars, levelling compounds, adhesives and floor systems over ACTFLEX EP250. Where any overcoat window is exceeded, mechanically abrade the cured coating, remove all dust and re-prepare as required by the next system layer. For project-specific compatibility advice, contact FORSPEC Technical Services.

Clean Up

Clean tools and equipment immediately after use with water and an approved detergent, wearing the PPE required by both component SDS. Collect all cleaning water and uncured waste — never discharge product or wash water to drains, soil or waterways. Cured material can only be removed mechanically.

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Container and Waste Disposal

Dispose of contents and containers in accordance with the relevant State or Territory legislation and local council requirements — Part B is classified as dangerous goods and environmentally hazardous, and uncured waste is routed to an authorised hazardous or special waste collection point. Allow mixed residues to fully cure before disposal as construction waste where permitted. Refer to Section 13 of both component SDS.

Quality Records

Record the batch numbers of both Part A and Part B for every kit used, the role applied (primer or moisture barrier), first-coat dilution used, coat count with wet film gauge readings and intercoat times, substrate moisture readings, sand-broadcast records for tiled areas, application dates and conditions, and overcoat timing, as part of the project quality assurance records. Where a 300 µm dry film thickness is specified, the wet film records are the acceptance evidence.

Storage

Store in original, unopened, undamaged containers in cool, dry, well-ventilated conditions, tightly closed, protected from physical damage, frost and incompatible materials. Shelf life: 24 months from the date of manufacture when stored as specified.

Safety Precautions and First Aid

Part A and Part B are classified as HAZARDOUS CHEMICALS, and Part B is additionally classified as DANGEROUS GOODS and environmentally hazardous, under their current Safety Data Sheets. Control epoxy sensitisation: avoid all skin and eye contact, avoid breathing mist, vapour or spray, use outdoors or in well-ventilated areas, and wear protective gloves, protective clothing, and eye and face protection, with respiratory protection where required by the SDS and workplace risk assessment. Persons with a history of epoxy or amine sensitisation must not be exposed. Contaminated work clothing must not leave the workplace. Prevent all release to drains, soil and waterways.

First aid — Eyes: rinse cautiously with water for several minutes; remove contact lenses if easy to do; continue rinsing and seek medical attention. Skin: wash with plenty of soap and water; remove contaminated clothing; seek medical advice if irritation or rash occurs. Inhaled: remove to fresh air and keep comfortable; seek medical attention if symptoms occur. Swallowed: rinse mouth; do not induce vomiting; contact a POISONS INFORMATION CENTRE or doctor. POISONS INFORMATION CENTRE: 13 11 26 (Australia-wide, 24 hours). In an emergency, dial 000. KEEP OUT OF REACH OF CHILDREN. Read both Safety Data Sheets before use — available at www.forspec.com.au.

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 EP250 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.

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Warranty (continued)

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 12/11/2026 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.

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.



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