



ACTFLEX 989 CWP.

Technical Data Sheet

TWO-PART FLEXIBLE CEMENTITIOUS ACRYLIC HYDRO-STATIC WATERPROOFING MEMBRANE

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Description

ACTFLEX 989 CWP is a high-performance waterproofing system engineered for a wide range of applications, including internal and external wet areas such as bathrooms, balconies, podiums, courtyards, non-exposed rooftops, swimming pools, and under pedestal systems. This two-part flexible cementitious modified acrylic polymer membrane offers exceptional versatility, serving as an under-tile anti-efflorescence barrier, a waterproofing solution for below-grade retaining walls, and protection for PVC panels. Compliant with AS4858-2004 and AS4654.1:2012 standards, it is classified as a Class 111 waterproofing membrane.

Roller, Brush, or Spray Grade

Colour

Khaki Green

Packaging (Weight)

- 18kg kits Consisting of 2 weighed parts.
- Part A liquid & Part B Powder (1:1.2)

Advantages/Uses

- Fast drying waterproofing membrane.
- Can tile over within 6-8 hours @ 25°C at 50% R.H
- Meets Class III requirements for AS4654.1 and AS4858 Wet area Membranes.
- Is to be applied over cured damp surfaces.
- Can be used for internal and external use.
- Non-staining.
- Non-Flammable, Non-toxic.
- Meets Green Building Council of Australia Greenstar requirements IEQ-13, IEQ-11.
- Compatible with most tile adhesives.
- Easy to clean-up with water.
- Excellent adhesion and easy to use.
- When applied directly to the substrate, the cured membrane can withstand 250kPa of hydrostatic pressure which equates to 25-metre head of water.
- Excellent build properties enable application to both horizontal and vertical surfaces.
- Can be applied to PVC panels which have been abraded without primer
- Very strong cured finish.
- Reaches sufficient cure in 72 hours @ 25°C 50% RH after final coat.

ACTFLEX 989 CWP Properties

Form	2 Component Cementitious Powder & Liquid per Coat	Recoat Time at 25°C 50% R.H.	4-6 Hours
Mixing Ratio	Part A is 1kg Liquid to Part B is 1.2kg Powder (1:1.2)		Confined underground areas require min 24 hrs
Membrane Classification	Membrane Classification Class III	Tack free time at 25°C 50% R.H.	6 Hours
Colour	Khaki Green	Full cure time at 25°C 50% R.H.	72 Hours at 1.2mm DFT
Solids Content	65% (+/- 2%)		Confined underground areas require min 7 days
Elongation at break	389% (+/- 5%)		Areas in permanent contact with water require 10 days + @ 25°C at 50% R.H (average)
Tensile Strength	2.31 MPa	Application Temperature	
Pot Life	Approx. 2 Hours @ °C	Shelf Life	12 Months
Foot Trafficable	6-8 Hours	Shore Hardness A	50A
		Hydrostatic Pressure	250Kpa (2.5 Bar)

Falls to Drains

- It is advisable to apply ACTFLEX 989 CWP on surfaces with a gradual positive incline towards drainage outlets to prevent water accumulation. The recommended slope for this purpose is as follows:
- For indoor wet spaces: A slope of 1:80, translating to a 12.5mm decline over a distance of 1 meter.
- For outdoor balconies, rooftops, and similar areas: A slope of 1:100, which results in a 10mm descent over a span of 1 meter.

Preparations

- Ensure the surface is free from coatings such as paints, sealers, or primers unless required for specific treatments like salt-affected areas.
- The surface must be stable, solid, and structurally sound to support the waterproofing membrane.
- Remove all contaminants, including grease, dust, mold, loose particles, flaking material, and any friable substances that could compromise adhesion.
- Eliminate any salt and efflorescence present on the surface to prevent adhesion issues.
- Cement screed must be solid, level, and free of voids, protrusions, and cracks before applying the membrane.
- Newly poured concrete must be cured for at least 7 days as per AS 3958.1-2007 guidelines.
- Rendered surfaces require a minimum curing time of 7 days, depending on thickness.
- Cement screed must have a smooth wood trowel finish and dry for at least 48 hours, up to 5 days, depending on thickness and temperature conditions.
- Concrete damage between 2mm and 30mm should be repaired using ACTFLEX POLYCRETE.
- Spalling concrete must be treated with ACTECH Concrete Repair products such as PROBOND 1100.
- Refer to the relevant product data sheets for specific repair instructions before proceeding.
- Once the surface is fully prepared and meets the required conditions, ACTFLEX 989 CWP can be applied according to the recommended application process.

Primer

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 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.
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- **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.

Mixing and Application

Combine Part A (liquid) and Part B (powder) at a ratio of 1:1.2 by weight.

Pre-mix Part A (liquid) on its own to ensure a uniform consistency.

Gradually add approximately half of Part B (powder) while mixing Part A, ensuring it wets out completely.

Once mixed, add the remaining Part B and continue mixing at a higher speed until a smooth, lump-free consistency is achieved.

