ACTFLEX CRACK SWELL PU1100.

Technical Data Sheet | **Two-Component Self-Expanding Polyurethane Foam for Crack and Void Sealing** | **Issue date: 12 November 2026**

Description

ACTFLEX CRACK SWELL PU1100 is a two-component, low-viscosity, self-expanding polyurethane foam supplied in a 600 mL dual cartridge. Parts A and B are dispensed 1:1 by volume through a static mixer straight into the crack, void or injection port, so there is no hand mixing and no part-mixed waste. The mixed resin starts to foam within 30 to 60 seconds, finishes foaming in 2 to 4 minutes and expands up to 20 times its liquid volume when free, filling the crack or void with a closed polyurethane foam seal.

The cartridge format suits small and medium repairs where a pump rig is not warranted: sealing cracks and voids in walls, slabs, around penetrations and behind linings, from either face, in dry or damp conditions. It is a sealing and void-filling product only - it is not a structural repair and is not for use in contact with potable water.

Advantages

- Fixed 1:1 dual cartridge and static mixer - no weighing, no hand mixing, only what is needed is mixed.
- Low viscosity lets the resin travel into fine cracks before it foams.
- Fast reaction: foaming starts in 30 to 60 seconds and is finished in 2 to 4 minutes.
- Expands up to 20 times its liquid volume when free, so one cartridge fills a large void.
- Works from the inside or outside face, in dry or damp cracks and voids.
- Portable: a dual-cartridge gun replaces the pump, lines and flushing of bulk injection.

Uses

- Sealing non-structural cracks in concrete and masonry walls and slabs.
- Filling voids behind linings, under slabs and around pipes, conduits and penetrations.
- Sealing honeycombing and porous zones in concrete.
- Retaining walls, basements, lift pits and service pits, as part of a FORSPEC crack-sealing detail.
- Small injection repairs where a bulk pump rig is not practical.

Limitations

- Not a structural repair. ACTFLEX CRACK SWELL PU1100 seals and fills; where structural continuity must be restored, specify the FORSPEC epoxy crack repair range.
- Not for use in contact with potable water.
- Not a waterproofing membrane - it seals a crack or void from within; it does not waterproof a surface.
- Running leaks under pressure: stop the flow first with ACTFLEX HYDROPLUG, then inject.
- Apply only between 5°C and 35°C. Cold slows the reaction and reduces expansion; heat shortens the working time.
- Confined expansion is far lower than free expansion - do not rely on the free-rise figure.
- Control injection pressure to avoid cracking the substrate; pressure limits are set by the project engineer.
- Confined and below-ground work requires the site confined-space entry procedure.

Compliance Status

ACTFLEX CRACK SWELL PU1100 holds no third-party certification. The reaction times and expansion stated in this data sheet are typical FORSPEC R&D values, asterisked, determined by the cup-foam method of ASTM D7487 and assessed against the injection product principles of EN 1504-5. The product is not tested to AS/NZS 4020 and is not for use in contact with potable water.

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Technical Data

PROPERTY	VALUE	BASIS
Product type	Two-component self-expanding polyurethane foam	—
Colour	Part A yellow, Part B brown; mixed yellow	—
Packaging	600 mL dual cartridge	—
Mix ratio	1:1 by volume, through a static mixer	—
Foaming start (cream time) at 25°C	30-60 seconds	FORSPEC R&D to ASTM D7487 *
Foaming finished (rise time) at 25°C	2-4 minutes	FORSPEC R&D to ASTM D7487 *
Free expansion	Up to 20 times liquid volume	FORSPEC R&D to ASTM D7487 *
Application temperature	+5°C to +35°C	—
Storage temperature	+10°C to +25°C	—
Shelf life	12 months from manufacture, unopened, stored as specified *	*

* Typical value determined by FORSPEC R&D. Not to be relied upon for engineering design without written confirmation from FORSPEC Technical Services.

Coverage and Yield

MEASURE	VALUE	BASIS
Free-rise foam - theoretical	Up to 12 L of foam per 600 mL cartridge *	600 mL × free expansion of up to 20 times
Free-rise foam - practical	Up to 10.8 L of foam per 600 mL cartridge *	Theoretical × 0.90 (10% wastage allowance for mixer purge and spill)
Confined cracks and voids	Established on the first section injected *	Confined expansion is much lower than free expansion

Estimate cartridge demand as the measured void volume divided by the expansion achieved, plus an allowance for travel beyond the void and for purging each new mixer. * Typical FORSPEC R&D values.

