

ACTFLEX 5000.

Technical Data Sheet

HIGH PERFORMANCE POLYMER RESIN-BASED SHEET MEMBRANE.

24/04/2024

Description

ACTFLEX 5000 waterproof membrane is a high-performance, self-adhesive sheet membrane that features a polymer resin base, significantly enhancing both environmental friendliness and overall performance compared to traditional asphalt membranes. It is reinforced with a robust cross-laminated high-density polyethylene film, ensuring exceptional waterproofing capabilities. This self-adhesive membrane boasts exceptional adhesive qualities and includes a self-adhesive salvage edge, which facilitates overlapping sheeting to create a watertight overlap seal. ACTFLEX 5000 can be applied in both wet and dry conditions, catering to the diverse needs of various construction projects. It is ideal for external wet areas such as basement walls, planter boxes (root resistant), retaining walls, external lift shaft walls, and non-exposed rooftop areas, providing reliable waterproofing solutions wherever needed.

Advantages

- **Superior Adhesion:** As a non-asphalt self-adhesive, ACTFLEX 5000 ensures full coating with concrete, forming a strong mechanical lock with the structural concrete for enhanced performance.
- **Enhanced Durability:** Its deprecation strength is twice the national standard, providing firm and durable adhesion that stands the test of time.
- **Improved Flexibility:** With high rubber content, the membrane exhibits excellent extension performance, allowing it to accommodate movement without compromising its integrity.
- **Active Waterproofing:** The membrane provides immediate effective initial viscosity upon treatment, ensuring prompt adhesion and active waterproofing performance from the moment of application.
- **Versatile Application:** Suitable for both wet and dry application methods, it meets the diverse needs of various construction projects.
- **User-Friendly Installation:** ACTFLEX 5000 is easy to apply without the need for specialized equipment or open flames, making it accessible for a range of users.
- **Wide Application Range:** Ideal for non-exposed areas, underground and external works, and projects where open flame usage is prohibited.
- **Excellent Chemical Resistance:** Resistant to a wide range of chemicals, ensuring longevity and reliability in diverse environments.
- **Weather-Resistant:** Performs well under various weather conditions, maintaining its integrity and waterproofing capabilities.
- **One-Day Application:** The membrane can be applied in just one day, eliminating the need for a return visit to apply an additional waterproofing layer.
- **High Chemical Resistance:** Offers protection against acids, alkalis, and other pollutants, enhancing durability.
- **Self-Sealing on Contact:** The membrane self-seals upon contact with the substrate, maintaining watertightness for reliable performance.
- **Consistent Membrane Thickness:** Ensures uniform performance and reliability across the entire installation.

No.	Test Item	Test Method	Result			
1	Peel Strength	With reference to ASTM D903-98(2017) and client's requirement	5.28N/mm			
2	Puncture Resistance	ASTM E154/E154M-08a(2019) Section 10	370N			
3	Tear Force	ASTM D624-00(2012)	Transverse	54.9 MPa		
			Lengthways	60.3N		
4	Tensile Test	ASTM D412-16 Method A	Tensile Strength	Coiled material	Transverse	4.89MPa
				Coiled material surface film	Lengthways	4.61MPa
			Elongation at Break	Coiled material	Transverse	57.6MPa
					Lengthways	54.0MPa
				Coiled material surface film	Transverse	310%
					Lengthways	280%
Coiled material surface film	Transverse	310%				
	Lengthways	320%				

No.	Test Item	Test Method	Result	
5	Thickness	ASTM D3767-03(2014) Procedure A	Total Thickness	1.55mm
			Coiled material surface film	0.13mm
6	Low Temperature Flexibility	ASTM D1970/D1970M - 15 Section 7.6	Transverse	No visual cracks
			Lengthways	No visual cracks
7	Peel Strength of Lap Edge	ASTM D1876 - 08(2015) ε1	3.7N/mm	
8	Water Vapor Transmission Rate	ASTM E96/E96M-16 Procedure A	Water Vapor Transmission Rate	0.043g/(m ² ·h)
			Permeance	2.00×10 ⁻⁹ g/(m ² ·s·Pa)

Application Method for Concrete and Masonry Substrates

Preparation of the Substrate:

- Surface Cleaning:** Ensure that the substrate is clean, dry, and free from dust, grease, oil, and any loose particles. Any contaminants should be removed to guarantee proper adhesion.
- Priming:**
 - For optimal adhesion, prime the substrate using ACTFLEX 300 series primer. Apply it evenly across the surface and allow it to dry according to the manufacturer's instructions.
 - If the substrate's moisture content exceeds 4.5%, use ACTFLEX EP 250 primer instead. This primer is specifically designed for high-moisture environments and will enhance the bond between the membrane and the substrate.

Installation of ACTFLEX 5000:

- Measure and Cut:** Measure the required lengths of ACTFLEX 5000 membrane and cut them to size. Ensure that sufficient overlap is included for joints.
- Application of Membrane:** Position the membrane over the primed surface. For

best results, apply ACTFLEX 5000 in a manner that allows for the self-adhesive edge to make contact with the substrate.

Begin at one edge and carefully roll out the membrane, smoothing it as you go to avoid air bubbles. Use a suitable roller to ensure full contact and adhesion between the membrane and the substrate.