Scrape the sides of the container to avoid dry areas and prevent aeration during mixing.

Allow the mixture to stand for 3-4 minutes, then re-mix lightly for 1 minute before applying.

Do not mix by hand; mechanical mixing is required.

The pot life of the mixed material is approximately 2 hours at 23°C with 50% relative humidity.

ACTFLEX 989 CWP requires a **minimum of two coats**, applied using a **roller and brush**. Allow **4-6 hours** between coats for recoating. Each coat should be applied **in opposite directions** to ensure **optimal consistency and thickness quality**.

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-Self-Adhesive Tapes (e.g., **ACTFLEX FLEXTAPE**), apply a coat of ACTFLEX 989 CWP 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 989 CWP 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 989 CWP 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 989 CWP membrane afterward.

- **Option 2:** Application Process for ACTFLEX 989 CWP 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 989 CWP.

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 before the first coat of ACTFLEX 989 CWP. While the first coat is still wet, embed FORSPEC reinforcement system centrally, ensuring no creases or air pockets. Apply a second coat of ACTFLEX 989 CWP to fully encapsulate the embed FORSPEC reinforcement system. Allow it to dry before applying ACTFLEX 989 CWP to the remaining surfaces. Ensure all bond-breaking methods follow Australian Waterproofing Standards.

PVC Panels

- **Surface Preparation:** Sand the PVC panels to promote adhesion. Clean thoroughly to remove dirt, dust, and contaminants. Ensure the surface is clean, dry, and free from residue.
- **First Coat:** Apply the first coat of **ACTFLEX 989 CWP** and allow it to dry completely at 25°C and 50% relative humidity
- **Joint Treatment:** For panel joints and corner junctions, choose one of the following:
 - Apply a bead of **ACTFLEX MS PRO (POSITIVE SIDE ONLY)** sealant and allow it to dry.
 - Or use **ACTFLEX SA TAPE**, securely roll it onto the joints and corner junctions
- **Second Coat:** After joint treatment, apply the second coat of **ACTFLEX 989 CWP** and let it cure thoroughly.
- This step-by-step process ensures a durable, flexible waterproofing bond between PVC panel sheets.
- ACTFLEX 989 CWP requires a **minimum of two coats**, applied using a **roller and brush**. Allow **4-6 hours** between coats for recoating. Each coat should be applied **in opposite directions** to ensure **optimal consistency and thickness quality**.

Water Holding Facilities or Constant Water Contact Applications

ACTFLEX 989 CWP – Water Holding Facilities and Swimming Pool Applications with Constant Water Contact: 3-Coat System

For water and detention tanks, ensure proper mechanical ventilation for drying due to limited aeration and high humidity.

Surface Preparation: Thoroughly clean all surfaces, removing dirt, dust, efflorescence, and contaminants. Ensure the surface is sound, clean, and dry with no residue.

Primer Coat: Apply a coat of ACTFLEX EP 250. If substrate moisture content exceeds 80% relative humidity (ASTM F2170) or 15g/m²/24hrs (ASTM F1869), apply a minimum of two coats.

Junction Treatment: At all horizontal and vertical junctions (wall/floor, hobs/wall, corners, water stops, drain outlets, screw, and nail heads), apply a bead of ACTFLEX MS PRO as a bond breaker and allow it to dry.

Reinforcement: Apply a coat of ACTFLEX 989 CWP over the bond breaker. While wet, embed FORSPEC REINFORCEMENT SYSTEM tape into the membrane, ensuring there are no bubbles or wrinkles for a secure bond, especially in corners and junctions. Allow the layer to dry.

Second Coat: Apply the second coat of ACTFLEX 989 CWP to all remaining surfaces and allow it to dry thoroughly.

Third Coat: Apply a third coat of ACTFLEX 989 CWP and allow it to cure for a minimum of 10 days at 25°C and 50% relative humidity before filling the tank or pool.

ACTFLEX 989 CWP requires a **minimum of two coats**, applied using a **roller and brush**. Allow **4-6 hours** between coats for recoating. Each coat should be applied **in opposite directions** to ensure **optimal consistency and thickness quality**.

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 989 CWP** 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 989 CWP** 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.

Coverage, Drying, and Curing

Coverage, Drying, and Curing Rates:

- The coverage, drying, and curing times provided are indicative only and may vary based on factors such as surface porosity, humidity, temperature, climate conditions, ventilation, application technique, and dry film thickness.
- ACTFLEX 989 CWP** is a minimum two-coat system. For applications below ground or in areas with constant water contact, a minimum of three coats is recommended.
- For a total Dry Film Thickness (DFT) of 1.2mm, a 18kg pail of **ACTFLEX 989 CWP** will cover approximately 8m². For an 18kg kit, the coverage rate is:
- Coverage per litre: Approx. 0.54m²/litre based on the total dry film thickness of 1.2mm (This does not account for wastage).

