ACTFLEX PROSWELL.



Technical Data Sheet | Hydrophilic Swellable Polyurethane Joint Sealant | Issue date: 25 August 2026

Description

ACTFLEX PROSWELL is a grey, elastic, water-swellable polyurethane paste applied by cartridge gun to concrete construction joints. It cures on atmospheric moisture to a soft, highly extensible solid, and the hydrophilic polymer dispersed through it draws in water on contact and expands by more than 70% of its original volume.

That expansion is the sealing mechanism. Confined within a cast joint, the swelling material cannot expand freely, so it generates positive pressure against both concrete faces and forms a compression seal — it blocks the joint rather than bridging it, and the tighter the confinement the harder it seals. Because it is applied as a paste rather than a preformed profile, it flows into surface irregularities, voids and honeycombing that a rigid strip would bridge and leave a path around, which is what makes it effective on rough concrete and on damp, uneven joint faces. The hydrophilic system is reversible: it releases water and returns toward its original volume as the joint dries, then swells again on the next wetting, so the seal survives repeated cycling rather than fatiguing.

Advantages

- Water-swellable — expands over 70% on contact with water to form a watertight compression seal.
- Consistent swelling through repeated wet and dry cycles, without elastic fatigue.
- Seals rough concrete — flows into surface irregularities a preformed strip cannot follow.
- Adheres to damp and uneven joint surfaces and stays in place during the concrete pour.
- Applied like a sealant from a standard cartridge gun — no specialist tools.
- Fast curing — hand-applied concrete cover within 8 hours for emergency repairs.
- Large-scale concrete pours from 24 hours.
- Retains flexibility and adapts to joint movement without compromising the seal.
- High elongation for a swellable sealant.
- The companion sealant to PRESWELL HYDROPHILIC WATERSTOP for below-ground construction joints.

Uses and Approved Basis

- Concrete construction joints and cold joints, below ground.
- Sealing and bedding PRESWELL HYDROPHILIC WATERSTOP on rough or uneven concrete.
- Basements, lift pits and below-ground structures.
- Retaining walls and blockwork walls.
- Pipe and service penetrations through concrete.
- Precast panel joints and segment joints.
- Emergency and rapid-turnaround joint sealing where an early concrete pour is required.
- Joints exposed to fluctuating moisture levels and repeated wet and dry cycling.

Approved basis: ACTFLEX PROSWELL is a water-swellable joint sealant. It is not a waterproofing membrane and carries no membrane classification under AS/NZS 4858 or AS 4654.1. No Australian Standard governs a hydrophilic swellable sealant of this type. It performs as one element of a below-ground waterproofing design and must be used in conjunction with the other waterproofing measures specified for the structure — refer to Limitations.

System Components

ACTFLEX PROSWELL is used as part of a complete FORSPEC below-ground waterproofing system. Approved system components:

- PRESWELL HYDROPHILIC WATERSTOP — the companion hydrophilic strip. PROSWELL beds it on rough surfaces and seals both its edges.
- PREBAR PVC WATERSTOP — heat-weldable PVC waterstop profile, where a cast-in profile is specified instead.

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System Components (continued)

- ACTFLEX HYDROPLUG — rapid-setting plugging cement, applied first where active water is entering the joint.
- ACTFLEX FLEXIPLUG — fast-setting elastomeric detailing mortar for forming coves, reglets and junction details.
- Membrane — ACTFLEX 988 CWP for below-ground and water-retaining membrane systems, or the FORSPEC membrane range specified for the structure.
- Concrete reinstatement — FORSPEC concrete repair system such as FORBUILD 100 or FORCRETE 100, for voids and honeycombing at the joint.

Use only the components above, applied per their current TDS, to maintain system compliance and warranty eligibility. Substitution of non-FORSPEC components voids system warranty eligibility.

Standards Compliance

STANDARD / REQUIREMENT	POSITION	EVIDENCE
Membrane classification	Not applicable. ACTFLEX PROSWELL is a joint sealant, not a waterproofing membrane, and carries no classification under AS/NZS 4858 or AS 4654.1.	—
Hydrophilic swellable sealants	No Australian Standard governs a product of this type. Performance is stated against the international test methods in Technical Data.	Forspec R&D *
DIN 53504 — tensile strength	1.4 N/mm² approximately	Forspec R&D *
DIN 53505 — Shore A hardness	23 approximately	Forspec R&D *
DIN 53479 — density	1.35–1.45 ± 0.05 kg/L	Forspec R&D *
GB/T 528 — elongation at break	700%	Forspec R&D *
Volatile organic compounds	No accredited VOC certificate currently held.	—
AS/NZS 4020 — products in contact with drinking water	Potable-water contact requires written confirmation from FORSPEC Technical Services.	—

* Indicative design characteristics established by Forspec R&D on standard production material. These are general guide values, not accredited laboratory test results, and are not to be relied upon for engineering design without written confirmation from FORSPEC Technical Services.

