ACTFLEX POLYFIN.



Technical Data Sheet | **Reinforced PVC Sheet Waterproofing Membrane — Mechanically Fastened, Hot-Air Welded, UV Exposed** | **Issue date: 25 August 2026**

Description

ACTFLEX POLYFIN is a PVC sheet waterproofing membrane supplied in two complementary types that form a single welded system. TYPE P is the scrim-reinforced field sheet, mechanically fastened and hot-air welded. TYPE H is the non-reinforced homogeneous sheet for walls, upstands, corners, penetrations and detailing — without a scrim it stretches and forms into complex geometry that a reinforced sheet cannot follow, and it welds to Type P as the same PVC.

Hot-air welding is what distinguishes the system from an adhered one. Heat softens the PVC on both mating faces and pressure fuses them into a single material, so the seam is the sheet rather than a bond line between two sheets — there is no adhesive to age, creep or debond, and a correctly made weld cannot fail at the interface because no interface remains. Because the field sheet is anchored mechanically rather than bonded, the system does not depend on adhesion to the substrate at all, and the reinforcing scrim in Type P carries the tensile and wind uplift load through the sheet into the fasteners.

Advantages

- Class II membrane certified to AS 4654.1-2012 under NATA-accredited testing (Type P).
- Two-type system — Type P reinforced for the field, Type H non-reinforced for walls, upstands and detailing, welded together as one PVC envelope.
- Outstanding certified UV durability — elongation after UV exposure measured 320% against a 57% pass requirement.
- Certified trafficable — suitable for pedestrian and occasional service vehicle traffic as the finished exposed surface.
- No cure period — the envelope is watertight the moment a seam is welded and proven, so following trades are not held waiting on a membrane to cure.
- Hot-air welded laps — heat-fused monolithic seams with no adhesive bond line to fail.
- Mechanically fastened and semi-loose laid — system integrity does not depend on adhesion to the substrate.
- Certified through water immersion, detergent immersion and heat ageing with no loss of extensibility.
- Certified dimensional stability — no change observed through two full humidity and temperature cycles.
- High certified puncture resistance and field seam strength.
- Low-temperature flexibility to −25°C without cracking.
- Root resistant, suiting planter boxes, green roofs and landscaped decks.
- Self-extinguishing PVC formulation.
- High plasticity for clean detailing around penetrations, corners and upstands.
- Seams are testable — every weld can be probe-tested and proven before handover.

Uses and Approved Basis

- Flat roofs, including fully exposed roofing systems.
- Podiums, structural decks and commercial balconies.
- Planter boxes, green roofs and landscaped decks.
- Basements and below-grade retaining structures.
- Tunnels, rail transit corridors and civil infrastructure.
- Water tanks, reservoirs and water-retaining structures.
- Swimming pools and water features.
- Grain storage and agricultural containment facilities.
- General civil, industrial and commercial waterproofing where long service life and dimensional stability govern.

Approved basis: complies with AS 4654.1-2012 as a Class II membrane for external above-ground use when designed and installed in accordance with AS 4654.2-2012, certified under NATA-accredited Report No. 608-1. Certified abrasion results qualify the membrane for pedestrian and occasional service vehicle traffic. Wind uplift design, fastener selection and fixing density are project-specific and are the responsibility of the project engineer. No AS/NZS 4020 certification is held — potable-water contact requires written confirmation from FORSPEC Technical Services.

