



ACTFLEX POLYCRETE.

Technical Data Sheet

ACTFLEX POLYCRETE SCREED AND PATCHING ADDITIVE

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Description

ACTFLEX POLYCRETE is a highly engineered, solvent-free polyurethane resin blend designed for superior strength and durability. It is ideal for a variety of applications, including screeds, ramps, deep and shallow indentations, leveling compounds, sandbanks, and patching. **ACTFLEX POLYCRETE** is an additive that, when mixed with aggregates such as sand, sand and cement, or quartz, enhances the performance of the compound, resulting in a high-strength, durable solution for various uses. The mixture forms a resilient, adaptable compound suitable for a wide range of applications. **ACTFLEX POLYCRETE** mixtures offers excellent adhesion to both polyurethane and cementitious surfaces, ensures efficient water runoff, and effectively levels uneven floors. With a versatile application thickness of 1mm to 80mm, it creates a high-strength screed and patching compound once mixed, providing enhanced performance and structural integrity..

Packaging (Weight)

20kg

ACTFLEX POLYCRETE Properties

Appearance	Translucent Gloss, viscous Liquid	Flash Point	>23°C
Odour	Minimal Solvent Odour	Density @25°C	1-1.2 g/mL
Solvent Resistant	Good	Volatile Content	<70 %(w/w)
Toxicity	Dry Film is not toxic	Work Time, Minimum	45 minutes at 20°C and 50% R.H.
Solubility	Soluble in organic solvent Insoluble in water	Pedestrian Traffic	30 minutes at 20°C and 50% R.H.
Waterproof Time	3 Hours at 25°C and 50% R.H	Application Temperature	6 Hours at 25°C and 50% R.H.
Coverage	20kg Resin/ 150kg Aggregate	Shelf Life	10°C – 30°C.
Usable Period After Opening	Within same day	Compressive Strength with Sand	6 Months
Solids	98%	Compressive Strength with Aggregate	39-42MPa
Cure Time	24 Hours	Flexural Strength	45-55MPa
Full Strength	7 days		9+ MPa
Mixing Ratio	10:1 (10 Part Aggregate/1 Part Liquid Resin)		

Coverage, drying and curing rates are given as a guide only as they can be affected by surface porosity, humidity, temperature, climate conditions, ventilation, application technique and dry film thickness. Improper storage may result in instability of product.

Key Benefits

- Exceptional tensile strength
- Effective adhesion to diverse surfaces
- Facilitates efficient water drainage
- Economical levelling of uneven floors
- Rapid curing time
- Versatility across multiple industries
- Formulating a screed for use in both interior and exterior wet environments with minimal falls
- Automotive service bays
- Warehousing and distribution centers

- Applied above a waterproofing membrane on a substrate without falls or water ponding
- Suitable for use as a ramping system in high-traffic areas such as car parks or warehouses
- Engineered to provide durability and resistances to heavy loads
- Industrial flooring
- Food processing facilities

Surface Preparation for ACTFLEX POLYCRETE when used with Aggregate Installation:

Surface Inspection

Begin by inspecting the substrate for visible defects, cracks, or imperfections.

• Crack Preparation (FORSPEC)

- **Surface Cleaning:** Remove all debris, dirt, dust, curing compounds, oils, grease, surface sealers, existing coatings, or any other contaminants from the crack area. Allow pre-treated cracks to cure fully before applying FORSPEC materials.
- **Static Cracks < 2.0mm:** Apply a suitable FORSPEC primer within the crack, extending 200mm on both sides. Once the primer is dry, apply two coats of **ACTFLEX 989 CWP**.
- **Static Cracks > 2.0mm (Using FORSPEC SA Tape):** Apply a suitable FORSPEC primer across the crack (200mm). Once dry, centrally place FORSPEC SA Tape over the crack, using the FORSPEC Brass and Small Hand Rollers to ensure uniform adhesion and eliminate air bubbles. Apply two coats of **ACTFLEX 989 CWP**, ensuring the tape overlap is at least 50mm.
- **Static Cracks > 2.0mm (Using FORSPEC MS PRO):** Grind the crack to a minimum width and depth of 6mm. Apply an appropriate backer rod or bond breaker tape, then apply **FORSPEC MS PRO** Sealant.

Tool the sealant flush, cover with bond breaker tape, and apply two coats of ACTFLEX 989 CWP after 1-2 hours of curing.

- **Additional Crack Rectification Methods:** Use **PROBOND 1100PS, PROBOND 1100, CRACK PRO 1200PS, or CRACK LOCK E400L**. Refer to the product data sheets at www.forspec.com.au.

• Moisture Level Assessment

- Use a moisture meter to assess the substrate's moisture content.
- 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 generally indicates high moisture, but always adhere to Australian Standards.

• Grinding and Scarifying (If needed)

- If the surface is rough, uneven, or contains existing coatings, grinding or scarifying may be required to achieve a smooth and level surface.
- Use appropriate equipment to remove contaminants, delaminated coatings, or high spots, ensuring the surface is ready for the screed application.

ACTFLEX POLYCRETE Mixing Ratios

Mixing Ratios: **(DO NOT MIX WITH WATER)**

1. DRY Sand and Cement Mix Ratios:

- Use a 3:1 or 4:1 ratio of DRY sand and cement mix or aggregate such as river sand
- 2. For 1.6L of **ACTFLEX POLYCRETE** liquid per 20kg of aggregate, the ratio is 1:12.5.
 - For 2L of **ACTFLEX POLYCRETE** liquid per 20kg of aggregate, the ratio is 1:10.

