ACTFLEX 929 HV.

Technical Data Sheet NON SAGGING MOISTURE CURED POLYURETHANE WATERPROOFING MEMBRANE 31/01/2025

Description

ACTFLEX 929 HV is a Class III high performance, tough, root resistant, highly flexible polyurethane waterproofing membrane for use in internal and external under tile and non-exposed applications. ACTFLEX 929 HV is a single component membrane which cures by reaction with the atmospheric moisture to give a tough elastomeric waterproof membrane. It is supplied as a thixotropic liquid which is easily applied at the recommended thickness to both vertical and horizontal surfaces.

Roller, Brush, or Spray Grade	Colour	Packaging (Weight)
	GREY	15L (20kg)

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 AS4654.2 2012 – "Waterproofing membranes for external above ground use"

ACTFLEX 929 HV is suitable for the following applications:

- Root Resistant
- Internal and external wet areas.
- Roof terraces and roofs (non - exposed).
- Planter boxes, above ground pits. Retaining walls
- Bridges, walkways, sub stations, parking decks.
- Concrete and metal surfaces
- General maintenance and repairs

Advantages

- Does not re-emulsify after proper curing.
- Immersion tolerant.
- Chemically resistant.
- Root resistant
- Moisture-cure technology
- Superior durability: Resistant to weathering, ageing, providing long-lasting results.
- Flexible: Exhibits good flexibility, accommodating for substrate movement and thermal expansion.
- Non-sagging: Holds its shape without slumping or dripping during vertical applications.
- Roller and brush grade for convenient and precise coating
- Suitable for both indoor and outdoor applications
- Once cured will accept light foot traffic.
- Outstanding barrier properties ensure protection against corrosive soil conditions.
- Excellent resistance to embrittlement.
- Reaches sufficient cure 48 hours after final coat (at 25°C 50% R.H.), allowing for fast placement of mortar beds and screeds.

Can be used over the following substrates * Priming required on all substrates

- 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 929 HV** 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 929 HV Properties

Membrane Classification	Class III	**No Fatigue Cracking**	Pass
Colour	Grey	**Recoat time at 25°C 50% R.H.**	4-6 Hours and a Maximum 48 Hours
Solids Content	90% (+/- 2%)	**Tack free time at 25°C 50% R.H.**	6 Hours in an aerated area
Density	1.1 - 1.3 g/cm³	**Full cure time at 25°C 50% R.H.**	48 Hours at 1.2mm DFT in an aerated area
Elongation at break	>600%	**Application Temperature**	10-26°C
ASTM E96 Moisture Vapour Transmission	Pass	**Shore Hardness A**	55-60
Physical or Chemical Damage	Chemical Cure by Reaction with Atmospheric Moisture	**Appearance**	Viscous Liquid
Tensile Strength	4.35MPa	**Shelf Life**	12 Months in Unopened Containers

Limitations

- **ACTFLEX 929 HV** is not suitable for exposure to sunlight or UV and must be protected from sunlight immediately after full cure.
- Direct adhesion of tiling to cured membrane is not recommended.
- Ensure membrane is fully cured for at least 48 Hours @ 25°C at 50% R.H. after final application before tiling, backfilling, topping or immersion in water.
- 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.
- It is not a vapour barrier and is not designed to withstand negative side substrate head of pressure.
- ACTFLEX 929 HV must be applied to a dry surface which is free from dampness.
- 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 929 HV 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.
- Do not apply onto substrates with surface temperatures under 10°C.

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.

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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 929 HV** to encapsulate the tape, ensuring the overlap of tape sections is at least 50mm.

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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 929 HV** 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

- ACTFLEX 700 PU PRIMER must be used on porous substrates such as concrete, masonry, blockwork, and brick.
- Allow primer to fully dry before proceeding (typically 1 hour at 23°C / 50% RH).
- ACTFLEX 700 PU PRIMER must be overcoated within 24 hours to prevent potential intercoat contamination.
- If the moisture content in masonry or concrete exceeds 80% RH (ASTM F2170) or 15g/m²/24hrs (ASTM F1869), a minimum of two coats of ACTFLEX EP 250 epoxy primer must be applied.
- This moisture level is generally equivalent to 5% or higher on a non-destructive moisture meter, but Australian Standards must be adhered to.
- For non-porous surfaces such as aluminum, PVC, or glass, ACTFLEX SUPERBOND 007 must be used as the primer.

Joint Preparation & Fixings

Using ACTFLEX SA TAPE with ACTFLEX 929 SL

- Remove the **release paper** and centrally position the **ACTFLEX SA TAPE** over the joint.
- Use a **roller** to apply pressure, ensuring **uniform adhesion** and eliminating any air pockets.
- Overlap tape ends by at least **50mm** to maintain a **continuous waterproof seal**.
- **Sealing with ACTFLEX 929 SL:**
- Once the **ACTFLEX SA TAPE** is securely in place, apply **ACTFLEX 929 HV** over the tape.

