FORSPEC PROTECTIVE COATINGS

ACTFLEX 900R.



Technical Data Sheet | **Dual-Fabric Butyl Rubber Internal Undertile Sheet Membrane — Adhesive Applied, Heat-Welded Laps** | **Issue date: 2 October 2026**

Description

ACTFLEX 900R is a dual-fabric butyl rubber (isobutylene-isoprene rubber, IIR) sheet waterproofing membrane built for the fully enclosed wet room: shower recesses and bases, bathroom and ensuite floors and walls, laundries, and floors incorporating encapsulated electric underfloor heating, under both direct-stick tiling and bonded screed construction, on new substrates or over existing cured screeds in remedial work. Butyl rubber is specified for the conditions a wet area actually imposes: constant wetting and drying, warm humid air, and long-term contact with the chlorinated and detergent-laden water that degrades other chemistries. It is effectively closed to water vapour, holds its elastic recovery across the service temperature range, and does not oxidise or embrittle with age, so the membrane continues to take up movement at junctions and across substrate cracking for the life of the room — with the low build and immediate hold point that a tight wet area programme depends on.

Advantages

- Dual nonwoven fabric facing — bonds to the substrate below and keys the finish above, from one sheet.
- Accepts direct-stick tiling or a bonded screed with no primer or further preparation.
- Heat-welded laps produce a monolithic, continuous membrane at every joint, with probe-testable seam integrity.
- No open flame at any stage — hot-air welded only.
- Fully adhered across the whole area — prevents lateral water tracking beneath the membrane.
- One-hour hold point — tiling, screeding and flood testing all proceed sixty minutes after the final weld, adding zero cure time to the programme.
- Water-based bonding adhesive formulated for internal wet areas — low odour, water clean-up.
- High elongation and flexibility — internal corners detailed without fillets or bond breakers.
- Cyclic-movement capability across junctions, engineered to the AS/NZS 4858 requirement.
- Compatible with electric underfloor heating installations.
- Detailing executed in cut strips of the membrane itself, or with ACTFLEX SA TAPE.
- Transitions cleanly into the FORSPEC liquid membrane range for walls and terminations.
- Consistent factory-controlled 0.9 mm gauge — no site film-build risk and no wet-film measurement.

Uses

- Internal wet areas — showers, bathrooms, ensuites and laundries, waterproofed in accordance with AS 3740:2021.
- Beneath direct-stick tiling on the upper fabric face, with ACTFLEX BIOSET or a compatible cement-based tile adhesive.
- Beneath bonded screeds using FORSPEC SCREEDX, FORCEM SCREED BINDER or ACTFLEX CRYSTAL BOND.
- Over existing cured screeds, primed with two coats of ACTFLEX EP250.
- Wet areas incorporating electric underfloor heating — heating cables fully encapsulated in a FORSPEC screed or levelling compound beneath the membrane; cables must never sit directly against the membrane underside.
- Hybrid systems in combination with the FORSPEC liquid membrane range — ACTFLEX 906 WPU or ACTFLEX 989 CWP for wall systems, terminations and non-exposed transitions.

ACTFLEX 900R is an internal-only membrane. For external, below-grade or UV-exposed applications use ACTFLEX 1300R, or consult FORSPEC Technical Services for the correct membrane selection.

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System Components

ACTFLEX 900R is applied as part of a complete FORSPEC waterproofing system.

- **Adhesive —** ACTFLEX 302 ADHESIVE, the water-based internal contact adhesive that bonds the membrane to the substrate. The membrane is not installed without it. ACTFLEX 301 ADHESIVE (solvent-based) is an approved alternative in well-ventilated areas only.
- **Primer —** ACTFLEX EP250, two coats, where the membrane is installed over an existing screed or where substrate moisture is at or above the threshold stated under Priming.
- **Detailing —** cut strips of ACTFLEX 900R itself; ACTFLEX SA TAPE; ACTFLEX FLEXIPLUG for movement joints, corner junctions and joint detailing prior to membrane installation; ACTFLEX MS PRO for cut edges, penetrations and rigid fittings.
- **Wall and termination system —** ACTFLEX 906 WPU or ACTFLEX 989 CWP liquid membrane, applied over the upper fabric face at terminations and as the wall system where sheet walls are not used.
- **Concrete reinstatement —** FORBUILD 100 or FORCRETE 100 for defects between 2 mm and 30 mm; PROBOND 1100 or the appropriate FORSPEC concrete repair product for spalling and structural repair.
- **Tile fixing —** ACTFLEX BIOSET, or a compatible cement-based tile adhesive, applied directly to the upper fabric face.
- **Screeding —** FORSPEC SCREEDX engineered screed; FORCEM SCREED BINDER; ACTFLEX CRYSTAL BOND.
- **Welding equipment —** hand hot-air welder and silicone roller, plus a blunt seam probe for testing.