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System Components

ACTFLEX POLYFIN is installed as a complete FORSPEC system. Approved system components:

- ACTFLEX POLYFIN TYPE H — the non-reinforced detailing membrane, used for walls, upstands, internal and external corners, penetrations, collars and cover strips, hot-air welded to Type P.
- FORSPEC Mechanical Fixing Bars — or approved corrosion-resistant screw and plate assemblies designed for reinforced PVC anchorage — for perimeter, edge, termination and penetration fixing.
- FORSPEC PVC-Coated Termination Strip — heat-welded to the membrane at the head of vertical upstands and mechanically fixed to the substrate.
- FORSPEC PVC Contact Adhesive or Primer — for stabilising the membrane on vertical surfaces and upstands prior to welding and mechanical termination.
- PREBAR PVC WATERSTOP — heat-weldable PVC waterstop profile, compatible with ACTFLEX POLYFIN for construction joint continuity in below-grade and water-retaining work.
- Hot-air welding equipment — Leister automatic welder or equivalent, with hand welder and silicone roller for detail work, plus a seam probe for testing.
- Concrete reinstatement — FORSPEC concrete repair system such as FORBUILD 100 or FORCRETE 100.
- Protection — FORSPEC-approved drainage cell and filter fabric, or protection board, in landscaped, ballasted and below-fill areas.

ACTFLEX POLYFIN is a plasticised PVC membrane and is not compatible with bituminous products, polystyrene insulation, or solvent-based coatings and sealants unless a separation layer is installed. 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	RESULT	EVIDENCE
AS 4654.1-2012	Waterproofing membranes for external above-ground use — Part 1: Materials	CLASS II — all durability criteria: pass	Report No. 608-1 — NATA-accredited to ISO/IEC 17025
AS 4654.2-2012	Waterproofing membranes for external above-ground use — Part 2: Design and installation	Systems to be designed and installed in accordance with this standard (NCC Deemed-to-Satisfy)	—
AS 1580.403.2 — abrasion, non-trafficable	Depth of abrasion, CS-10 wheel, 500 cycles	0.016 mm — meets the requirement for a non-trafficable membrane (limit 0.2 mm)	Report No. 608-1, per AS 4654.1 Paragraph 2.3.1
AS 1580.403.2 — abrasion, trafficable	Depth of abrasion, H-22 wheel, 1000 cycles	0.077 mm — meets the requirement for pedestrian traffic (limit 0.2 mm) and occasional service vehicle traffic (limit 0.1 mm)	Report No. 608-1, per AS 4654.1 Paragraph 2.3.2
ASTM D6207	Dimensional stability to changes in humidity and temperature	No changes observed over two full cycles	Report No. 608-1
BS EN 12691	Puncture resistance, Method A	1000 mm drop height without leakage	Report No. 608-1
Root penetration resistance	Resistance to root penetration	Resistant — meets standard test criteria	Manufacturer test data *
Fire behaviour	Reaction to fire	Self-extinguishing PVC formulation. No Australian fire classification currently held.	Manufacturer test data *

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Standards Compliance (continued)

STANDARD	TITLE	RESULT	EVIDENCE
AS/NZS 4020	Products in contact with drinking water	No certification currently held. Potable-water contact requires written FORSPEC confirmation.	—
VOC content	Volatile organic compound content	Not applicable — factory-manufactured sheet membrane.	—

National Construction Code: for external above-ground waterproofing — flat roofs, terraces, balconies and podiums above internal spaces — AS 4654.1 and AS 4654.2 apply under NCC Volume One Part F1 and NCC Volume Two Clause H2D8. The designer is responsible for confirming the compliance pathway applicable to the project.

Approved Substrates

ACTFLEX POLYFIN is mechanically fastened and semi-loose laid and does not rely on adhesion to the substrate. Concrete must be fully cured, dimensionally stable and structurally sound. Residual construction moisture in a cured slab is tolerated because there is no bond line to break — this is a tolerance, not a licence to waterproof over a wet, green or uncured slab.