Using ACTFLEX 75FC Joint Sealant

- For internal wet areas, apply a 12mm diagonal fillet bead to all corner junctions and around all fixings.
- For external wet areas, apply a 15mm x 15mm fillet bead to all corner junctions and fixings.
- Tool off the sealant smoothly to ensure a seamless finish.
- ACTFLEX 929 HV waterproofing can be applied directly over uncured ACTFLEX 75FC.
- Ensure the appropriate primer is used on all fixings before applying the fillet joint treatment.

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: 0.7mm
- DFT per coat: 0.6mm
- Total DFT (after 2 coats): 1.2mm
- Allow 4–6 hours between coats at 23°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.

Dilution Guidelines:

- For dry, highly porous substrates, the first coat may be diluted with up to 10% Xylene per drum for better penetration.
- In colder conditions, dilution with up to 10% Xylene can improve workability.
- Do not exceed 10% dilution, as this may compromise performance.

Application Rates

	DFT RATE	Number of Coats	Recoat Time at 25°C 50%RH	Full Cure Time at 25°C 50%RH
Wall Applications	1.0mm or 1000 microns	2	4-6 Hours	48 Hours After Final Coat
Floor & Upturn Applications	1.2mm or 1200 microns	2	4-6 Hours	48 Hours After Final Coat
Planter box Floor & Retaining Walls	1.5mm or 1500 microns	2	4-6 Hours	48 Hours After Final Coat

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Prior Screeding

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

Tiling

- Direct adhesion of tiling to cured membrane is not recommended. In applications where tiles are to be laid over ACTFLEX 929 HV, a cement-based screed must be laid over the membrane. When screeding over ACTFLEX 929 HV 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.

Paver Pedestals System

- ACTFLEX 929 HV - Post-Cure Requirements:
- After full cure, ACTFLEX 929 HV must be UV top-coated with either ACTFLEX ATC or ACTFLEX ULTRA FC to ensure long-term durability and protection against UV damage.
- Paver Pad (Tiling Pedestal) Installation:
- Paver pads (tiling pedestals) can be used over ACTFLEX 929 HV 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.

Underground/Landscaping Areas

- Always cover cured membrane with HIFLOW drainage cell 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 cured membrane by a compatible drainage cell and filter fabric system or protection board.

Coverage, Drying and Curing

Coverage:

- The coverage of ACTFLEX 929 HV is typically between 8m² and 10m² at a total dry film thickness (DFT) of 1.2mm, equating to approximately 1.04kg/m² or 0.8L/m². However, coverage may vary depending on the application technique and the porosity of the substrate.

Curing:

- Allow a **minimum of 48 hours** curing time after the final coat, based on ambient conditions of **23°C @ 50% RH**, before applying protection or covering the membrane.
- The **slowest drying areas** will be those applied over **ACTFLEX SA Tape or ACTFLEX 75FC sealant**. These areas must be **fully dry** before covering.
- **Temperature and substrate conditions** will affect drying and curing times.

It is recommended that after curing and prior to placement of protection or screeding, flood to a minimum depth of 50 mm of water for 24 hours. Drains should be plugged and barriers placed to contain the water.

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 929 HV becomes difficult to remove, and mechanical methods may be required for cleaning.

Safety:
Always follow the appropriate **OH&S** guidelines and refer to the **MSDS** for safe handling and usage of solvents. It is crucial that no product or cleaning water is discharged into sewers or waterways. Additionally, avoid contact with spilled material to prevent any risk of contamination or harm.

Storage

Storage: ACTFLEX 929 HV 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 use all contents, as the product is sensitive to airborne moisture.
Shelf Life: When stored in proper conditions, ACTFLEX 929 HV has a shelf life of **12 months** from the date of manufacture.

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Safety Precautions

ACTFLEX 929 HV is classified as hazardous and 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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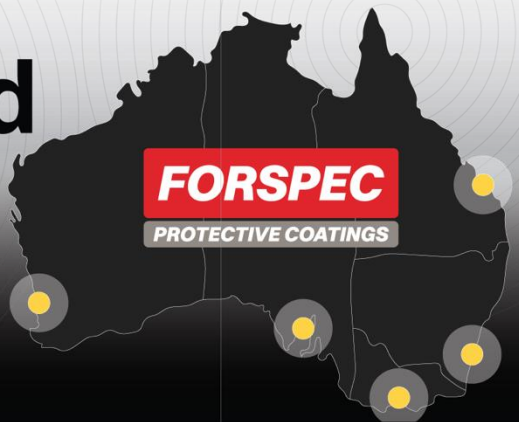

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