ACTFLEX 906 WPU.

Technical Data Sheet Water-Based Polyurethane Membrane 10/09/2024

Description

ACTFLEX 906 WPU is a Class III, water-based, high performance single-component polyurethane-modified waterproofing membrane designed for internal and external applications under tiles or screed. It offers high flexibility, excellent build properties, and superior weather resistance while being solvent-free, low VOC, and classified as non-hazardous. Engineered for strong adhesion and long-term durability, it complies with AS3740:2021 and meets the performance requirements of AS/NZS 4858 and AS4654.1:2012, ensuring reliable waterproofing in various conditions.

Packaging (Weight)	Colour	Roller Or Brush Grade
15.0 L	Grey	

Standards Compliance

- Meets the requirements of AS3470:2021 (Waterproofing areas within a Domestic building) by complying with AS/NZ 4858 (Wet Area Membranes as a Class III membrane)
- Tested by a NATA-accredited laboratory for Class III membrane compliance.
- Meets requirements of AS4654.1 – "Waterproofing membranes for external above-ground use"
- Low VOC – Meets Green Building Council of Australia Green star requirements IEQ-13-11
- Classified as Non-Hazardous and Non-Flammable.

ACTFLEX 906 WPU is suitable for the following applications:

- Internal wet areas
- External wet areas
- Under tile waterproofing
- Concrete surfaces
- Facades and parapet walls
- Podiums
- On rendered surfaces
- Can be used of exposed roof area (must apply UV TOPCOAT) such as ACTFLEX ATC OR ACTFLEX ULTRA FC

ACTFLEX 906 WPU Advantages

- Tough, durable and highly flexible
- Excellent resistance to embrittlement.
- Suitable to use in confined spaces.
- Weather resistant
- Excellent adhesion to primed surfaces
- Paintable with conventional acrylic paint
- Will not stain grout or tiles.
- Does not re-emulsify after proper curing.
- Excellent build properties enable application to both horizontal & vertical surfaces.
- Compatible bonding properties for most tile adhesives, screeds and renders.
- Can be rendered with polymer render and standard render (with bonding additive).
- Formulated for wet areas and under tile applications.
- Once cured will accept light foot traffic.

ACTFLEX 906 WPU – Where It Can Be Used

- Concrete - Cured for min. 28 days and left with a wood trowel finish.
- Renders and Screeds - Cured for min. 7 days and left with a wood trowel finish.
- Fibre Cement Sheets - Walls (min. 6mm) Wet area grade only.
- Compressed Fibre Cement (min. 15mm) Wet area grade only.
- Brickwork, Block work, masonry, asbestos, sycon, cement, timber, metal and PVC surfaces.
- We do **not** recommend applications of **ACTFLEX 906 WPU** be applied on particle board, platform floor sheeting, yellow tongue or chipboard as they are not a suitable substrate for wet areas. This should be replaced with Wet Grade CFC sheeting.

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ACTFLEX 906 WPU Properties

Form	Single-Component Viscous Liquid	**ASTM E96 Moisture Vapour Transmission**	Pass
Membrane Classification	Class III	**Recoat time at 25°C 50% R.H.**	6 Hours
Colour	Grey	**Tack free time at 25°C 50% R.H.**	6 Hours
Solids Content	73% (+/- 2%)	**Full cure time at 25°C 50% R.H.**	3 Days
Elongation at break	500%	**Application Temperature**	10-26°C
No Fatigue cracking	Pass	**Flammability**	Non-Flammable
Tensile Strength	4.2mPa	**Shore Hardness A**	50-60A

Preparation

- Ensure surfaces are installed per manufacturer instructions and Australian Standards and are structurally sound.
- Surface must be clean, dry, smooth, and free of contaminants such as oils, grease, wax, mould, dust, curing compounds, release agents, coatings, adhesives, loose particles, rust, paint, and efflorescence.
- Damaged concrete (2mm–30mm) can be treated with **ACTFLEX POLYCRETE**.
- Spalling concrete must be repaired using the **FORSPEC Epoxy Range** (refer to product data sheets).
- Remove high points or protrusions that could pierce the membrane.
- Fill blowholes and surface imperfections with a high-strength, non-shrink mortar.
- Ensure all applied surfaces, including screeds, are solid and not crumbly.
- If skinning occurs in the pail, cut and remove before mixing.
- Mix well before use with an electric drill and low-speed mixer attachment.
- Internal wet areas: Minimum fall of 1:80 (12.5mm per 1m).
- External areas (balconies, rooftops): Minimum fall of 1:100 (10mm per 1m).