SUBSTRATE	REQUIREMENT
Concrete	Fully cured, dimensionally stable and structurally sound. Residual construction moisture tolerated; free water, green or uncured slabs are not. Concrete Surface Profile 2–4 per ICRI. Smooth, firm and free of laitance and weak material.
Cement render and screed	Fully cured, sound, firm and non-friable.
Structural steel decking	Fixed and stable, with fastener pull-out capacity verified by the project engineer.
Timber and plywood decking	Structurally fixed, dimensionally stable, with fastener pull-out capacity verified.
Insulation boards	Compatible board types only. Polystyrene requires a separation layer — PVC plasticiser migration will attack it.
Existing membranes	Only where mechanically fastened over a separation layer, and only with written FORSPEC approval. Never welded or adhered to bituminous material.
Substrates with inadequate fastener capacity	NOT APPROVED. Mechanical anchorage is the sole means of restraint.

Where FORSPEC PVC Contact Adhesive or Primer is used at vertical transitions, that area must be dry at the time of bonding. The moisture tolerance applies to the mechanically fastened field only, never to adhered details.

Technical Data

PROPERTY	VALUE	BASIS
Product types	TYPE P — scrim-reinforced field sheet. TYPE H — non-reinforced homogeneous sheet for walls, upstands and detailing.	—
Installation method	Mechanically fastened, semi-loose laid, hot-air welded laps	—
Roll size — Type P	2 m × 20 m — 40 m² gross per roll	—
Roll size — Type H	To be confirmed §	—
Thickness — Type P	1.5 mm and 2.0 mm †	—

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Technical Data (continued)

PROPERTY	VALUE	BASIS
Thickness — Type H	To be confirmed §	—
Membrane classification — Type P	CLASS II (medium extensibility)	AS 4654.1 — Report 608-1
Membrane classification — Type H	No classification currently held — detailing membrane, not a field membrane	—
Control elongation at break	141%	AS 1145.3 — Report 608-1
Control tensile strength	12.85 MPa	AS 1145.3 — Report 608-1
Abrasion resistance — non-trafficable	0.016 mm depth of abrasion (CS-10 wheel, 500 cycles)	AS 1580.403.2 — Report 608-1
Abrasion resistance — trafficable	0.077 mm depth of abrasion (H-22 wheel, 1000 cycles) — pedestrian and occasional service vehicle traffic	AS 1580.403.2 — Report 608-1
Dimensional stability	No changes observed	ASTM D6207 — Report 608-1
Field seam strength	383.71 N/25 mm — failure at the lap joint in all specimens	AMTM005 — Report 608-1
Puncture resistance	1000 mm drop height without leakage (Method A)	BS EN 12691 — Report 608-1
Temperature resistance	0.52 g/m²/24 h after cycling from −17.8°C to 85°C	AMTM004 — Report 608-1
Water vapour transmission	0.65 g/m²/24 h	ASTM E96 desiccant method — Report 608-1
Low-temperature flexibility	−25°C, no cracking	Manufacturer test data *
Root penetration resistance	Resistant — meets standard test criteria	Manufacturer test data *
Fire behaviour	Self-extinguishing PVC formulation	Manufacturer test data *
Design service life (exposed system)	20 years, indicative ‡	Manufacturer indicative figure *
Substrate condition at installation	Fully cured and structurally sound. Residual construction moisture tolerated; free water, green or uncured substrates are not.	—
Minimum substrate fall	1% (1:100), draining positively to outlets	—
Weld temperature and speed	Established by trial weld on the day, for the prevailing conditions	—
Storage	Rolls stored upright, on end, under cover	—
SDS	Chemwatch 9041-05 (Type P) and 9041-04 (Type H) — refer to the current Safety Data Sheets at www.forspec.com.au	—

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Technical Data (continued)

Certified durability test results — Report 608-1, AS 4654.1 Appendix A

CONDITION	ELONGATION AT BREAK	TENSILE STRENGTH	PASS REQUIREMENT	ASSESSMENT
Control (AS 1145.3)	141%	12.85 MPa	60–299% for Class II	CLASS II
Water immersion (56 days)	168%	14.85 MPa	≥ 36% (25% of control)	PASS
Detergent immersion (56 days)	130%	15.36 MPa	≥ 36% (25% of control)	PASS
Heat ageing	135%	13.08 MPa	≥ 71% (50% of control)	PASS
Ultraviolet exposure	320%	10.88 MPa	≥ 57% (40% of control)	PASS

Elongation at break after ultraviolet exposure measured 320% against a control of 141% and a pass requirement of 57% — the membrane retains and exceeds its extensibility through UV exposure rather than embrittling.