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	TITLE	POSITION
AS/NZS 4858:2004 (R2020)	Wet area membranes	Designed and manufactured to comply †
AS 3740:2021	Waterproofing of domestic wet areas	Membrane and installation details comply — 150 mm floor upturns, 1800 mm shower walls, falls minimum 1:80 and maximum 1:50 to floor wastes.
AS 3958:2023	Installation of ceramic and stone tiles	Direct-stick tiling to the upper fabric face, or tiling to a screed over the membrane, in accordance with this standard.
AS 3558.1	Swimming pool and spa materials — water absorption	Water absorption determined in accordance with this method.
EN 12316-2 / EN 12317-2	Determination of peel and shear resistance of joints	Weldable seam performance determined in accordance with these methods.
NCC 2022	National Construction Code	Internal wet areas per Volume Two Part H4 (H4P1; H4D2/H4D3 with ABCB Housing Provisions Part 10.2) and Volume One Part F2, with AS 3740 as the compliance pathway.
Volatile organic compounds	VOC content	Not applicable — factory-manufactured sheet membrane. Refer to the ACTFLEX 302 ADHESIVE TDS and SDS for the bonding adhesive.
AS/NZS 4020	Products in contact with drinking water	Not certified. Potable-water contact requires written confirmation from FORSPEC Technical Services.

† Manufacturer classification. Accredited verification testing is programmed; certified report numbers will be cited on completion.

Test reports are available on request from Forspec Protective Coatings.

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Technical Data

PROPERTY	VALUE	BASIS
Product type	Single-ply butyl rubber sheet waterproofing membrane, adhesive applied with heat-welded laps	—
Core material	Butyl rubber (isobutylene-isoprene rubber, IIR), light grey	—
Fabric facing	White nonwoven fabric, both faces	—
Membrane gauge (total)	0.9 mm	—
Installation method	Fully adhered with ACTFLEX 302 ADHESIVE; laps hot-air welded	—
Roll dimensions	1.4 m x 20 m (28 m^2 gross)	—
Hardness	60–70 IRHD	ASTM D1415 *
Tensile strength	4.0 MPa minimum	ASTM D412 *
Elongation at break	Greater than 300%	AS/NZS 4858 *
Tear resistance	22.0 kN/m minimum	ASTM D624 *
Tensile strength retained after conditioning	65% minimum	ASTM D412 *
Cyclic movement	Designed to conform †	AS/NZS 4858
56-day immersion durability — deionised water, chlorinated (bleach) and detergent solutions	Designed to conform †	AS/NZS 4858
Water vapour transmission	0.3 g/m^2/24 h maximum	ASTM E96 *
Water absorption	2.0% maximum	AS 3558.1 *
Lap joint weld strength	Determined in accordance with EN 12316-2 and EN 12317-2. Correctly executed welds fuse the sheets into a joint of membrane-integral strength — failure under load occurs in the sheet body, not the weld. Certified shear and peel values will be published on completion of verification testing.	EN 12316-2 / EN 12317-2 †
Service temperature range	−25°C to +80°C	*
Application temperature	5°C to 35°C ambient (average)	—
Ready for cover (at 25°C, 50% RH)	1 hour after installation	—
Adhesive coverage — ACTFLEX 302 ADHESIVE	8–10 m^2/L per coated face	Refer ACTFLEX 302 ADHESIVE TDS

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Technical Data (continued)

PROPERTY	VALUE	BASIS
Shelf life	Minimum 60 months from date of manufacture in unopened original packaging	—
Safety Data Sheet	Refer to the current ACTFLEX 900R SDS at www.forspec.com.au. The ACTFLEX 302 ADHESIVE SDS also applies.	—

* Typical Forspec R&D characteristic values on standard production material at 25°C and 50% relative humidity — not for engineering design without written confirmation from FORSPEC Technical Services.