Approved Substrates

SUBSTRATE	REQUIREMENT
Concrete construction joints	Structurally sound and clean. Damp but not wet — no standing water. Free of dust, dirt, oil, curing agents and release agents.
Rough and uneven concrete	Approved and preferred. The paste fills irregularities a preformed strip cannot follow. Apply additional sealant to fill voids.
Precast and segment joints	Sound, clean and free of release agents. Confirm the joint geometry suits a sealant bead.
Blockwork and masonry	Sound, joints struck flush and made good.
Pipe and service penetrations	Clean and sound around the full circumference of the penetration.
Voids and honeycombing at the joint	Repair with a FORSPEC concrete repair product before sealing, where the defect exceeds what additional sealant can reasonably fill.

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Approved Substrates (continued)

SUBSTRATE	REQUIREMENT
Non-porous surfaces	NOT APPROVED without proper preparation. Confirm the preparation method with FORSPEC Technical Services.
Wet surfaces and standing water	NOT APPROVED. The surface must be damp, not wet.
Joints subject to active water ingress	Stop the flow with ACTFLEX HYDROPLUG first, then seal.

Technical Data

PROPERTY	VALUE	TEST METHOD / BASIS
Product type	Hydrophilic swellable polyurethane joint sealant	—
Chemical base	Polyurethane	—
Colour	Grey	—
Cure mechanism	Moisture curing	—
Packaging	600 mL sausage pack	—
Density	1.35–1.45 ± 0.05 kg/L	DIN 53479 *
Shore A hardness	23 approximately	DIN 53505 *
Tensile strength	1.4 N/mm² approximately	DIN 53504 *
Elongation at break	700%	GB/T 528 *
Tear propagation resistance	≥ 2 N/mm	*
Water expansion	Greater than 70% of original volume	*
Shrinkage	10% approximately	*
Skin time (at 25°C, 50% RH)	65 minutes	—
Cure rate (at 25°C, 50% RH)	3.5 mm per 24 hours approximately	—
Hand-applied concrete cover (at 25°C, 50% RH)	From 8 hours — emergency repairs	—
Large-scale concrete pour (at 25°C, 50% RH)	From 24 hours	—
Service temperature range	−10°C to +65°C	*
Application temperature	5°C to 35°C ambient	—
Substrate condition at application	Damp but not wet. No standing water.	—
Shelf life	To be confirmed †	—
SDS	Refer to the current ACTFLEX PROSWELL Safety Data Sheet at www.forspec.com.au	—

† Shelf life and storage conditions are not stated in the source data and are to be established and inserted — refer to the Change Register.

* Indicative design characteristics established by Forspec R&D on standard production material. These are general guide values, not accredited laboratory test results, and are not to be relied upon for engineering design without written confirmation from FORSPEC Technical Services.

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Limitations

- Not a waterproofing membrane. ACTFLEX PROSWELL seals a joint; it does not waterproof a structure. It must be used in conjunction with the other waterproofing measures specified for the structure, such as PRESWELL HYDROPHILIC WATERSTOP and the FORSPEC membrane range.
- Not suitable for continuous water immersion.
- Not suitable for expansion joints or designed movement joints. It seals construction and cold joints.
- Requires clean surfaces for proper adhesion. The joint must be damp, not wet — do not apply into standing water.
- Not for non-porous surfaces without proper preparation. Confirm the preparation method with FORSPEC Technical Services.
- Apply only between 5°C and 35°C ambient. Performance may be affected outside this range. Avoid application in extreme temperatures or during heavy rain.
- Ensure adequate curing time before the concrete pour or any water exposure. Premature water contact will swell the sealant before it has cured and developed adhesion.
- Do not pre-soak. The sealant is designed to swell on contact with groundwater in service, not before the pour.
- Protect from rain and groundwater between application and the pour.
- Where active water is entering the joint, stop the flow with ACTFLEX HYDROPLUG before sealing. Swellable sealants do not stop running water.
- Avoid displacement during concrete placement and vibration.
- Moisture-cured. Cure proceeds at approximately 3.5 mm per 24 hours — a deep bead takes proportionally longer to cure through, and the 8-hour and 24-hour cover times assume a normal bead section.