† Certified results in Report 608-1 were determined on 1.5 mm Type P specimens. The 1.5 mm and 2.0 mm Type P products share the same formulation and the results are applied to both thicknesses.

§ All certified results in Report 608-1 were determined on the reinforced product and apply to ACTFLEX POLYFIN TYPE P. ACTFLEX POLYFIN TYPE H is a non-reinforced detailing membrane, is not a field membrane, and carries no classification. Roll size and thickness for Type H are to be established and inserted. Refer to the Change Register.

‡ The 20-year figure is an indicative design service life for an exposed system, not a warranted period and not an accredited durability result. The FORSPEC Standard Product and Performance Warranty period is ten (10) years and is stated in the Warranty section of this document.

Values citing Report 608-1 are certified results from NATA-accredited testing to ISO/IEC 17025. * Typical characteristic values determined by Forspec R&D on standard production material at 25°C and 50% relative humidity — not to be relied upon for engineering design without written confirmation from FORSPEC Technical Services.

Limitations

- Mechanical anchorage is the sole means of restraint. Substrates that cannot develop the required fastener pull-out capacity are not approved. Fastener selection, fixing density and pattern are project-specific and must be designed by the project engineer for the wind uplift condition.
- Not compatible with bituminous products. Never weld, adhere or lay ACTFLEX POLYFIN in direct contact with bitumen, asphalt or torch-on membranes without an approved separation layer.
- Not compatible with polystyrene insulation. PVC plasticiser migration attacks polystyrene — a separation layer is mandatory.
- Not compatible with solvent-based coatings and sealants in direct contact.
- Welding is the system. An incomplete, cold, burnt or contaminated weld is a defect in the waterproofing envelope — every seam must be probe-tested.
- Weld parameters vary with ambient temperature, wind and humidity. A trial weld must be carried out on the day, in the prevailing conditions, before production welding begins.
- Laps must be clean and dry at the moment of welding. Dust, moisture, oil and release agents prevent fusion.
- The membrane must not be trafficked by sharp footwear, dropped tools, scaffold feet or plant. Provide temporary protection to all working routes.
- Certified for pedestrian and occasional service vehicle traffic only. Regular vehicle traffic requires a depth of abrasion below 0.05 mm and is NOT approved — provide a separate trafficable wearing surface.
- Substrate falls must be a minimum of 1% (1:100) with positive drainage. Ponding is not a design condition.
- Where FORSPEC PVC Contact Adhesive or Primer is used at vertical transitions, that area must be dry at the time of bonding. The moisture tolerance applies to the mechanically fastened field only, never to adhered details.
- Do not lay over free water, ponded water, green or uncured concrete. The membrane tolerates residual construction moisture in a cured slab; it does not waterproof a wet substrate.
- No AS/NZS 4020 certification is held. Potable-water contact requires written confirmation from FORSPEC Technical Services.
- Installation constitutes acceptance of the substrate. Verify and accept the substrate before any membrane is laid.

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Substrate Preparation

The applicator must verify and accept the substrate before work begins. Installation of ACTFLEX POLYFIN indicates full acceptance of the substrate conditions.