Limitations

- Internal only — not suitable for external, below-grade or permanently UV-exposed applications. Use ACTFLEX 1300R for those situations.
- The membrane is adhesive applied. It is not mechanically fastened and not loose laid — ACTFLEX 302 ADHESIVE must be used to bond the sheet to the substrate across its whole area.
- Welding applies to the laps only. Never attempt to weld the sheet to the substrate, and never apply adhesive into a lap that will be welded — adhesive-contaminated laps cannot be heat-welded and must be cut out and re-detailed.
- ACTFLEX 302 ADHESIVE is for internal use only. ACTFLEX 301 ADHESIVE may be used as an approved alternative in well-ventilated areas only — it is solvent-based; refer to its TDS and SDS.
- If ACTFLEX EP250 has not fully cured before adhesive is applied, solvent-based adhesive will attack and damage the uncured epoxy film. Allow full cure.
- Substrates must be dry at the time of adhesive application. A contact adhesive will not develop bond to a damp surface.
- Remove all sharp protrusions, aggregate and debris that could puncture the membrane once bonded.
- Newly poured concrete must be cured a minimum of 28 days before membrane installation.
- Electric underfloor heating cables must be fully encapsulated in a FORSPEC screed or levelling compound beneath the membrane — cables must never sit directly against the membrane underside.
- Not a wearing surface. The membrane is always covered by tiles, screed or a comparable protective finish.
- Do not stretch the sheet during installation. A stretched sheet will recover and lift at laps and terminations.
- An unwelded, cold or contaminated lap is a defect in the waterproofing envelope — every seam must be probe-tested.
- Do not apply below 5°C or above 35°C ambient.
- Rapid-set or engineered screed products must not be laid directly onto the membrane unless FORSPEC Technical Services has confirmed compatibility.
- Movement joints and non-standard junctions must be detailed per FORSPEC guidance before covering.
- Not certified to AS/NZS 4020. Potable-water contact requires written confirmation from FORSPEC Technical Services.
- Installation is restricted to applicators holding current FORSPEC accreditation for this system.
- Before any cover is placed, the builder records the membrane on the site hazard register and briefs following trades — any penetration of the finished membrane voids the installation until repaired by an accredited applicator.

Approved Substrates

SUBSTRATE	REQUIREMENT
Concrete	Cured minimum 28 days. Structurally sound, clean and dry. Defects between 2 mm and 30 mm repaired with FORBUILD 100 or FORCRETE 100; spalling concrete treated with PROBOND 1100 or the appropriate FORSPEC concrete repair product.
Rendered masonry and blockwork	Sound, joints struck flush and made good.
Sand and cement screeds	Cured, sound and non-friable. Existing screeds primed with two coats of ACTFLEX EP250 before adhesive application.
Structural plywood	Fixed, rigid and dimensionally stable, installed to the relevant Australian Standard.

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Approved Substrates (continued)

SUBSTRATE	REQUIREMENT
Fibre cement sheet	Wet-area grade; fixed and jointed to the manufacturer's specification. For lightweight fibre cement sheet flooring, contact FORSPEC Technical Services for current fixing and jointing guidance.
Paper-faced plasterboard	Wet-area grade, fixed and set to the manufacturer's specification. Walls only.
Moisture-affected or curing concrete	Prime with two coats of ACTFLEX EP250 per its TDS, allowing the specified cure between coats, before adhesive application.
Non-standard substrates	Contact FORSPEC Technical Services before proceeding.

Surface Preparation

- **Substrate acceptance —** substrates must be structurally sound and installed to the relevant Australian Standard, and must be clean, dry and free of dust, laitance, curing compounds, oils, grease and surface sealers. Application constitutes acceptance of the substrate.
- **Curing —** newly poured concrete must be cured a minimum of 28 days prior to membrane installation.
- **Protrusions —** remove all sharp protrusions, aggregate and debris that could puncture the membrane once bonded.
- **Repairs —** reinstate damaged and spalled concrete with the FORSPEC concrete repair system — FORBUILD 100 or FORCRETE 100, or PROBOND 1100 for structural repairs — in accordance with the relevant product TDS.
- **Joint detailing —** treat movement joints, corner junctions and other joint details with ACTFLEX FLEXIPLUG before membrane installation.
- **Falls —** floor plane to the waste: minimum 1:80, maximum 1:50, in accordance with AS 3740:2021 and NCC Housing Provisions Part 10.2.12.
- **Upturn backing —** pack out all transition gaps so the full 150 mm floor upturn is solidly supported. The membrane must never bridge an unsupported gap.
- **Final clean —** vacuum clean immediately before priming or adhesive application. Dust is the most common cause of adhesive failure.

Checks before proceeding: substrate sound, dry and vacuumed; falls verified; defects reinstated and cured; joint detailing complete; upturn backing solid.