Crack Preparation

Surface Cleaning:

- Remove all loose debris, dirt, dust, curing compounds, oils, grease, surface sealers, existing coatings, and any other contaminants from the crack area. Allow any pre-treated cracks to fully cure before applying FORSPEC materials.

Static Cracks < 2.0mm (Using FORSPEC SA Tape):

- Apply a suitable FORSPEC primer 200mm across and along the crack.
- Once the primer has dried, centrally place **FORSPEC SA Tape** over the prepared crack.
- Use the **FORSPEC Brass Roller** and **FORSPEC Small Hand Roller** to ensure uniform adhesion to the substrate and remove any air bubbles or wrinkles.
- Apply two coats of **ACTFLEX 906 WPU** to encapsulate the tape, ensuring the overlap of tape sections is at least 50mm.

Static Cracks > 2.0mm (Using ACTFLEX MS PRO):

- Grind out the crack to a minimum width of 6mm and depth of 6mm.
- Use ACTFLEX MS PRO joint sealant in the reglet that has been chased out
- Tool the sealant flush with the surface, then cover with a suitable bond breaker tape.
- Apply two coats of **ACTFLEX 906 WPU** once the sealant has dried for at least 1-2 hours.
- For cracks requiring enhanced shear strength and durability, consider additional crack rectification methods:
  - **PROBOND 1100PS**
  - **PROBOND 1100**
  - **CRACK PRO 1200PS**
  - **CRACK LOCK E400L**

Follow the product data sheets for each method, available at www.forspec.com.au.

Priming

- **Surface Preparation:** Must follow the preparation list in this TDS.
- **Primer Selection:** Choose the appropriate FORSPEC primer based on the substrate condition:
  - **ACTFLEX EP 250**
  - **ACTFLEX 600 PRIMER**
  - **ACTFLEX 500 NP PRIMER**
  - **ACTFLEX 300**
  - If moisture content exceeds 80% relative humidity (ASTM F2170) or 15g/m²/24hrs (ASTM F1869), apply a minimum of two coats of ACTFLEX EP 250.
  - A digital non-destructive moisture meter reading of 5% or greater typically indicates high moisture, but Australian Standards must be followed.
- **Mixing the Primer (If required):**
  - Stir or mix thoroughly before application to ensure consistency.
  - Follow manufacturer instructions for mixing ratios, pot life, and working time.
- **Application of Primer:**
  - Apply using a brush, roller, or airless sprayer, ensuring even coverage across the substrate.
  - Allow the first coat to dry completely before applying a second coat if required.

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- If applying two coats, apply the second coat perpendicular to the first for optimal coverage.

- **Drying Time & Inspection:**
  - Allow the primer to cure fully as per manufacturer recommendations before applying ACTFLEX 989 CWP.
  - Inspect the surface for full coverage, ensuring no pooling or missed areas.
  - If necessary, lightly abrade or clean the surface before proceeding with waterproofing application.

Detailing

- **Option 1:** Ensure the primer is fully cured before applying FORSPEC Reinforcement Tape Systems. The surface should be clean, dry, and free of dust, grease, and loose particles.
- **Application to Floor Joints:** For **ACTFLEX SA TAPE** (self-adhesive), peel off the release paper and place the tape over the floor joints For FORSPEC Non-Adhesive Tapes (e.g**., ACTFLEX FLEXTAPE**), apply a coat of A**CTFLEX 906 WPU** on the floor joints, then embed the tape into the wet coat, ensuring there are no bubbles or wrinkles. Press firmly using a roller and overlap tape ends by at least 50mm.
- **Application to Wall/Floor Joints:** For **ACTFLEX SA TAPE**, peel off the release paper and position the tape at the wall/floor junction, ensuring 50mm coverage on both the floor and wall. For non-self-adhesive tapes, apply **ACTFLEX 906 WPU** to the junction before placing the tape into the wet coat. Ensure all edges are sealed and overlap the tape by 50mm.
- **Application Around Penetrations**: For **ACTFLEX SA TAPE**, peel off the release paper and wrap it around pipes or drains. For other tapes, apply **ACTFLEX 906 WPU** around the penetration and press the tape into the wet coat. Ensure full adhesion and overlap by 50mm if needed.

