ACTFLEX FLEXIPLUG.



Technical Data Sheet | High-Performance Flexible Joint and Crack Repair Mortar | Issue date: 12 August 2026

Description

ACTFLEX FLEXIPLUG is a fast-setting, elastomeric two-component repair mortar engineered for sealing joints, cracks, corner junctions and service penetrations — the detailing mortar of the FORSPEC membrane systems, forming the coves, reglets and junction details that ACTFLEX 988 CWP and ACTFLEX 989 CWP build over. It bonds to damp, saturated-surface-dry concrete, stops water ingress, accommodates up to 15% joint movement, and reaches final set within the hour — with FORSPEC membranes over-coating after just 2 hours. Thixotropic for vertical and overhead work, solvent-free and low-odour for confined spaces, it serves structural repairs, wet areas, submerged environments and industrial trafficked floors. Supplied in 10 kg, 5 kg and 2 kg two-component kits mixed 1:1 by weight.

Advantages

- Fast-setting — initial set 25–30 minutes, final set 50–60 minutes; FORSPEC membranes over-coat after 2 hours.
- The system detailing mortar — forms the corner coves, fillets and reglets specified in the ACTFLEX 988 CWP and 989 CWP membrane systems.
- Accommodates up to 15% joint movement.
- Bonds to damp, saturated-surface-dry concrete — no waiting for dry substrates.
- Excellent adhesion to concrete, masonry, ceramics, PVC and metals — pull-off commonly fails the substrate, not the bond.
- Rapid return to service — pedestrian traffic 8 hours, wheel traffic 24 hours, permanent immersion 72 hours.
- Highly thixotropic — vertical and overhead repairs without slump.
- UV stable, non-yellowing and weather-resistant.
- Solvent-free, low odour — suitable for confined areas.
- Resistant to sulphates, chlorides, chlorinated water, saltwater and wastewater environments.

Uses

- Corner junctions, coves and fillets within FORSPEC membrane systems — including the 15 × 15 mm rebates and 35 × 35 mm diagonal coves in the ACTFLEX 988 CWP and 989 CWP details.
- Crack repair reglets over 2.0 mm within FORSPEC membrane systems, per the membrane TDS.
- Fast sealing of construction joints in wet or submerged areas.
- Urgent repairs in pools, tanks, pipelines, treatment plants and reservoirs.
- Sealing joints between precast elements, façade panels and tunnel segments.
- Sealing around penetrations, pipe entries, sleeves, skimmers and drains — with ACTFLEX HYDROPLUG stopping any active flow first.
- Crack and joint repairs on concrete floors, industrial pavements and garages exposed to wheel and forklift traffic.

Compliance Status

No Australian Standard prescribes performance requirements for elastomeric repair mortars of this type; membrane-system compliance is carried by the FORSPEC membranes applied over the completed details, per their TDS. Performance values below are Forspec characteristic values determined on the ASTM test bases named, pending accredited testing — no accredited test reports currently exist for this product. Hazard classification: refer to the current SDS.

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Technical Data

PROPERTY	VALUE	BASIS
Product type	Two-component elastomeric repair mortar (resin + reactive powder)	—
Mix ratio	Part A : Part B = 1 : 1 by weight	—
Appearance	Part A grey/off-white liquid resin; Part B fine grey reactive powder (≤0.50 mm); mixed — uniform grey thixotropic paste	—
Density	Part A 1.00 ± 0.10 g/cm³; Part B 0.90 ± 0.10 g/cm³ (bulk); mixed system 1.20–1.30 kg/L (typical 1.25)	*
Pot life	10–15 minutes at 20°C; working time 6–8 minutes at 30°C — temperature dependent	*
Initial / final set (at 20°C)	25–30 minutes / 50–60 minutes	*
Membrane over-coating (at 25°C, 50% RH)	2 hours — FORSPEC membranes over the completed detail	—
Pedestrian access (at 25°C, 50% RH)	8 hours	*
Vehicle traffic (at 25°C, 50% RH)	24 hours	*
Permanent immersion (at 25°C, 50% RH)	72 hours	*
Joint movement capability	Up to 15%	*
Elongation at break	12–18% (ASTM D412)	*
Tensile strength	2.5–3.5 MPa (ASTM D412)	*
Flexural strength	8–12 MPa (ASTM C348)	*
Compressive strength (28 days)	25–35 MPa (ASTM C579)	*
Shear strength	2.0–2.8 MPa	*
Adhesion to concrete (pull-off)	≥1.5 MPa — substrate failure common	*
Modulus of elasticity	1.0–1.5 GPa	*
Shore hardness	70–75 Shore A	*
Crack bridging (static)	Up to 1.5 mm	*
Water absorption	Less than 2% after 24 hours	*
Pressure resistance	Up to 10 m head of water — negative or positive	*
Abrasion resistance	High — wheel and forklift traffic (ASTM D4060)	*
Chemical resistance	Sulphates, chlorides, chlorinated and salt water, wastewater	*
Shrinkage	Non-shrink, volume-stable	*
UV resistance	Excellent — non-yellowing, non-chalky	*
Service temperature	−10°C to +80°C	*
Application temperature	+10°C to +30°C (ambient and substrate)	—
Shelf life	24 months, unopened, stored at 5–30°C	—