Priming

Priming is not required on sound, dry internal substrates — the membrane is bonded directly with ACTFLEX 302 ADHESIVE. Two coats of ACTFLEX EP250 are required in the two cases below.

- **Installation over an existing screed**
  Prime the cured screed with two coats of ACTFLEX EP250 in accordance with its TDS, allowing the specified cure time between coats. Once the second coat has fully cured, apply ACTFLEX 302 ADHESIVE to both the primed screed and the membrane underside, then bed and weld the sheet as normal.
- **Moisture-affected or curing concrete**
  Where substrate moisture exceeds 80% relative humidity (ASTM F2170) or 15 g/m²/24 h (ASTM F1869) tested to AS 1884 or AS 3740 — typically 4.5% or higher on a calibrated non-destructive meter, though Australian Standards testing takes precedence — prime with two coats of ACTFLEX EP250 in accordance with its TDS, allowing the specified cure time between coats, before adhesive application.

Where the approved solvent-based alternative ACTFLEX 301 ADHESIVE is used, the ACTFLEX EP250 must be fully cured before it is applied. Solvent attacks an uncured epoxy film and the damage is not recoverable — the primer must be removed and reinstated.

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Adhesive Application

ACTFLEX 302 ADHESIVE is a ready-to-use, single-pack, water-based contact adhesive engineered for bonding ACTFLEX 900R in internal wet areas. It suits structural concrete, rendered masonry, sand and cement screeds, structural plywood, fibre cement sheeting and paper-faced plasterboard. Dilution is prohibited. For any other substrate, confirm suitability with FORSPEC Technical Services before proceeding.

STAGE	REQUIREMENT	CHECK
Preparation	Stir the pail thoroughly before use. Do not dilute.	Adhesive uniform
Application	Roll or brush an even, continuous film onto both the substrate and the membrane underside at 8–10 m^2/L per coated face.	Both faces coated, no misses
Flash off	Allow both films to reach an even tack — touch-test with a knuckle: tacky, with no wet transfer. The flash-off window shortens with substrate warmth and air movement.	Tacky, no wet transfer
Lap zones	Do not apply adhesive into any area that will later be welded. Welded joints require clean, adhesive-free mating faces.	Lap zones masked and clean
Bedding	Mate the membrane progressively from one edge, working the sheet into full contact as it lands to exclude air. Never drop the sheet flat onto the adhesive.	No trapped air, no creases
Rolling	Consolidate the entire bonded area with a weighted or hand pressure roller.	Full-area contact achieved
Alternative adhesive	ACTFLEX 301 ADHESIVE (solvent-based) may be used where approved, in well-ventilated areas only — refer to its TDS and SDS before use.	Ventilation and ignition control in place

Contact adhesive bonds on contact and does not reposition. Position the sheet dry and confirm alignment before the coated faces are brought together.

Membrane Layout and Laps

- Plan the layout before the first roll is unwrapped. Sheet direction and lap positions determine both the weld run and the finished appearance.
- Dry-lay the floor sheet to confirm direction and fall lines relative to the floor waste, then plan the wall sheet run so laps fall clear of the shower rose, hob and fixtures.
- Relax rolls before bonding and welding. A sheet laid under tension will recover and stress the laps and terminations.
- Overlap adjoining sheets a minimum of 40 mm at both side laps and end laps.
- Stagger end laps between adjacent sheets — never align end laps across the run to create a cross joint.
- Set out so no lap falls in the fall line to the waste or in a ponding zone where practicable.
- Mark cut lines with chalk rather than cutting on the fly.
- Keep all lap zones clean, dry and free of adhesive. Fold back the lap and clean both mating faces immediately before welding.

Hot-Air Welding

The laps are hot-air welded to fuse the sheet into a continuous membrane. No open flame is used at any stage. The weld is the waterproofing at every joint — it is not a lap seal.

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Hot-Air Welding (continued)

STAGE	REQUIREMENT	CHECK
Equipment	Hand hot-air welder and silicone roller for field laps, detail work, corners and terminations.	Equipment serviced, nozzle clean
Trial weld	Carry out a trial weld on an offcut each day and again whenever conditions change, to establish temperature and speed for the prevailing ambient and humidity.	Trial weld peel-tested and recorded
Lap preparation	Fold back the lap and clean both mating faces. Both surfaces must be clean, dry and free of adhesive at the moment of welding.	No dust, moisture, oil or adhesive
Welding	Weld continuously along the lap, keeping even roller pressure directly behind the nozzle. Do not stop mid-run.	Continuous even weld
Cross-laps	Double back over T-junctions and cross-laps to ensure full fusion in every direction.	Full fusion at every intersection
Weld faults	A cold weld has not fused; an overheated weld has degraded the butyl rubber. Both are defects. Cut out and reinstate with a welded patch.	No cold or burnt seams accepted
Cooling	Allow each seam to cool before probing or applying load.	Seam cool before testing

Installation Sequence

ACTFLEX 900R installs as a fully bonded, welded system in a fixed sequence: floor sheet first, then detailing, then the walls.

