

# ACTFLEX 906 WPU

## DESCRIPTION

ACTFLEX 906 WPU is a Class III water-based membrane, free of solvents, engineered with modified polyurethane for both internal and external applications underneath tiles or toppings. It stands as a singular component, boasting remarkable flexibility and high build properties. This waterproofing solution exhibits exceptional weather resistance, emitting low VOC levels, and bearing a Non-Hazardous classification. ACTFLEX 906 WPU aligns with the mandates of AS3740:2021 through its adherence to AS/NZ 4858 and AS4654.2 2012, further reinforcing its suitability and performance standards.

## PACKAGING (weight)

- 15L (20kg)
- 4L (5kg)

## COLOUR

Grey

## ROLLER OR BRUSH GRADE

## STANDARDS COMPLIANCE

- Meets the requirements of AS3740:2021 (Waterproofing of Wet areas within a Domestic building) by complying with AS/NZ 4858 (Wet Area Membranes as a Class III membrane).
- Meets the requirements of AS4654.1 – "Waterproofing membranes for external above-ground use.
- LOW VOC - Meets Green Building Council of Australia Green star requirements IEQ-13, IEQ-11
- Classified as Non- Hazardous and Non-Flammable.

## CAN BE USED OVER THE FOLLOWING SUBSTRATES - PRIMING REQUIRED ON ALL SUBSTRATES

1. Fibre Cement Sheets - Walls (minimum 6mm thickness) of wet area grade.
2. Concrete - Cured for a minimum of 28 days and finished with a wood trowel.
3. Plasterboard Walls - Wet area grade only, with a minimum thickness of 10mm.
4. Suitable for Brickwork, Block Work, Masonry, Asbestos, Sycon, Cement, Timber, Metal, and PVC surfaces.
  - Please note that ACTFLEX 906 WPU is not recommended for application on particle board, platform floor sheeting, yellow tongue, or chipboard surfaces due to their unsuitability for wet areas. It is advised to replace these with Wet Grade CFC sheeting.
  - Ensure that application is not carried out on substrates with surface temperatures below 10°C.

## 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.
- Virtually odourless.
- 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 tile adhesives, screeds and renders.
- Can be rendered with polymer render and standard render (with bonding additive).
- After curing is permanently flexible (tested to class 111 - highest tensibility) & strong.
- Formulated for wet areas and under tile applications.
- Once cured will accept light foot traffic.
- Easy application by roller brush or squeegee.

## ACTFLEX 906 WPU - WHERE IT CAN BE USED

1. ACTFLEX 906 WPU can be used in the following applications:
2. Internal and external under tile waterproofing.
3. Internal and external topping waterproofing.
4. Wet areas such as bathrooms, showers, laundries, and kitchens.
5. Balconies and terraces.
6. Podiums and planter boxes.
7. Retaining walls.
8. Concrete slabs and screeds.
9. Masonry walls.
10. Substrates requiring a flexible and high build waterproofing membrane.
11. Areas requiring compliance with AS3740:2021 standards, AS/NZ 4858, and AS4654.2 2012.

# ACTFLEX 906 WPU PROPERTIES

<b>Form</b>	Single-Component Viscous Liquid
<b>Membrane Classification</b>	Class III
<b>Colour</b>	Grey
<b>Solids Contents</b>	70% (+/- 2%)
<b>Elongation At Break</b>	>500%
<b>No Fatigue Cracking</b>	Pass

<b>ASTM E96 Moisture Vapour Transmission</b>	Pass
<b>Recoat Time At 25°C 50% R.H.</b>	6 Hours
<b>Tack Free Time At 25°C 50% R.H.</b>	24 Hours
<b>Full Cure Time At 25°C 50% R.H.</b>	5 Days
<b>Application Temperature</b>	10 - 26°C
<b>Flammability</b>	Non Flammable
<b>Shore Hardness A</b>	50-60A

## PREPARATION

- Allow all prep work to dry/cure before proceeding.
- Internal wet areas: Waterproof in accordance with AS3740:2021.
- External wet areas: Waterproof in accordance with AS4654.2 2012.
- Ensure surfaces are completely dry before applying ACTFLEX 906 WPU.
- Surfaces must comply with manufacturer's instructions and relevant Australian Standard(s).
- Surfaces must be structurally sound, clean, dry, smooth, and free from contaminants.
- Remove high points and protrusions that may pierce the membrane.
- Repair defects like voids, blowholes, and surface imperfections using high-strength non-shrink mortar.
- Ensure applied surfaces, including screeds, are solid and not crumbly.