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Technical Data (continued)

* Typical Forspec characteristic values on standard production material, determined on the test bases named — no accredited test reports exist for this product. Values are not to be relied upon for engineering design without written confirmation from FORSPEC Technical Services.

Packaging

KIT	COMPONENT SPLIT	COLOUR
10 kg kit	Part A 5 kg (resin) + Part B 5 kg (powder)	Grey
5 kg kit	Part A 2.5 kg + Part B 2.5 kg	Grey
2 kg kit	Part A 1 kg + Part B 1 kg	Grey

Coverage and Yield

Linear consumption derives directly from joint volume at the mixed density: consumption (kg/m) = 0.00128 × joint width (mm) × joint depth (mm). The coefficient is the mixed density (≈1.28 kg/L within the 1.20–1.30 band) — every figure below verifies against it:

JOINT SIZE	CONSUMPTION	COVERAGE PER 10 KG KIT
10 mm × 10 mm	0.128 kg per linear metre	Approx. 78–80 linear metres
20 mm × 12 mm	0.307 kg per linear metre	Approx. 32 linear metres
25 mm × 12 mm	0.384 kg per linear metre	Approx. 26–28 linear metres
30 mm × 15 mm	0.576 kg per linear metre	Approx. 17 linear metres
35 × 35 mm diagonal cove	Approx. 0.78 kg per linear metre (half-square section)	Approx. 12–13 linear metres

Add allowance for wastage, compaction into irregular substrates and overfill-and-tool-flush finishing.

Joint Size Guidelines

- Minimum joint width: 5 mm. Maximum joint width: 50 mm — wider joints require a different system or an engineered build-up.
- Joints 15 mm wide or more: FLEXIPLUG depth = 50% of the joint width.
- Joints under 15 mm wide: FLEXIPLUG depth = the joint width, ensuring movement performance and proper compaction.
- Closed-cell polyethylene backing rod, sized 25% larger than the joint width, controls depth and prevents three-sided adhesion.
- Joint sides must be sawn, clean, straight and squared for full adhesion contact and correct joint mechanics.
- Confirm the required joint width with a FORSPEC representative before application.

Limitations

- Never apply below +10°C or above +30°C (ambient or substrate), or where rapid surface heating from direct sunlight or strong wind may cause flash-drying.
- No rain, condensation or water exposure within the first 24 hours of curing.
- Never apply to frozen, frosted or excessively dry porous surfaces — maintain SSD: damp, with no standing water.
- Maximum joint width 50 mm.
- Never dilute or extend with water, cement, sand or aggregates, and never re-temper to extend working time.
- Joints moving more than 15% require an engineered, FORSPEC-approved detail.
- Active flowing water is stopped with ACTFLEX HYDROPLUG before FLEXIPLUG is applied.
- Incorrect depth-to-width geometry reduces performance — follow the Joint Size Guidelines.
- No heavy vibration, impact or traffic loads during the early cure phase.
- Minimum 72 hours cure at 25°C, 50% RH before permanent water immersion.

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Surface Preparation

- Substrates must be sound, fully cured and free from dust, laitance, loose material, oil, grease, paint, coatings, curing compounds, efflorescence and form-release agents.
- Prepare by mechanical grinding, abrasive cleaning or high-pressure air to a clean, open profile.
- Saw, define and square all joints to the required width and depth — cut irregular, rounded or damaged edges back to solid material.
- Install the closed-cell backing rod (25% oversize) to the required depth.
- Pre-wet concrete and maintain a uniform saturated-surface-dry condition — damp, with NO standing or ponded water.

Mixing

- Add Part A (resin) into a clean container.
- Slowly add Part B (powder) while mixing.
- Mix for 2–3 minutes with a low-speed drill (400–600 rpm) until smooth and lump-free.
- Rest the mix for 1 minute, then re-mix briefly before use.
- NEVER add water, cement or aggregates, and never re-temper. Mix only what can be placed within the pot life — 10–15 minutes at 20°C, shorter in heat.