- Surface condition — surfaces must be smooth, firm and free from laitance, weak material, oils, curing agents, dust, ice, snow and any contaminant that may impair welding or the adhesion of ancillary components.
- Concrete condition — fully cured, dimensionally stable and structurally sound, presenting a Concrete Surface Profile between 2 and 4 in accordance with ICRI guidelines. No free water on the surface at the time of laying.
- Falls and drainage — the substrate must fall to a minimum gradient of 1% (1:100), draining positively to outlets with no ponding. Verify falls before any membrane is laid.
- Protrusions — remove fins, high points and sharp protrusions that could puncture the membrane. Fill blowholes, honeycombing and surface defects flush.
- Repairs — reinstate spalled and defective concrete with the FORSPEC concrete repair system, such as FORBUILD 100 or FORCRETE 100, and allow to cure.
- Fastener capacity — confirm the substrate will develop the pull-out capacity assumed in the wind uplift design. Carry out pull-out testing where the substrate condition is uncertain.
- Separation layers — install where the membrane will contact bituminous material, polystyrene insulation or any incompatible surface.
- Trial weld and adhesion test — carry out a weld and adhesion test to verify compatibility and confirm fusion parameters before production work commences.
- Final clean — remove all dust and debris from the substrate and from every lap zone immediately before laying.

Membrane Layout and Laps

Plan the layout before the first roll is unwrapped. Sheet direction, lap positions and fixing lines determine both the weld run and the uplift performance of the finished system.

- Lay sheets to run with the fall wherever practicable, so laps shed water rather than dam it.
- Position sheets to extend up all adjoining parapets and vertical transitions, maintaining full continuity of the waterproofing envelope. Never terminate the field membrane at the base of an upstand.
- Relax rolls before fixing and welding. Sheet laid under tension will shrink back and stress the welds and terminations.
- Set out laps so no lap falls in a valley, gutter sole or ponding zone where practicable.
- Stagger end-laps between adjacent sheets — never align end-laps across the run to create a cross joint.
- Keep all lap zones clean and dry. Fold back the lap and clean both mating faces immediately before welding.
- Where PREBAR PVC WATERSTOP is installed at a construction joint, weld the membrane to the waterstop profile as a continuous detail per its TDS.

Mechanical Fixing and Terminations

ACTFLEX POLYFIN is anchored mechanically around the entire perimeter — all edges, terminations, penetrations and structural projections — using FORSPEC Mechanical Fixing Bars or approved corrosion-resistant screw and plate assemblies designed for reinforced PVC anchorage.

- Use only corrosion-resistant fasteners and plates rated for the exposure. Fastener corrosion is the most common long-term failure of a mechanically fastened system.
- Fix in accordance with the wind uplift design prepared by the project engineer. Fixing density is increased at perimeters and corners, where uplift pressures are highest.
- Fasteners must penetrate the structural substrate to the embedment depth assumed in the design and develop the specified pull-out capacity.
- Do not over-tighten. An over-driven plate dishes the membrane and concentrates stress at the fastener.
- Overweld every fixing bar and plate with a PVC cover strip so no fastener penetration is left exposed within the waterproofing envelope.
- At the head of vertical upstands, heat-weld ACTFLEX POLYFIN to a FORSPEC PVC-Coated Termination Strip, then mechanically fix the strip to the substrate to provide a durable termination point.
- Terminate into a reglet, under a capping or flashing, or to a sealed mechanically fixed edge. Never leave a free edge exposed.

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Hot-Air Welding

All side-laps and end-laps are fused by hot-air welding to achieve a monolithic seam with full fusion and no voids. The weld is the waterproofing — it is not a lap seal.

STAGE	REQUIREMENT	CHECK
Equipment	Leister automatic welder or equivalent for production seams. Hand welder and silicone roller for detail work, corners and terminations.	Equipment serviced, nozzle clean
Trial weld	Carry out a trial weld each day and again whenever conditions change, to establish temperature and speed for the prevailing ambient, wind and humidity.	Trial weld peel-tested and recorded
Lap preparation	Fold back the lap and clean both mating faces. Both surfaces must be clean and dry at the moment of welding.	No dust, moisture, oil or release agent
Production welding	Run the automatic welder at the established parameters, maintaining constant speed and nozzle position. Do not stop mid-run.	Continuous even weld bead
Detail welding	Hand weld all corners, terminations, penetrations and any seam the automatic welder cannot reach, consolidating with a silicone roller.	Full fusion, no voids
Weld faults	A cold weld has not fused; a burnt weld has degraded the PVC. 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