Surface Preparation

- Surface cleaning — ensure the surfaces to be sealed are clean and free of dust, dirt, oil, curing agents, release agents and any other contaminant. Use a wire brush, compressed air or a suitable cleaner to remove debris and loose material.
- Surface conditioning — for best adhesion the joint surfaces should be damp but not wet. Ensure no standing water is present where the sealant will be applied.
- Voids and honeycombing — repair defects at the joint with a FORSPEC concrete repair product where the defect exceeds what additional sealant can reasonably fill.
- Active water — where water is entering the joint, stop the flow with ACTFLEX HYDROPLUG per its TDS before sealing.
- Conditions — confirm ambient temperature is between 5°C and 35°C. Do not apply in extreme temperatures or during heavy rain.
- Cartridge preparation — open the 600 mL sausage pack and load it into a suitable caulking gun. Cut the nozzle to the joint width required.

Application

STAGE	REQUIREMENT	CHECK
Load and apply	Insert the 600 mL sausage pack into a caulking gun, cut the nozzle to suit the joint, and apply a continuous bead along the full length of the joint.	Continuous bead, no breaks
Tool the bead	Tool the sealant to ensure full contact with both joint faces. A bead sitting on the surface without contact to both faces will not form a compression seal.	Full contact both faces
Rough surfaces	Apply additional sealant to fill voids and surface irregularities so no path is left around the bead.	Voids filled, no bypass path
Continuity	Butt successive beads into one another so the seal is continuous. A gap in the bead is a gap in the seal.	No gaps at bead junctions
Penetrations	Run the bead around the full circumference of each pipe or service penetration, returning into itself.	Full circumference, closed
Protection	Protect from rain and groundwater between application and the pour.	Area covered if weather threatens

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Application (continued)

STAGE	REQUIREMENT	CHECK
Cure before pour	Allow adequate cure before concrete placement — from 8 hours for hand-applied cover, from 24 hours for a large-scale pour.	Cure time recorded
Pouring	Avoid displacement of the bead during concrete placement and vibration.	Bead intact after placement

Use with PRESWELL Hydrophilic Waterstop

ACTFLEX PROSWELL and PRESWELL HYDROPHILIC WATERSTOP are designed to work together. The sequence depends on how rough the concrete is.

- **On sound, reasonably smooth concrete**
  Install PRESWELL HYDROPHILIC WATERSTOP to the designated area and ensure firm fixation per its TDS. Then apply a bead of ACTFLEX PROSWELL along both edges of the strip, sealing the strip to the concrete on each side.
- **On rough or uneven concrete**
  Apply ACTFLEX PROSWELL to the joint line first, then install PRESWELL HYDROPHILIC WATERSTOP on top of the wet sealant and press it firmly home. The sealant fills the surface irregularities beneath the strip, producing a watertight bed where the strip alone would bridge the roughness and leave a path. Both products are hydrophilic and both swell on contact with water. Observe the cure and protection requirements of each before the pour, and confirm the minimum concrete cover required by the PRESWELL TDS is achieved.

Consumption

Consumption is a direct function of the bead cross-section. Demand per linear metre in millilitres equals the bead width in millimetres multiplied by the bead depth in millimetres.

BEAD SIZE (WIDTH × DEPTH)	DEMAND PER LINEAR METRE	METRES PER 600 ML SAUSAGE
10 × 10 mm	100 mL	6.0 m
15 × 10 mm	150 mL	4.0 m
20 × 10 mm	200 mL	3.0 m
20 × 15 mm	300 mL	2.0 m
25 × 15 mm	375 mL	1.6 m

Basis: a 600 mL sausage pack yields 600 mL of sealant. Metres per pack = 600 mL ÷ demand per metre. Figures are theoretical bead volume only.

Actual consumption is routinely higher than the theoretical bead volume. Rough concrete absorbs additional sealant into surface irregularities — which is the product's purpose, not waste — and voids, honeycombing and penetration returns all consume more. Where ACTFLEX PROSWELL is applied to both edges of a PRESWELL strip, demand is two beads per linear metre of joint. Establish actual consumption on a trial length before ordering.

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Drying, Curing and Testing Times

All times below are measured at 25°C and 50% RH.

STAGE (AT 25°C, 50% RH)	TIME
Skin time	65 minutes
Cure rate	Approx. 3.5 mm per 24 hours
Hand-applied concrete cover — emergency repairs	From 8 hours
Large-scale concrete pour	From 24 hours
Protection from rain and groundwater	From application until the pour

The product is moisture cured and cures from the surface inward at approximately 3.5 mm per 24 hours. A deep bead takes proportionally longer to cure through than a shallow one, and the cover times above assume a normal bead section. Low temperature extends all times; high humidity shortens skin time. Do not force the programme by pouring early — a bead that has not developed adhesion will be displaced by the pour and will swell against nothing.