- Overlap Installation:** For overlapping sections, make sure to align the self-adhesive salvage edge properly to create a watertight seal. Press down firmly to ensure adhesion, especially along the seams. Apply a Pressure Seal Strip to the waterproof wall, ensuring that the membrane termination height adheres to AS4654.2 Appendix A. Alternatively, riglets may be utilized for proper termination.
- Final Checks:** Once all sections are installed, visually inspect the membrane for any gaps or areas that may need additional attention. Ensure that all edges are well adhered and that the surface is free from wrinkles or air pockets.

Application Method for Pvc Panel Walls

Preparation of the PVC Panel Surface:

- Surface Preparation:** Begin by lightly sanding down the surface of the PVC panels to remove any existing glaze. This will enhance the bond between the primer and the panels, ensuring better adhesion of the waterproof membrane.
- Cleaning:** After sanding, clean the surface thoroughly to remove any dust, debris, or contaminants. Use a clean, dry cloth to wipe down the panels, ensuring they are completely free of particles.
- Priming:** Apply ACTFLEX 300 primer to the prepared surface of the PVC panels. Use a roller or brush to ensure an even application, covering the entire area where the ACTFLEX 5000 membrane will be installed. Allow the primer to dry as per the manufacturer's instructions before proceeding to the next step. This typically involves waiting until the primer is tacky but not wet.

Installation of ACTFLEX 5000 on PVC Panel Walls:

- Measure and Cut:** Measure the required lengths of ACTFLEX 5000 membrane according to the dimensions of the PVC panels. Cut the membrane to size, ensuring to account for overlaps at the seams.
- Application of Membrane:** Position the membrane against the primed PVC panel surface. Begin at one end and carefully roll the membrane out along the wall, ensuring that the self-adhesive side makes full contact with the primed area.
- As you apply the membrane, use a suitable roller to smooth it down, ensuring there are no air pockets or bubbles trapped underneath.

Overlap Installation: For any overlaps, align the self-adhesive salvage edge properly to create a watertight seal. Firmly press down along the seam to ensure it adheres well, maintaining full contact with the underlying surface.

Apply a Pressure Seal Strip to the waterproof wall, ensuring that the membrane termination height adheres to AS4654.2 Appendix A. Alternatively, riglets may be utilized for proper termination.

Final Checks: Inspect the entire installation for any gaps, air bubbles, or areas that may need additional pressing. Make sure that all edges and seams are securely adhered.

Packaging

- 1m x 20m

Backfilling

Before backfilling, it's essential to install HiFlow Drainage Cells against the ACTFLEX 5000 waterproof membrane to facilitate efficient drainage and manage water flow away from the structure, reducing hydrostatic pressure. Use clean, granular fill material for backfilling, avoiding heavy clay or expansive soils

that can retain moisture. Backfill in layers, compacting each layer to ensure stability, and protect the membrane during the process. Finally, grade the area to promote proper drainage away from the structure, preventing water pooling and ensuring the longevity of the waterproofing system.

Limitations

- **Temperature Sensitivity:**
ACTFLEX 5000 is sensitive to extreme temperatures. Application in very cold or very hot conditions can affect its adhesion and overall performance. It is advisable to avoid installation during extreme weather conditions.
- **Moisture Content:**
The substrate moisture content should not exceed 4.5% when using ACTFLEX 300 primer. If the moisture level is higher, the primer ACTFLEX EP 250 must be used instead, which may limit its application on certain substrates.
- **Non-Exposed Applications:**
ACTFLEX 5000 is primarily designed for non-exposed areas. Continuous exposure to UV light and harsh weather conditions can degrade the material over time.
- **Joint Movement:**
The membrane is suitable for static applications; however, excessive movement in joints or structures may exceed the membrane's capacity to accommodate and could lead to failure.
- **Compatibility:**
Not all substrates are compatible with ACTFLEX 5000. Compatibility testing is recommended for unusual materials to ensure proper adhesion and performance.

Cleaning

Clean up immediately while still wet. Wipe down with solvent to clean tools & equipment. Once dry, is difficult to remove and mechanical means may be necessary. No.1. Observe all OH&S and MSDS information pertaining to safe usage and handling of solvents.

DO NOT discharge product or water from cleaning into sewer or waterways.
DO NOT touch the spill material.

Safety – Whan Handling Do Not Eat, Drink or Smoke

ACTFLEX 500 NP PRIMER is hazardous and may cause skin and/or eye irritations. Use for intended purpose only. Observe good industrial hygiene. Keep all sources of ignition away. Always use in a well-ventilated area and wear Personal Protection Equipment (PPE. Change soiled work clothes and wash hands before breaks and after finishing work. In case of eye contact, rinse with plenty of water: If inhaled, remove to fresh air, if discomfort persists, if any breathing difficulties occur or if swallowed (do NOT induce vomiting), immediately contact Doctor or Poisons Information centre and seek medical attention. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or 0800 764 766 (NZ).

or a doctor for advice. IN TRANSPORT EMERGENCY DIAL 000 – POLICE-FIRE BRIGADE. 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

KEEP OUT OF REACH OF CHILDREN.

DO NOT allow wash water from cleaning or process equipment to enter drains.

DO NOT discharge into sewer or waterways.

DO NOT seal or stopper drums being decontaminated as CO2 gas is generated and may pressurise containers.

Data Sheet

This Technical Data Sheet (TDS) and the Material Safety Data Sheet (SDS) are subject to revision at any time to ensure compliance with relevant Australian Standards and to incorporate advancements in technology. Before use, it is essential to read the most current SDS and TDS thoroughly, as application and performance data may be updated periodically. 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 data provided here is representative but does not constitute a comprehensive specification. For specific projects, it is advisable to consult directly with the company for tailored specifications.

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