Vertical Surfaces and Upstands

Walls, upstands and vertical transitions are formed in ACTFLEX POLYFIN TYPE H. Without a reinforcing scrim, Type H stretches and dresses into internal angles, external corners and complex geometry that the reinforced field sheet cannot follow without bridging or pleating, and it hot-air welds to Type P as the same PVC. FORSPEC PVC Contact Adhesive or Primer is used to stabilise the membrane on the vertical face and ensure a uniform bond during welding and mechanical termination.

- The vertical substrate must be dry at the time of bonding. The moisture tolerance applies to the mechanically fastened field only, never to adhered vertical work.
- Apply FORSPEC PVC Contact Adhesive or Primer per its TDS, achieving even coverage without pooling.
- Dress Type H into the internal angle without bridging. A bridged corner is unsupported and will be stressed by movement and traffic — this is precisely why the non-reinforced sheet is used here.
- Weld Type H to the Type P field sheet with a continuous hot-air weld at the transition, and probe-test the seam as for any field lap.
- Carry the membrane to the full height of the designed termination, and never terminate below the design water line at gutters, tanks and sumps.
- Heat-weld the head of the upstand to a FORSPEC PVC-Coated Termination Strip and mechanically fix the strip to the substrate.
- Weld prefabricated internal and external corner pieces, or hand-weld formed corners, at every change of plane. Corners are the highest-risk detail on a welded system.
- Complete all upstand and termination work before the roof or deck is handed to following trades.

Detailing and Penetrations

- Form every detail in ACTFLEX POLYFIN TYPE H — collars, flashings, corner pieces and cover strips — welded to the Type P field sheet.
- Weld a prefabricated PVC collar, or a Type H hand-formed and welded flashing, to every service penetration and dress it to the penetration with a mechanical clamp or sealed termination.
- Weld PVC-coated metal flanges into outlets, rainheads and sumps, and dress the membrane down into the outlet body so water enters the drain and not the lap.
- Weld prefabricated internal and external corner pieces, or Type H hand-formed corners, at all changes of plane.

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Detailing and Penetrations (continued)

- Detail movement and expansion joints with a welded expansion loop that allows the designed movement. Never weld the membrane flat across a movement joint.
- Weld to PREBAR PVC WATERSTOP at construction joints in below-grade and water-retaining work, forming a continuous detail per its TDS.
- Overweld all mechanical fixing bars and plates with a Type H PVC cover strip.
- Hand-weld and consolidate with a silicone roller at every detail, then probe-test the completed seam.

Seam Inspection and Quality Control

Every seam is inspected and proven before the system is handed over. A welded membrane is only as good as its worst weld, and a defective seam is invisible until it leaks.

- 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. A correct weld fails in the sheet, not at the seam.
- Visually inspect the full membrane area for cold welds, burnt welds, skips, fishmouths, wrinkles, punctures and mechanical damage.
- 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 fixing bar and plate is overwelded and no fastener penetration is left exposed.
- Confirm every termination, outlet, penetration and corner is welded and mechanically secured.
- Record the inspection, the trial weld results and all repairs on the project quality records before flood testing.