1. Plan the layout. Dry-lay the floor sheet to confirm direction and fall lines relative to the waste, and plan wall coverage — sheet or liquid — so laps and junctions fall clear of the shower rose, hob and fixtures. Mark cut lines with chalk.
2. Install the floor sheet. Coat both mating surfaces with ACTFLEX 302 ADHESIVE, allow both to tack off, then mate the sheet progressively from one edge, working it into full contact to exclude air. The floor sheet extends up every wall a minimum of 150 mm above finished floor height over solid backing. Lay the sheet relaxed and without tension, and work it tightly into every junction with a hand roller.
3. Detail the installation. With the floor sheet in place, detail all corners, junctions, pipe penetrations and the floor waste per the Joints and detailing and Floor waste sections. Weld every detail piece to the field sheet and to its neighbouring detail pieces, and probe-test each weld before proceeding.
4. Waterproof the walls — Option A, ACTFLEX 900R wall sheets: bond wall sheets over tacked-off ACTFLEX 302 ADHESIVE, lapping a minimum of 40 mm over the floor upturn and heat-welding the lap. Run the wall membrane to at least 1800 mm above finished floor height, or a minimum of 50 mm above the shower rose — whichever is greater, per AS 3740. Terminate the top edge with the liquid system.
5. Waterproof the walls — Option B, FORSPEC liquid wall system: where wall sheets are not used, waterproof the walls with ACTFLEX 906 WPU or ACTFLEX 989 CWP, using ACTFLEX SA TAPE or ACTFLEX MS PRO at all corners and junctions, lapped down onto the sheet membrane floor system, and applied to the dry film thickness specified in the relevant liquid membrane TDS.
6. Weld and check every lap. Overlap a minimum of 40 mm at side and end laps, weld continuously, and probe the full length of every weld while it is still accessible — re-weld on the spot anywhere that lifts.
7. Final pass. Roll the full installation with a weighted or water-filled roller to bed the membrane into uniform, full contact with the substrate.
8. Flood test in accordance with the Flood testing section — from one hour after installation — before any tiling, screeding or covering.

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Joints and Detailing

Detailing follows the floor sheet. Once the field sheet is bonded, all internal and external corners, floor-to-wall junctions, pipe penetrations and the floor waste are detailed over it. Every detail piece is welded to the field sheet, and adjoining detail pieces are welded to each other — the completed detail work and field sheet form one continuous welded membrane. The membrane's elongation allows it to be dressed into corners without a fillet or bond breaker. Two methods are approved.

- **Method 1 — cut membrane strip (preferred for most details)**
  Cut a strip of ACTFLEX 900R approximately 200–300 mm wide, sized to suit the detail, and pre-form it to the shape of the corner, junction or penetration without stretching or thinning the fabric. Apply ACTFLEX 302 ADHESIVE to the contact surfaces, extending a minimum of 100 mm onto each adjoining plane, and allow it to tack off — tacky, with no wet transfer — then press the strip firmly into place, working out trapped air. Heat-weld the strip to the field sheet along every mating edge, and weld adjoining detail strips to each other at every corner and junction so no detail relies on adhesive alone. Probe-test every completed weld.
- **Method 2 — ACTFLEX SA TAPE (where welding access is restricted)**
  Prepare the surface per the ACTFLEX SA TAPE data sheet — clean, dry, sound and free of loose material. Peel the release liner, position the tape centrally over the junction, corner or penetration, and roll firmly with a pressure roller to bed the tape fully and expel trapped air. Overlap adjoining tape sections a minimum of 50 mm. Where the field sheet meets the tape, weld directly onto the tape's fleece face; where welding is not practical, bed the sheet edge onto tacked-off ACTFLEX 302 ADHESIVE.
- **Movement joints —** treat with ACTFLEX FLEXIPLUG before the membrane is installed, then run the membrane over the completed detail.
- **Upstands —** the floor sheet extends a minimum of 150 mm above finished floor height at every wall, over solid backing.
- **Complex junctions —** contact FORSPEC Technical Services before finalising detail work on complex or non-standard junctions.