Wet Film Thickness (WFT) per Coat:

To achieve the desired total dry film thickness (DFT) of 1.2mm, the Wet Film Thickness (WFT) for each coat should be:

- 1st coat WFT: 0.92mm
- 2nd coat WFT: 0.92mm
- Re-coat and Cure Times:
- Re-coat Time: 4-6 hours at 25°C and 50% relative humidity.

Complete Cure Time:

- 6-8 hours for tiling and foot traffic at 25°C and 50% relative humidity.
- At least 48 hours for full cure in non-ventilated areas at 25°C and 50% relative humidity.
- 7 days for full cure in confined spaces at 25°C and 50% relative humidity.
- 7-10 days or more for areas with constant water exposure at 25°C and 50% relative humidity.

In confined spaces such as underground basements or water tanks with limited airflow and elevated humidity, the curing process may take longer. Adequate artificial ventilation is recommended to promote proper curing and mitigate humidity effects.

Application Rates

	DFT RATE	Number of Coats	Recoat Time at 25°C 50%RH	Full Cure Time at 25°C 50%RH
Wet Areas	1.2mm or 1200 microns	2	4-6 Hours	3 Days After Final Coat
PVC Panel	1.2mm or 1200 microns	2	4-6 Hours	3 Days After Final Coat
Underground	1.5mm or 1500 microns	3	24 Hours	7 Days After Final Coat
Permanent Contact with Water	1.5mm or 1500 microns	3	24 Hours	10 Days after Final Coat

Flood Testing/ Screeding

Flood Testing:

Flood testing may begin 48 hours after the final coat of ACTFLEX 989 CWP has been applied, under ambient conditions of 23°C and 50% relative humidity (R.H.). Both the ambient and substrate temperatures will influence the drying and curing times. A thorough inspection of the final membrane is required prior to flood testing to ensure no damage has occurred. If any imperfections, damage, or pinholes are observed, an additional coat of ACTFLEX 989 CWP may be necessary. The membrane surface must be clean, intact, dry, and free of any contaminants before applying any additional coatings.

Tiling or Screed Application:

Direct tiling or screeding can commence 24 hours after the final coat of ACTFLEX 989 CWP has been applied, assuming ambient conditions of 23°C and 50% relative humidity (R.H.). Both ambient and substrate temperatures will impact the drying and curing process. For suitable tile adhesives, ARDEX offers a comprehensive range. For more information, please contact FORSPEC Technical Services at info@forspec.com.au

Limitations

Do not apply **ACTFLEX 989 CWP** if the ambient or substrate temperature is below 10°C or above 35°C. The product should not be diluted with solvent or water, and it must not be applied if rain is imminent. **ACTFLEX 989 CWP** must be recoated, tiled, screeded, or have pavers/decking applied within 5 days of application. If exposed for longer, the surface may need to be cleaned with a mild detergent and water and allowed to fully

dry before further applications. **ACTFLEX 989 CWP** is not designed as a stand-alone UV-exposed or permanent trafficable membrane. Always use appropriate personal protective equipment (PPE) before performing any installation or finishing methods. Ensure you consult the Safety Data Sheets from the substrate manufacturers to mitigate any potential risks.

Safety – Whan Handling Do Not Eat, Drink or Smoke

Part A - Liquid Component

May cause an allergic skin reaction. Harmful to aquatic life with long-lasting effects. Wear protective gloves, protective clothing, eye protection, and face protection. Avoid breathing mist, vapors, or spray. Prevent release into the environment. Contaminated work clothing should not leave the workplace. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs, seek medical advice/attention. Dispose of contents/container at an authorized hazardous or special waste collection point in accordance with local regulations.

Part B - Powder Component

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. May cause respiratory irritation. May cause cancer. Causes damage to organs through prolonged and repeated exposure. Wear protective gloves, protective clothing, eye protection, and face protection. Use personal protective equipment as required. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. Immediately call a POISON CENTER or doctor/physician.

ACTFLEX 989 CWP is hazardous and may cause skin and/or eye irritations. The powder contains cement, and until fully wet, inhalation of powder dust should be avoided. Always use in a well-ventilated area and wear Personal Protective Equipment (PPE), including gloves, safety boots, and protective eyewear (to protect against splashes). Breathing respirators should be worn at all times. Wash hands immediately after use and before breaks. Change soiled work clothes and wash hands before breaks and after finishing work. Do not allow clothing wet with material to stay in contact with skin.

KEEP OUT OF REACH OF CHILDREN.

In case of eye contact, rinse with plenty of water. If inhaled, move to fresh air. If swallowed (do NOT induce vomiting), immediately contact a doctor or the Poisons Information Centre (AUS: 131 126, NZ: 0800 764 766). In case of a transport emergency, dial 000 – Police/Fire Brigade.

Please observe all local regulations and health and safety advice on packaging labels. For more information, download the SDS from www.forspec.com.au.

Clean Up

- Wash all equipment in soapy water immediately after use. Avoid spillage as it is difficult to remove entirely from porous 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 packaging in a cool dry place 10-22°C & 50% R.H.
- Do not use if bags are damaged.
- Keep containers in a well-ventilated place, away from sunlight, moisture and tightly closed

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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