Coverage and Yield

MEASURE	VALUE	BASIS
Roll size	2 m × 20 m	—
Gross area per roll	40 m^2	2 m × 20 m
Effective width at 50 mm side lap	1.95 m	2.00 m − 0.05 m
Effective area per roll at 50 mm side lap	39.0 m^2	1.95 m × 20 m
Effective width at 100 mm side lap	1.90 m	2.00 m − 0.10 m
Effective area per roll at 100 mm side lap	38.0 m^2	1.90 m × 20 m
Rolls per 100 m^2 at 50 mm lap	Approx. 2.6	100 m^2 ÷ 39.0 m^2
Rolls per 100 m^2 at 100 mm lap	Approx. 2.7	100 m^2 ÷ 38.0 m^2

Effective area accounts for side laps only. End laps, upstands, corner cut-offs, detail work, prefabricated corners, cover strips over fixing bars and cutting waste all consume additional material. Allow a minimum of 10% over the effective area for a simple rectangular roof, and substantially more on cut-up areas with numerous penetrations, upstands and changes of plane.

Confirm the lap width required by the project specification and the wind uplift design before calculating quantities — lap width is a design input, not an installer preference.

Flood Testing

Flood test after all welding, detailing, termination and seam probing is complete and every defect has been rectified, and before any protection, ballast, insulation, planting or overlay is placed.

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 the underside, perimeter and any adjacent occupied space for leakage throughout. On completion, release the water, remove plugs and allow the surface to dry before covering.

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Flood Testing (continued)

Where the area cannot be flooded — a fall too steep to hold water, a vertical face, or a gutter with open drainage — test by controlled hose flooding at the design flow for a minimum of 30 minutes at each detail, working from the lowest point upwards with the underside under observation. 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 4654.2.

In water-retaining structures, complete the flood test, then fill slowly and progressively rather than in a single charge, inspecting the structure during and after first filling.

Protection and Finishes

ACTFLEX POLYFIN is UV stable and may be left permanently exposed as the finished waterproofing surface, with no topcoat, protection layer or ballast required.

- Exposed roofs and decks — no covering is required. Provide dedicated walkway protection to all plant, access and maintenance routes; the membrane is not a wearing surface.
- Landscaped decks, planter boxes and green roofs — cover the membrane with a FORSPEC-approved drainage cell and filter fabric, or protection board, before placing growing medium, fill or ballast. Never place these materials directly on the membrane.
- Below-grade and backfilled areas — install a protection layer before backfilling. Never backfill directly against the membrane.
- Pavers and pedestal systems — install load-spreading pads beneath every pedestal base. Never place or drag pedestal bases directly on the membrane.
- Following trades — protect the completed membrane from all traffic, dropped tools, scaffold feet, plant and hot works until handover. Damage caused by following trades is the most common cause of failure on a completed welded system.
- Maintenance — inspect annually and after severe weather. Clear outlets, gutters and rainheads of debris. Inspect all seams, terminations, upstands and fixings for damage or movement.

Clean Up

Remove offcuts, packaging and swarf from the completed membrane immediately — metal swarf from fastener drilling will rust and puncture the sheet, and is the most common cause of pinhole leaks on a mechanically fastened roof. Sweep and vacuum the finished surface clear of all debris before flood testing.

Clean the membrane surface with clean water and a mild detergent. Do not use solvent cleaners, aggressive chemicals or abrasive pads on the sheet — solvent attack of plasticised PVC is irreversible. Clean welding equipment nozzles and rollers per the equipment manufacturer's instructions.

Do not allow wash water, adhesive residue or solvent from ancillary products to enter drains, 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 and packaging are inert and may be disposed of as construction waste, or recycled through an approved PVC recycling stream where one is available locally. Do not burn PVC offcuts or packaging under any circumstances — combustion of PVC produces hydrogen chloride and other toxic products.