## CRACKS/FALLS

- Opt for floors with positive falls to drainage outlets to prevent water pooling.
- Internal wet areas: Aim for a 1:80 slope (12.5mm fall over 1m).
- External balconies, rooftops, etc.: Opt for a 1:100 slope (10mm fall over 1m).
- Ensure pre-treated crack areas are thoroughly dried and cured.
- For cracks under 1mm width:
  - Apply primer and use self-adhesive butynol tape or embed AT Mesh into a wet coat of ACTFLEX 906 WPU.
- For cracks between 1mm and 2mm width (static cracks):
  - Widen cracks to a minimum 2mm width, then clean by vacuuming away dust and residues.
  - Prime the cleaned surface.
  - Fill cracks with MS Bond breaker, allow curing, then apply self-adhesive butynol tape or AT Mesh as per directions.
- For cracks greater than 2mm or those experiencing movement:
  - Consult the builder or engineer for structural assessment.

## PRIMING

General Priming Considerations:

- Allow primers to dry within specified drying times before proceeding with over-coating.
- Primer selection should be determined by substrate condition and other specific requirements.
- Ensure thorough scrubbing of priming systems into absorbent surfaces like porous concrete or sand/cement screeds. This step seals pin holes and minimizes excessive absorption of ACTFLEX 906 WPU.
- Inadequate priming may result in pin holes becoming visible through the waterproofing membrane.

Recommended Priming Approaches:

- For Internal Dry Sound Surfaces: Apply a single coat of ACTFLEX 600 Primer.
- For External or Rough Surfaces: Apply 2 coats of ACTFLEX EP 250.
- For Metal Surfaces: Apply ACTFLEX 600 Primer.
- For Wood or PVC Surfaces: Utilize ACTFLEX EP 250.
- For Rusty Metal Surfaces:
  - Eliminate loose rust and paint fragments using wire brushing.
  - Roughen remaining paint areas for optimal mechanical adhesion.
  - Remove loose flakes or corroded metal segments.
  - Apply rust converter as the first coat, followed by an anti-corrosive primer as the second coat.

Special Consideration for Moist Areas:

- In areas with moisture levels exceeding 4%, it is recommended to apply 2 coats of ACTFLEX EP 250 primer.

## MS BOND BREAKER/JOINTS SEALANT

Avoiding Polyurethane Joint Sealants:

- Refrain from using polyurethane joint sealants due to their potential to leach plasticizers into the overlying coating.

Sealing Horizontal/Vertical Junctions and More:

- All junctions including wall/floor, hobs/wall, shower set downs, corner junctions, water stops, drain outlets, as well as screw and nail heads must be effectively sealed.
- Substrate gaps at drainage outlets and flashings also require sealing.
- Apply a layer of V-TECH MS Bond breaker along these junctions and gaps. Allow the sealant to dry and cure before proceeding with membrane application.

Bond Breaker Joint Sealant Profile Requirements:

- Ensure that the bead of V-TECH MS Bond breaker is of sufficient depth.
- At the midpoint of the joint, the joint sealant profile should have a minimum depth of 12mm.

Special Note for ActNow 100mm Rubber Puddle Flange Installation:

- If you are installing the ActNow 100mm Rubber Puddle Flange, it is advisable to seek technical assistance from Actech Protective Coatings for guidance.



## ACTECH PROTECTIVE COATINGS

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# SHEETED FLOORS & WALLS (wet area grade only) - SELF ADHESIVE BUTYNOL TAPE

In applications where fibro cement floors and/or walls are used, apply a suitable ACTFLEX SA Self Adhesive Butynol Tape over the cured joint sealant in all corner junctions and over sheet joints. Use a roller to ensure that a secure bond is made between the tape and substrate and carefully moulded into the corners.

## ACTECH AT MESH POLYESTER TAPE For Concrete & Masonry Corner Junctions

Utilizing Acrylic Membrane Properties:

- ACTFLEX 906 WPU is an acrylic membrane that necessitates the use of ACTFLEX AT Mesh polyester tape over the cured joint sealant.
- This application is essential for all corner junctions and sheet joints.

Avoiding Fibreglass Reinforcing:

- The use of fibreglass reinforcing is not recommended due to its potential to diminish the membrane's elasticity.

Procedure for ACTECH AT-Mesh Tape Application:

1. Apply a single coat of ACTECH 906 WPU, ensuring that the application extends at least 50mm on either side of the ACTFLEX AT Mesh.
2. Embed the ACTFLEX AT Mesh Tape into the wet coat, making certain to press it securely into place.
3. Eliminate any bubbles or wrinkles that may have formed and ensure a firm bond between the tape and the substrate.
4. Take special care to mold the tape accurately into corners for optimal adhesion.
5. Allow the applied tape to set and dry.

## APPLICATION

1. Begin by applying a layer of ACTFLEX 906 WPU over the entire area designated for waterproofing. Utilize a brush or roller for application. A medium nap (8–12mm pile) or a 50mm long bristle paint brush is recommended for optimum results.
2. The first coat should be applied with a wet film thickness of 0.85 to achieve a dry film thickness of 0.6mm.
3. Allow the applied first coat to dry. The drying time is estimated to be approximately 24 hours at a temperature of 23°C and a relative humidity of 50%.
4. Subsequently, apply a second coat of ACTFLEX 906 WPU membrane. This coat should have a wet film thickness of 0.85mm, resulting in a dry film thickness of 0.6mm.
5. The cumulative outcome will be a final dry film thickness of 1.2mm.