Types of FORSPEC Reinforcement Tape Systems:

- **SUPERFLEX Joint Tape**
- **ACTFLEX FLEXTAPE**
- **ACTFLEX MESHTAPE**
- **ACTFLEX SA TAPE**

- Final Checks: Ensure all tape edges are fully adhered. Follow Australian Waterproofing Standards for bond-breaking methods and apply **ACTFLEX 906 WPU** membrane afterward.
- **Option 2:** Application Process for **ACTFLEX 906 WPU** with a Joint Fillet - **ACTFLEX MS PRO**
  Begin by applying a bead of **ACTFLEX MS PRO** sealant around all critical areas, such as drains, penetrations, floor/wall junctions, wall/wall junctions, and joints, prior to the application of **ACTFLEX 906 WPU**.

  For internal wet areas, ensure that the bead size is 12mm Fillet at all changes in direction and junctions. For external applications, increase the bead size to 15mm x 15mm fillet. After applying the sealant, smooth it thoroughly over all junctions.

  If extra reinforcement is needed for areas with movement, apply a FORSPEC Bandage System over the **ACTFLEX MS PRO**. Apply the first coat of **ACTFLEX 906 WPU** into the corner junctions. While the first coat is still wet, embed FORSPEC reinforcement system centrally, ensuring no creases or air pockets. Allow to cure before applying second coat. Apply a second coat of **ACTFLEX 906 WPU** to fully encapsulate the embed FORSPEC reinforcement system. Allow it to dry before applying **ACTFLEX 906 WPU** to the remaining surfaces. Ensure all bond-breaking methods follow Australian Waterproofing Standards.

Application

Pre-Mixing Guide:

- Before use, mix well using an electric drill with a paddle mixer at low speed (300-500 RPM) for at least 2–3 minutes.
- Ensure a consistent, lump-free mixture before application.
- Avoid high-speed mixing, as this may introduce air bubbles.

Application:

- Apply by brush or roller in a minimum two-coat system to achieve a total dry film thickness (DFT) of 1.2mm.
- Wet film thickness (WFT) per coat: 0.8mm
- DFT per coat: 0.6mm
- Total DFT (after 2 coats): 1.2mm
- Allow 4–6 hours between coats at 25°C / 50% RH. Ensure the first coat is completely dry and free from water or condensation before applying the next.
- Recoat within 24 hours to ensure proper adhesion.
- Drying and curing times may vary based on ambient and substrate temperatures.

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Application Rates

	DFT RATE	Number of Coats	Recoat Time at 25°C 50%RH	Full Cure Time at 25°C 50%RH
Wall Applications	0.8mm or 800 microns	2	6 Hours	3 Days After Final Coat
Floor Applications	1.2mm or 1200 microns	2	6 Hours	3 Days After Final Coat

Tiling/Screeding

For direct bonding with tile adhesive, ACTFLEX 906 WPU is suitable once cured. For screeding, it is recommended to wait at least 24 hours after the final coat to allow the curing process. To determine the most suitable tile adhesive, please contact a FORSPEC representative.

Paver Pedestals System

- After full cure, **ACTFLEX 906 WPU** must be UV top-coated with either **ACTFLEX ATC** or **ACTFLEX ULTRA FC** to ensure long-term durability and protection against UV damage when using pedestal systems.
- Paver pads (tiling pedestals) can be used over **ACTFLEX 906 WPU** and should be installed as per the manufacturer's instructions.
- When installing paver pads over the waterproofing membrane, rubber matting must be placed under each pedestal to minimize damage to the membrane and extend its service life.

Coverage, Drying and Curing

- **Coverage:** The coverage of ACTFLEX 906 WPU is typically between 8m² and 10m² at a total dry film thickness (DFT) of 1.2mm, equating to approximately Application rate: 0.67/L per sqm (2 coats applied). However, coverage may vary depending on the application technique and the porosity of the substrate.
- The **slowest drying areas** will be those applied over **ACTFLEX SA Tape or ACTFLEX MS PRO sealant**. These areas must be **fully dry** before covering.
- **Temperature and substrate conditions** will affect drying and curing times.
- For floor testing, it is recommended to wait at least 72 hours after the final coat.