Clean Up

Fresh sealant: remove excess with a clean cloth or wipe immediately after application, before skin time is reached.

Cured sealant: use isopropyl alcohol or a suitable adhesive remover. Ensure the surface is dry before any reapplication. Cured sealant on finished surfaces may require mechanical removal.

Tools: clean with a suitable solvent immediately after use, handled in accordance with the Work Health and Safety Regulations and that solvent's SDS. Do not allow solvent, sealant residue or wash water to enter 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.

Container and Waste Disposal

Do not reuse packaging. Allow residual sealant to cure fully in the pack before disposal, in a well-ventilated area away from ignition sources.

Dispose of cured product, part-used sausage packs, solvent residues, contaminated rags and empty packaging in accordance with the Safety Data Sheet, the WHS Regulations, the relevant State or Territory EPA requirements and local council regulations. Uncured sealant and used solvent are regulated waste and must be disposed of through a licensed waste contractor. Never discharge to sewer, stormwater, soil or waterways.

Quality Records

Record and retain the following as part of the project quality assurance records and as a condition of warranty eligibility:

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Quality Records (continued)

- Batch numbers of all ACTFLEX PROSWELL used, and of PRESWELL HYDROPHILIC WATERSTOP and any other system components.
- Joint register — location and length of every construction joint sealed.
- Substrate condition at application, confirming the joint was damp and free of standing water.
- Bead size applied and the number of sausage packs consumed per joint length.
- Where used with PRESWELL — which sequence was used (strip first, or sealant first on rough concrete), and confirmation of concrete cover achieved.
- Any active water stopped with ACTFLEX HYDROPLUG before sealing.
- Date and time of application, and date and time of the concrete pour, confirming the required cure period was observed.
- Ambient and substrate temperature at the time of application.
- Photographic record of the completed bead before the pour — this is the last opportunity to record it.
- Name and licence details of the applicator, and sign-off before the pour proceeded.

Storage

Store in original unopened packaging in a cool, dry, well-ventilated area, protected from moisture, frost and direct sunlight. The product is moisture cured — packaging must remain sealed until the point of use, and part-used sausage packs will skin and cure once opened.

Keep away from water, ignition sources and heat. Store away from food, drink and animal feedstuffs, and stock rotate on a first-in, first-out basis. Do not use product beyond its shelf life.

Safety Precautions and First Aid

ACTFLEX PROSWELL is classified per its current Safety Data Sheet. Read the Safety Data Sheet in full before use — it is available at www.forspec.com.au and governs in the event of any inconsistency with this document. This is a moisture-curing polyurethane sealant. Read the Safety Data Sheet in full before use — it is available at www.forspec.com.au and governs in the event of any inconsistency with this document. Uncured polyurethane sealants may cause skin and eye irritation and may cause an allergic skin reaction on repeated contact.

Handling

Wear chemical-resistant gloves, safety glasses or goggles, and protective clothing. Below-ground and construction joint work is frequently carried out in pits, basements, shafts and trenches — these may constitute confined spaces under the WHS Regulations, requiring atmospheric testing, mechanical ventilation, a permit and a standby observer before entry. Provide ventilation where the product is used in an enclosed space. Avoid contact with skin and eyes and avoid breathing vapour. Change contaminated clothing immediately and wash hands thoroughly before breaks and after finishing work. Where PRESWELL HYDROPHILIC WATERSTOP is used alongside this product, read and observe its Safety Data Sheet as well — it carries a different and more severe hazard classification.

First aid

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Safety Precautions and First Aid (continued)

- Eyes — rinse cautiously with water for several minutes, holding the eyelids apart. Remove contact lenses if present and easy to do. Continue rinsing and seek medical attention if irritation persists.
- Skin — remove contaminated clothing and wash the affected area thoroughly with soap and water. Do not use solvents on skin. Seek medical attention if irritation or a rash develops, as sensitisation can occur with repeated contact.
- Inhaled — move the affected person to fresh air and keep at rest in a position comfortable for breathing. Seek medical attention if discomfort persists.
- Swallowed — do NOT induce vomiting. Rinse the mouth with water and seek immediate medical attention.
- Spillage — contain with inert absorbent material and collect into a sealed container for licensed disposal. Do not allow entry to drains or waterways.

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

Keep Out of Reach of Children

In an emergency call 000.

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 PROSWELL 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 is valid for three (3) years from the issue date shown above, unless superseded earlier. It supersedes all previous versions. 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.

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