Checks before proceeding: all details welded to the field sheet and to each other, all detail seams probed, no detail relying on adhesive alone.

Floor Waste and Penetration Detailing

Floor waste penetrations are finished using either a standard glued flange or a clamp-down flange, depending on the fitting installed.

- **Standard flange —** bond the membrane onto the flange with ACTFLEX 302 ADHESIVE, then heat-weld the sheet directly to the flange detail. Transition the joint between the welded edge and the flange body with ACTFLEX SA TAPE or ACTFLEX MS PRO, priming first with the suitable FORSPEC primer per the ACTFLEX MS PRO TDS.
- **Clamp-down flange —** cut the membrane to size and lay it into the clamping ring without gluing or welding to the flange body — the mechanical clamping ring compresses the membrane against the flange to form the seal. Confirm the clamping ring is fully seated and evenly tightened before proceeding.
- **Pipe penetrations and cut edges —** seal with ACTFLEX MS PRO, priming the surface first with the suitable FORSPEC primer per the ACTFLEX MS PRO TDS.

Liquid Transition and Membrane Termination

Sheet-to-liquid transitions use ACTFLEX SA TAPE across every junction, prepared by one of two approved methods. ACTFLEX 900R is internal-only — do not use it where the finished transition will be exposed to open-air UV; use ACTFLEX 1300R with ACTFLEX 101 UV for those applications.

- **Weld-through method —** prime above the upturn per the selected liquid membrane TDS. Centre the tape on the junction and heat-weld it directly to the fabric face — the fabric nap burns away along the weld line as intended. Roll to a smooth, void-free bond.
- **Fabric-strip method —** prime as above. Remove the fabric from the upturned section with the hot-air tool, bed the tape onto the exposed core and roll firmly.
- **Completion (both methods) —** flood-coat the selected liquid membrane — ACTFLEX 906 WPU or ACTFLEX 989 CWP — over the full tape width, lapping onto sound ACTFLEX 900R. Tape end joins overlap a minimum of 50 mm.
- **Edge termination — internal wet areas**
  All ACTFLEX 900R edge terminations in internal wet areas are liquid terminations: seal the sheet edge with ACTFLEX MS PRO (primed per its TDS) and encapsulate the termination with ACTFLEX 906 WPU, ACTFLEX 989 CWP or a FORSPEC-approved liquid membrane, in accordance with AS 3740. Mechanical terminations — pressure bars and reglets — are not part of the internal ACTFLEX 900R system.

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Liquid Transition and Membrane Termination (continued)

- **Sealing sheet edges and penetrations**
  ACTFLEX MS PRO is used wherever a cut or exposed membrane edge, or a rigid fitting, needs a flexible seal rather than a weld: cut or exposed sheet edges, pipe penetrations and puddle flanges, and where ACTFLEX SA TAPE meets a penetration or terminates at an exposed edge. Always prime these surfaces with the suitable FORSPEC primer before applying ACTFLEX MS PRO — refer to the ACTFLEX MS PRO TDS for the correct primer for the substrate.

Seam Inspection and Quality Control

- Probe every seam along its full length with a blunt seam probe once cool. The probe must not enter the seam at any point.
- Cut and peel-test trial weld samples at the start of each day and whenever conditions change.
- Visually inspect the full membrane area for cold welds, overheated welds, skips, fishmouths, wrinkles, punctures and mechanical damage.
- Sound the membrane for hollow and drummy areas indicating incomplete adhesive bond to the substrate.
- Cut out and reinstate any defective seam or damaged area with a welded patch, lapped and welded on all sides, and re-probe the repair.
- Confirm every termination, penetration, corner and upstand is welded and sealed, and that floor upturns and wall heights meet AS 3740.
- Record the inspection, the trial weld results and all repairs on the project quality records before flood testing.

Coverage and Yield

ITEM	VALUE	BASIS
Membrane gauge	0.9 mm	—
Roll size	1.4 m x 20 m x 0.9 mm	—
Roll gross area	28 m^2	1.4 m x 20 m
Effective coverage per roll	27.2 m^2	1.36 m effective width x 20 m, after the 40 mm welded side lap
Practical coverage per roll	Approximately 25–26 m^2	Allowing for end laps, upturns, details and wastage
ACTFLEX 302 ADHESIVE — coverage	8–10 m^2/L per coated face	Applied to both substrate and membrane underside
ACTFLEX 302 ADHESIVE — practical demand	Approximately 0.20–0.25 L per m^2 of membrane	2 coated faces ÷ 8–10 m^2/L

Adhesive demand governs ordering and is easily underestimated: the adhesive is applied to both the substrate and the membrane underside, so one square metre of membrane consumes two square metres of coated area. Confirm actual consumption on a trial area before ordering.