## 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	5 Days After Final Coat
Floor, Upturns, Retaining Walls	1.2mm Or 1200 Microns	2	6 Hours	5 Days After Final Coat
Retaining Walls & Floors	1.5mm Or 1500 Microns	2	6 Hours	5 Days After Final Coat

## COVERAGE DRYING AND CURING

Multi-Coat System: ACTFLEX 906 WPU is designed to be applied in a minimum 2-coat system. The effectiveness of the application process can be influenced by factors such as surface porosity, humidity, temperature, climate conditions, ventilation, application technique, and the dry film thickness.

Coverage and Guidelines: Coverage, drying, and curing rates serve as approximate indicators, recognizing the potential variability due to the mentioned factors. For reference, a 15-liter (20kg) pail of ACTFLEX 906 WPU is estimated to cover approximately 10-12m<sup>2</sup> over two coats. Similarly, a 4-liter (5kg) pail may cover 2-3m<sup>2</sup>.

Coverage Rate: The recommended coverage rate ranges from 1.25m<sup>2</sup> to 1.5m<sup>2</sup> per liter. This calculation is based on achieving a total Dry Film Thickness (DFT) of 1.2mm. It's important to note that this coverage estimation does not account for potential wastage during application.

## FINAL INSPECTION AND FLOOD TEST

We recommend a final inspection over the surface to make sure no pinholes are evident prior to tiling. After full cure we recommend that a flood test be carried out prior to covering. Flood to a min. depth of 50 mm of water for 24 hours. Drains should be plugged and barriers placed to contain the water.

## PRIOR SCREEDING

Ensure the membrane is fully cured before tiling and topping.

On large decks where the membrane is to be covered with a self-supporting concrete screed which may be exposed to thermal or shrinkage movement, it is recommended that a 200-micron plastic sheet be laid over the entire membrane surface to act as a slip sheet system.

## TILING

ACTFLEX 906 WPU is compatible with most tile adhesives.

When tiling directly to the membrane, tilers must "notch trowel" the tile adhesive to all wall and floor areas. Spot bonding may then be applied to reach the required levels. When screeding over ACTFLEX 906 WPU in sunlight or UV exposed areas, we recommend applying 2 coats of ACTFLEX 988 CWP over the screed as an anti-efflorescent coating before tiling.



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## 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.

## UNDERGROUND/LANDSCAPING AREAS

Always protect the cured membrane prior to clean fill. The installation of ballast, such as back filler, river pebbles or similar loose laid unbound coverings must be isolated from the membrane by protection board or a compatible drainage cell and filter fabric system.

## CLEAN UP

- Wash All Equipment In Soapy Water Immediately After Use.
- Avoid Spillage As It Is Difficult To Remove Entirely From Surfaces.
- DO NOT Discharge Into Sewer Or Waterways.
- DO NOT Allow Wash Water From Cleaning Or Process Equipment To Enter Drains.

## STORAGE

- 12 Months When Stored In The Original, Unopened Containers In A Dry Place @ 10-26°C & 50% R.H. Storage Above This Temperature May Reduce Storage Life
- Keep Containers In A Well-Ventilated Place, Away From Sunlight And Moisture And Tightly Closed.

## SAFETY PRECAUTIONS

Always use in a well-ventilated area and wear Personal Protection Equipment (PPE). Use breathing respirators at all times. Wash hands immediately after use and before breaks. DO NOT allow material to contact humans, exposed food or food utensils. In case of eye contact, rinse with plenty of water: If inhaled, remove to fresh air: if swallowed (DO NOT INDUCE VOMITING) and immediately contact Doctor or Poisons Information centre on 131 126 (AUS) and 0800 764 766 (NZ). IN TRANSPORT EMERGENCY DIAL 000 – POLICE-FIRE BRIGADE. KEEP OUT OF REACH OF CHILDREN. Local regulations as well as health and safety advice on packaging labels must be observed. For more information, please download a copy of the SDS from [www.thewaterproofingshop.com.au](http://www.thewaterproofingshop.com.au).

## Data Sheet

This Technical Data Sheet and the Material Safety Data Sheet (SDS) may be revised at any time to comply with relevant changes to the Australian Standards or to include changes to current technology. Always read the current SDS and TDS carefully prior to use as application and performance data may change from time to time. It is always best to request a copy of the latest technical data from Actech Protective Coatings by calling 02 8021 3517 or emailing [admin@actechpc.com.au](mailto:admin@actechpc.com.au). Data provided is typical but does not constitute a full specification. This should be sighted from the company for specific projects.

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