Limitations

- **ACTFLEX 906 WPU** is only UV resistant for up to 6 months. For extended periods of UV and sun exposure we recommend using ACTFLEX 101 UV.
- **ACTFLEX 906 WPU** is not recommended for planter boxes. Please use ACTFLEX 929 SPU for this application.
- Not compatible with all silicon-based and bitumen surfaces/products.
- Not recommended for constantly submerged applications such as swimming pools and ponds.
- Not suitable for use in chlorine environments.
- **ACTFLEX 906 WPU** is not a vapour barrier and is not designed to withstand negative side substrate head of pressure.
- Do not apply if rain threatens.
- Care should be taken when coating over movement joints as in some cases the amount of movement may be more than the capability of the membrane.
- **ACTFLEX 906 WPU** can be left uncovered in internal areas, exposed to light foot traffic such as plant rooms where foot traffic is only required for maintenance purposes. It is not designed to accept daily foot traffic, footwear that can pierce the membrane or machinery.

Clean Up

Clean-Up:
It is essential to clean tools and equipment immediately while the product is still wet. Use a solvent to wipe down and remove excess product from surfaces. Once dry, **ACTFLEX 906 WPU** becomes difficult to remove, and mechanical methods may be required for cleaning.

Storage

Storage: ACTFLEX 906 WPU should be stored in cool, dry conditions (10-22°C) in its original, unopened containers. Protect the material from moisture and direct sunlight, as exposure to temperatures above the recommended range may reduce the shelf life of the product. The product is **combustible** when uncured, so it is important to keep it away from any ignition sources and avoid storing it in areas such as pits, depressions, basements, or spaces where vapours may accumulate. Once the container is opened, it is preferable to

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use all contents, as the product is sensitive to airborne moisture.

Shelf Life: When stored in proper conditions, **ACTFLEX 906 WPU** has a shelf life of **12 months** from the date of manufacture.

Safety Precautions

ACTFLEX 906 WPU is classified as non hazardous it may cause skin and eye irritation. Always use this product in a well-ventilated area, and wear the appropriate personal protective equipment (PPE), including chemical-resistant gloves, safety boots, and protective eyewear (to guard against splashes). Inhalation of vapours may also pose a risk, so it is essential to wear a suitable respiratory protection device. Note that **organic vapour respirators with particulate pre-filters** and **powered air-purifying respirators** are **not suitable** for use with this product.

To minimize exposure, ensure that soiled clothing is changed immediately and wash hands thoroughly before taking breaks or finishing work. In the event of eye contact, rinse immediately with plenty of water. If inhaled, move the affected person to fresh air, and if discomfort persists or if breathing difficulties occur, seek medical attention without delay. If swallowed, **do not induce vomiting**. Contact the Poisons Information Centre (13 11 26 within Australia or 0800 764 766 in New Zealand) for advice.

IMPORTANT: The uncured product is **combustible**, so keep all sources of ignition away from the product and its vapours. For emergency situations, dial **000** for assistance from the **Police or Fire Brigade**.

Always comply with **local regulations** and follow the safety instructions outlined on the packaging. For additional safety information, refer to the **Safety Data Sheet (SDS)** available at www.forspec.com.au.

Data Sheet

This Technical Data Sheet (TDS) and Material Safety Data Sheet (SDS) are subject to revision as necessary to ensure compliance with relevant Australian Standards and incorporate technological advancements. It is crucial to read the most current versions of the SDS and TDS before use, as application and performance data may be updated. For the latest technical information, please contact Forspec Protective Coatings at (02) 8021 3517 or email info@forspec.com.au to request a copy. The information provided is representative but does not serve as a comprehensive specification. For specific projects, we recommend consulting directly with the company for tailored specifications.

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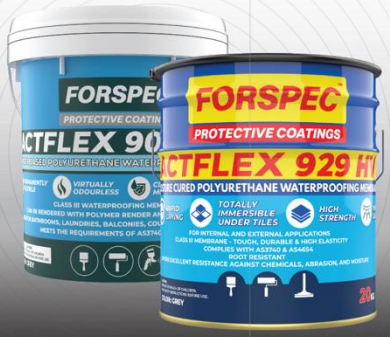

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