Quantity take-offs must allow for 150 mm floor upturns, wall sheets to 1800 mm, detail strips and approximately 10% wastage.

Drying, Curing and Testing Times

All times below are measured at 25°C and 50% RH. Low temperature, high humidity and poor ventilation extend every stage — verify on site before proceeding.

STAGE (AT 25°C, 50% RH)	TIME
ACTFLEX 302 ADHESIVE — flash off to tack	Touch-test both faces: tacky, with no wet transfer
ACTFLEX EP250 primer — cure before adhesive	Full cure per the ACTFLEX EP250 TDS. Do not proceed early.
Membrane consolidation	Immediately after mating — roller the full bonded area

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Drying, Curing and Testing Times (continued)

STAGE (AT 25°C, 50% RH)	TIME
Lap welding	Immediately after bonding, once lap faces are clean and dry
Seam cooling before probing	Until the seam is cool to the touch
Ready for tiling, screeding and flood testing	1 hour after installation
Flood test duration	24 hours
Ready for covering	After a successful flood test

The flash-off window shortens with substrate warmth and air movement. Allow cold rolls to reach ambient temperature before unrolling — a cold butyl rubber sheet is stiff and difficult to dress into corners.

Flood Testing

Flood test from one hour after installation, once all laps and details have been welded and probe-tested — and before any tiling, screeding or covering.

Plug all drains and outlets and install temporary barriers to contain the water. Flood to a minimum depth of 50 mm at the highest point of the membrane and retain the water for 24 hours, inspecting for leakage throughout. On completion, release the water, remove plugs and allow the surface to dry before covering. Rectify any defect by welded patch repair, re-probe the repair and re-test before proceeding. Conduct testing in accordance with the project specification and AS 3740:2021.

Tiling, Screeds and Finishes

- **Direct tiling**
  The upper nonwoven fabric face is a mechanical key and accepts tile adhesive directly — no primer, no abrasion and no separating layer is required. Fix tiles with ACTFLEX BIOSET or a compatible cement-based tile adhesive from one hour after installation, achieving full adhesive coverage in accordance with AS 3958:2023. Contact FORSPEC Technical Services to confirm a compatible tile adhesive for the specific tile and substrate combination.
- **Screed over ACTFLEX 900R**
  Screeding may commence 1 hour after installation once the membrane surface is sound, dry and clean. Bonded sand/cement screeds bond directly to the fabric face: use FORSPEC SCREEDX, FORCEM SCREED BINDER or ACTFLEX CRYSTAL BOND in accordance with the relevant product TDS for mix ratio, minimum thickness and application method. Unbonded screeds are a minimum of 40 mm at any point per AS 3958.1, reduced to 35 mm at the lowest point with FORSPEC SCREEDX, with thicknesses below 35 mm requiring written FORSPEC approval; reinforcing mesh is laid between screed layers, never directly on the membrane. Rapid-set or engineered screed products must not be laid directly onto the membrane unless FORSPEC Technical Services has confirmed compatibility. For epoxy-based screeds, refer to the specific epoxy screed TDS.
- **ACTFLEX 900R over an existing screed**
  Prime the cured screed with two coats of ACTFLEX EP250 in accordance with its TDS. Once the second coat has fully cured, apply ACTFLEX 302 ADHESIVE to both the primed screed and the membrane underside, then bed and weld the sheet as normal.
- **Liquid membrane finish**
  ACTFLEX 906 WPU or ACTFLEX 989 CWP may be applied directly over the upper fabric face without primer or further preparation, forming the hybrid wall and termination system described above.

Clean Up

Remove offcuts, packaging and swarf from the completed membrane as the work proceeds. Clean ACTFLEX 302 ADHESIVE from tools and equipment while still wet, using water. Clean ACTFLEX 301 ADHESIVE, primer and sealant residues while wet using the solvent nominated in the relevant product SDS, handled in accordance with the Work Health and Safety Regulations. Cured residues can only be removed mechanically.

contact.

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Clean Up (continued)

Clean welding equipment nozzles and rollers per the equipment manufacturer's instructions. Clean the finished membrane surface with clean water and a mild detergent; do not use solvent cleaners or abrasive pads on the fabric face, which will damage the key that the finish relies on.