Dispose of adhesive containers, primer containers, solvent residues and contaminated rags in accordance with those products' Safety Data Sheets, the WHS Regulations, the relevant State or Territory EPA requirements and local council regulations. Solvent-contaminated rags present a fire risk and must be stored in a sealed metal container pending disposal. 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 and roll numbers of all ACTFLEX POLYFIN installed, and of all ancillary FORSPEC components used. Batch numbers provide full manufacturing traceability.
- Substrate type, preparation method, Concrete Surface Profile achieved, and photographic evidence of the accepted substrate.
- Substrate falls verified before laying, and confirmation of positive drainage to outlets.
- Fastener type, plate type, embedment depth, fixing pattern and density, and the wind uplift design reference they were installed to.
- Pull-out test results where fastener capacity was verified on site.
- Trial weld records — date, ambient temperature, wind condition, weld temperature and speed established, and peel-test result.
- Membrane layout drawing showing sheet direction, lap positions and fixing lines as installed.
- Seam probe inspection records covering the full length of every seam, and details of every weld defect cut out and reinstated.
- Detail register — every penetration, outlet, corner, termination and movement joint, with confirmation of welding and mechanical fixing.
- Flood test date, method, duration, result and any rectification carried out and re-tested.
- Name and licence details of the applicator, welder competency records, and sign-off of each hold point.

Storage

Store rolls upright on end, on a clean flat surface, under cover and protected from direct sunlight, rain and mechanical damage. Do not stack rolls horizontally — a roll stored on its side will flatten and take a permanent set that cannot be relaxed out on the roof.

Keep rolls in their original packaging until required, clear of the ground and away from solvents, bituminous products, oils and any source of heat or ignition. Do not stack pallets. Protect rolls from freezing conditions; allow cold rolls to reach ambient temperature before unrolling, as plasticised PVC is stiff and prone to cracking when handled cold.

Store away from food, drink and animal feedstuffs, and stock rotate on a first-in, first-out basis.

Safety Precautions and First Aid

ACTFLEX POLYFIN 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. ACTFLEX POLYFIN is classified as a HAZARDOUS CHEMICAL and NON-DANGEROUS GOODS under the WHS Regulations and the ADG Code, signal word DANGER — it causes skin irritation (H315), causes serious eye damage (H318) and may cause respiratory irritation (H335), with a body contact hazard rating of High. Read the Safety Data Sheet in full before use: Chemwatch 9041-05 for Type P and 9041-04 for Type H. The additional hazards of this system are hot-air welding, working at height, and the ancillary adhesives and primers used at vertical transitions.

Handling

Wear protective gloves, protective clothing, eye protection and face protection when handling and cutting the membrane, and wash all exposed skin thoroughly after handling. Cutting and grinding generate dust and fume — avoid breathing dust and fume, and use only outdoors or in a well-ventilated area. Hot-air welding equipment operates at temperatures capable of causing severe burns and igniting combustible material — wear heat-resistant gloves, never direct the nozzle at any person, and keep the hot nozzle clear of the membrane and packaging when not welding. Overheated or burning PVC releases hydrogen chloride and other toxic decomposition products: never burn offcuts, ventilate enclosed areas, and stop work and withdraw if visible fume is produced. Welding on a roof is hot work — comply with the site hot work permit system and keep an extinguisher at the work face. Roof and deck work requires fall protection and edge protection in accordance with the WHS Regulations. Cutting the sheet requires sharp blades used away from the body, with cut-resistant gloves. The membrane surface becomes slippery when wet. Observe the Safety Data Sheet of FORSPEC PVC Contact Adhesive or Primer and any solvent used, including ventilation, ignition-source control and respiratory protection.

First aid

contact.

(02) 8021 3517 info@forspec.com.au 22/872 Canterbury Road, Roselands 2196 NSW (Head Office) www.forspec.com.au

Safety Precautions and First Aid (continued)

- 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.
- Inhalation of PVC decomposition fume — remove the person to fresh air immediately and keep at rest in a position comfortable for breathing. Seek medical attention without delay; effects of hydrogen chloride inhalation can be delayed.
- Cuts — control bleeding, clean the wound and seek medical attention for any deep or contaminated cut.
- Eyes — rinse cautiously with water for several minutes, holding the eyelids apart. Seek medical attention if irritation persists.
- Skin contact with adhesives or primers — 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.

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 POLYFIN 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.

contact.
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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.

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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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