Application

- **General joints**
  Confirm the joint is SSD with no standing water. Place ACTFLEX FLEXIPLUG with a trowel, putty knife or caulking gun, compacting firmly against the joint walls and backing rod to eliminate voids. For wider joints, wet-bond both joint sides first and place the central material last. Tool and finish immediately with a trowel lubricated with soapy water.
- **Corner junctions — internal and external**
  Cut or prepare the junction to a minimum 15 mm × 15 mm rebate; use a 35 mm × 35 mm diagonal fillet in high-movement areas for maximum flexibility and load distribution — the cove geometry specified in the ACTFLEX 988 CWP and 989 CWP systems. Apply a thin bonding layer to both planes, place additional material into the junction and compact fully into the angle, form to the specified geometry, and tool immediately to a dense, uniform finish.
- **Penetrations — pipes, sleeves and services**
  Where the annular gap exceeds 20 mm, install a closed-cell backing rod; below 20 mm, place and compact FLEXIPLUG directly. Where water is actively flowing, STOP THE FLOW with ACTFLEX HYDROPLUG first, then apply FLEXIPLUG as the final sealing material. Compact firmly behind the face of the penetration with the sealant body at least 20 mm behind the surface line, fully embedded and recessed — never proud of the surface — tooled to full contact around the pipe circumference.
- **Cracks and narrow joints**
  Cut, chase or saw the crack to a rectangular profile (a V-cut only where rectangular cutting is not possible). Clean thoroughly, maintain SSD, and press FLEXIPLUG firmly into the cavity to complete depth, compacting in lifts for deeper cavities. Overfill slightly and tool flush with the surrounding substrate.

Drying, Curing and Testing Times

STAGE	TIME (AT 25°C, 50% RH)	CONTROL
FORSPEC membrane over-coating	2 hours	Detail set, dense and tooled; surface clean
Pedestrian access	8 hours	Protect from impact
Vehicle and wheel traffic	24 hours	No early heavy loads or vibration
Permanent water immersion	72 hours	Full cure confirmed before filling or exposure

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Clean Up

Clean tools, mixing equipment and application instruments immediately with clean water while the material is fresh — cured FLEXIPLUG can only be removed mechanically by grinding or chiselling. Wash hands and skin with soap and water; never use solvents on skin. Do not discharge material or wash water into drains, soil or waterways.

Container and Waste Disposal

Allow residues to fully harden before disposal in accordance with State and local requirements; route unused components to an authorised waste collection point per the SDS, Section 13. Do not reuse contaminated packaging.

Quality Records

Record the batch numbers of Part A and Part B for every kit, joint dimensions and geometry against the Joint Size Guidelines, SSD confirmation, HYDROPLUG use at active-water locations, placement and tooling times, cure periods before membrane over-coating and immersion, and ambient conditions, as part of the project quality assurance records.

Storage

Store in original, unopened packaging in a cool, dry, covered environment between 5°C and 30°C. Protect Part A (resin) from direct sunlight and excessive heat; protect Part B (powder) from moisture, humidity and condensation. Never allow to freeze. Shelf life: 24 months from the date of manufacture when stored as specified.

Safety Precautions and First Aid

Refer to the current Safety Data Sheet before use. ACTFLEX FLEXIPLUG combines a liquid resin with a reactive cementitious powder: avoid ALL dust generation and inhalation when handling and mixing the powder — add the powder to the resin gently and ensure ventilation; the wet mix is alkaline and resin systems may cause skin sensitisation in susceptible persons. Wear protective gloves, protective clothing, and eye and face protection, with respiratory protection during mixing and wherever dust cannot be adequately controlled. Do not eat, drink or smoke when handling; wash hands before breaks and after work; contaminated work clothing must not leave the workplace.

First aid — Eyes: immediately hold eyelids apart and flush continuously with clean water for at least 15 minutes; seek medical attention without delay. Skin: remove contaminated clothing and wash thoroughly with soap and water; seek medical advice if irritation or rash occurs. Inhaled: remove to fresh air and keep comfortable. Swallowed: do NOT induce vomiting; rinse mouth and seek medical attention immediately. POISONS INFORMATION CENTRE: 13 11 26 (Australia-wide, 24 hours). In an emergency, dial 000. KEEP OUT OF REACH OF CHILDREN. Read the Safety Data Sheet (SDS) before use — available at www.forspec.com.au.

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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 FLEXIPLUG 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 12/08/2026 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.

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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)) 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.

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FORSPEC PROTECTIVE COATINGS

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