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.

Container and Waste Disposal

Membrane offcuts, core tubes, release liners and packaging are inert and may be disposed of as general construction waste in accordance with local council requirements, or through construction and demolition recycling where accepted. Do not burn offcuts, packaging or residues.

Dispose of adhesive, primer and sealant containers and any liquid residues in accordance with the relevant product Safety Data Sheets, the WHS Regulations, the relevant State or Territory EPA requirements and local council regulations. Liquid residues must not go to landfill, 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.

- Batch numbers of all FORSPEC products used — membrane, adhesive, primer, sealants and tapes. Batch numbers are printed on the roll packaging and container and provide full manufacturing traceability.
- Substrate type, preparation method and substrate moisture readings with the test method used.
- Primer system applied, date and time primed, and date and time overcoated, where priming was required.
- Ambient and substrate temperature and relative humidity at each stage of installation.
- Adhesive batch numbers and coverage rate achieved.
- Membrane layout record showing sheet direction, lap positions and lap widths as installed.
- Corner, junction, penetration and floor waste details completed, and the method used for each.
- Trial weld records — date, ambient conditions, weld temperature and speed established, and peel-test result.
- Seam probe inspection records covering the full length of every seam, and details of every weld defect cut out and reinstated.
- Floor upturn heights and wall membrane heights as installed, against the AS 3740 requirement.
- Flood test date, duration, result and any rectification carried out and re-tested.
- Name and licence details of the applicator, and sign-off of each hold point.

Storage

Store rolls flat and horizontal in their original packaging, under cover in dry conditions between 5°C and 30°C, clear of sharp objects, site traffic, heat sources and direct sun. Do not stack pallets. Inspect every roll for punctures, crushing and edge damage before it goes to the floor.

Shelf life is a minimum of sixty (60) months from the date of manufacture in unopened original packaging under these conditions. Store ACTFLEX 302 ADHESIVE sealed and upright, protect it from freezing, and use within the period stated on the pail label. Store away from food, drink and animal feedstuffs, and stock rotate on a first-in, first-out basis.

Safety Precautions and First Aid

ACTFLEX 900R 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. The membrane itself is an inert factory-manufactured butyl rubber sheet and is not classified as hazardous to handle. The hazards of installation arise from the associated works: hot-air welding, cutting, manual handling, and the primers, sealants and adhesives used with the system.

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Safety Precautions and First Aid (continued)

Handling

Observe safe manual handling for rolls. Cutting the sheet requires sharp blades used away from the body, with cut-resistant gloves. Hot-air welding equipment operates at temperatures capable of causing severe burns — wear heat-resistant gloves and eye protection, keep the welding gun away from combustible materials, never direct the nozzle at any person, and allow welded areas to cool before contact. Provide adequate ventilation when welding in enclosed wet areas. ACTFLEX 302 ADHESIVE is water-based and low odour; where the approved solvent-based alternative ACTFLEX 301 ADHESIVE is used, read its Safety Data Sheet in full and observe its ventilation and ignition-source control requirements — solvent vapour is heavier than air and accumulates in enclosed wet areas. Primers and sealants are handled strictly in accordance with their own SDS. Wash hands thoroughly before breaks and after finishing work.

First aid

- **Burns from welding equipment or hot membrane —** cool the burn under running water for at least 20 minutes. Do not apply ice or ointments. Seek medical attention for any burn that blisters or is larger than a coin.
- **Eyes —** rinse cautiously with water for several minutes, holding the eyelids apart. Seek medical attention if irritation persists.
- **Skin contact with adhesive, primer or sealant —** remove contaminated clothing and wash the affected area thoroughly with soap and water. Do not use solvents on skin. Seek medical attention if irritation persists.
- **Inhaled —** remove the person to fresh air and keep at rest in a position comfortable for breathing. Seek immediate medical attention if drowsiness, dizziness or breathing difficulty occurs.
- **Swallowed —** do not induce vomiting. Rinse the mouth with water and seek immediate medical attention.
- **Cuts —** control bleeding, clean the wound and seek medical attention for any deep or contaminated cut.

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 900R will be free from manufacturing defects and will not fail under normal usage for a period of fifteen (15) years from the date of purchase, extending to twenty (20) years where the system is installed with the detailing and component specification nominated by Forspec for the project. The applicable period is determined by Forspec on assessment of the project and is stated in writing before works commence. In each case the product must be 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.

contact.

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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 02/10/2026 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)) 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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