Surface Preparation

- Inspect the crack or void and record its location, length, width and any water present.
- Clean the crack and surrounding area of loose material, dust, laitance and contaminants.
- Where water is running under pressure, stop the flow first with ACTFLEX HYDROPLUG.
- Where injection is required, drill and set injection ports to the pattern and spacing set by the crack width, wall thickness and project design, and seal the crack face between ports.

Application

- If the cartridge is below 21°C, condition it at 21 to 24°C for 1 hour before use.
- Shake the cartridge, fit it in a 1:1 dual-cartridge applicator gun, remove the cap and dispense a small amount until both parts flow evenly.
- Attach the static mixer and secure it. Purge the first mixed resin to waste until the mixed colour is even and free of air.

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Application (continued)

- Inject into the lowest port first, or dispense directly into the crack or void, and work upwards. Move to the next port when resin shows at the port above.
- Work steadily: once flow stops for longer than the foaming start time, resin can set in the mixer - fit a new mixer before continuing.
- Allow the foam to finish expanding and firm up before trimming.
- Trim cured foam flush, remove ports once the foam is firm, and make good the holes and surface with a FORSPEC repair mortar.
- Inspect the treated crack and re-treat any section that still shows leakage.

Drying, Curing and Service Times

All times below are measured at 25°C. Low temperature slows the reaction and extends every stage - confirm the foam has finished expanding before trimming, removing ports or re-injecting.

STAGE (AT 25°C)	TIME	BASIS
Foaming start (cream time)	30-60 seconds	FORSPEC R&D to ASTM D7487 *
Foaming finished (rise time)	2-4 minutes	FORSPEC R&D to ASTM D7487 *
Re-injection at the same port	After the previous shot has finished foaming *	*
Trim, remove ports and make good	Once the foam is firm and no longer expanding *	*

* Typical FORSPEC R&D values.

Clean Up

Wipe uncured resin from tools and the gun immediately with a dry cloth; cured foam can only be removed mechanically. Leave the used static mixer on the cartridge to seal it, or discard it and fit a new one before the next use. Observe all WHS requirements and the Safety Data Sheet. Do not discharge product into sewers or waterways.

Container and Waste Disposal

Allow residues in used mixers and part-used cartridges to fully react before disposal in accordance with State and local requirements. Route unused, unreacted product to an authorised hazardous waste collection point per Section 13 of the Safety Data Sheet. Do not reuse empty cartridges.

Quality Records

Record the cartridge batch numbers, crack and void locations, lengths and widths, water present before treatment, port pattern and spacing, number of cartridges used per section, re-injection where undertaken, port removal and making good, and the post-treatment leak inspection, as part of the project quality assurance records.

Storage

Store in the original sealed cartridge in a cool, dry place at 10°C to 25°C, out of direct sunlight and away from heat sources and moisture. Keep the cap on until use. Shelf life: 12 months from the date of manufacture, unopened, when stored as specified.*

Safety Precautions and First Aid

Read the Safety Data Sheet (SDS) before use, available at www.forspec.com.au. Part A contains 4,4'-diphenylmethane diisocyanate (MDI) and is classified as hazardous and as dangerous goods: it can be fatal if inhaled, may cause allergy or asthma symptoms or breathing difficulties if inhaled, may cause an allergic skin reaction, causes skin and eye irritation and is suspected of causing cancer. Use only in a well-ventilated area. Wear chemical-resistant gloves, protective clothing, eye and face protection, and the respirator specified in the SDS (a combined organic vapour and particulate filter) wherever ventilation is inadequate. Anyone with a history of

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Safety Precautions and First Aid (continued)

asthma or isocyanate sensitisation must not use this product. Below-ground and confined work requires the site confined-space entry procedure, atmospheric testing and mechanical ventilation. Do not eat, drink or smoke when handling; wash hands before breaks and after work. First aid - Inhaled: move to fresh air at once, keep at rest and seek urgent medical attention. Skin: remove contaminated clothing and wash with plenty of soap and water. Eyes: rinse with running water for at least 15 minutes and seek medical attention. Swallowed: do NOT induce vomiting; rinse mouth and seek immediate medical attention. POISONS INFORMATION CENTRE: 13 11 26 (Australia-wide, 24 hours). In an emergency, dial 000. 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 CRACK SWELL PU1100 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 12/11/2026 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.

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

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