3. Working Time:

- Once mixed, the product must be worked within a 30-40-minute time frame.

4. Application Technique:

- The mix must be thoroughly worked in using a steel float trowel.

COVERAGE - A combination of 20 kilograms of sand and cement, along with 1.6L-2L liters of **ACTFLEX POLYCRETE** applied at a 10mm thickness, is estimated to cover approximately 1 square meter of area.

Application

Surface Preparation: Prior to the application of the membrane, it is essential to clean the surface by wiping it down with xylene or alcohol to remove any contaminants that could affect adhesion.

Mix Preparation:

- Combine 20 kg of dry sand and cement with 1.6L to 2L of **ACTFLEX POLYCRETE** Liquid.
- The liquid-to-aggregate ratio influences the consistency of the mix; a higher liquid ratio produces a denser screed or patching compound.

Manual Mixing:

- In a clean bucket, add the required amount of **ACTFLEX POLYCRETE** Liquid, then slowly add the dry sand, cement, or aggregates, while mixing at a low RPM for 2-3 minutes.
- Ensure complete homogenization of the aggregates with the **POLYCRETE** Liquid.
- Confirm that the correct mixing ratio is adhered to. For any uncertainties, consult a FORSPEC representative.
- Always wear appropriate Personal Protective Equipment (PPE) during the mixing process.

Mechanical Mixing:

- Combine 20 kg of dry sand and cement with 1.6L to 2L of **ACTFLEX POLYCRETE** Liquid.
- Do not exceed 60 kg of mixed material per batch.
- A higher liquid-to-aggregate ratio results in a denser screed or patching compound.
- If using a mechanical mixer, clean the equipment every 30 minutes with alcohol or xylene to prevent material adhesion and ensure optimal performance.
- In temperatures exceeding 30°C, clean the mixer after every batch to maintain consistency.

Priming the Substrate:

- Prior to applying the wet **POLYCRETE** mix, prime the substrate with a full, generous coat of **ACTFLEX POLYCRETE** Liquid.

- Ensure that the primer is fully covered, but do not allow it to dry before applying the wet mix.

Application of Wet Mix:

- Trowel the wet **POLYCRETE** mix to the desired thickness, ranging from 1mm to 80mm in a single application, as required by the job.
- It is recommended to first mix one bag of **POLYCRETE** to become familiar with the workability and drying time, as it differs from traditional screed applications.
- During installation, ensure sufficient compression to achieve a dense, well-adhered screed.
- If the mix starts to dry, do not continue to use it—mix a fresh batch.

Limitations

1. **Substrate Condition:** **ACTFLEX POLYCRETE** requires a clean, dry, and sound substrate for proper adhesion. It is not suitable for application over substrates that are contaminated with oils, grease, or other substances that may inhibit bonding.
2. **Temperature Sensitivity:** Do not apply **ACTFLEX POLYCRETE** in temperatures below 5°C or above 30°C. Extreme temperatures may affect the curing and performance of the product.
3. **Moisture Content:** Excessive moisture in the substrate (over 80% relative humidity) may interfere with the bond. It is recommended to assess the moisture content of the substrate before application.
4. **Mix Ratio:** Maintaining the correct mix ratio of **ACTFLEX POLYCRETE** Liquid to dry sand and cement is crucial. Deviating from the specified ratio may result in a mix that is either too wet or too dry, leading to poor performance or curing issues.
5. **Curing Time:** The curing time can be affected by environmental factors such as humidity and temperature. Proper curing is essential to achieve optimal performance, and it is important not to apply heavy traffic or load until the product has fully cured.
6. **Not Suitable for Direct Exposure to UV:** **ACTFLEX POLYCRETE** is not designed for direct exposure to UV radiation or extreme weather conditions once applied. For areas exposed to UV, it may require additional protective coatings.
7. **Storage and Handling:** **ACTFLEX POLYCRETE** should be stored in a cool, dry environment. Prolonged exposure to moisture or direct sunlight may reduce the shelf life of the product.
8. **Not for Use Over Active Leaks:** **ACTFLEX POLYCRETE** should not be applied over areas with active water leaks without first addressing the underlying issue.

Health and Safety, Storage

Health and Safety:

When handling **ACTFLEX POLYCRETE**, it is essential to follow all safety precautions. Always wear appropriate personal protective equipment (PPE), including gloves, eye protection, and a dust mask, to avoid skin contact and inhalation of dust or fumes. In case of skin contact, wash affected areas immediately with soap and water. If eye contact occurs, flush with water for at least 15 minutes and seek medical attention if irritation persists. If inhaled, move to fresh air and seek medical attention if symptoms develop. Always follow the safety guidelines and instructions on the product's Safety Data Sheet (SDS) for detailed health and safety measures.

Storage:

ACTFLEX POLYCRETE should be stored in a cool, dry, and well-ventilated area, away from direct sunlight and sources of heat. Ensure that the product is kept in its original, sealed container to prevent contamination. Keep containers tightly closed when not in use. Store away from incompatible materials, such as strong acids or bases, and keep out of reach of children. Ensure the product is used within its shelf life, as prolonged exposure to extreme conditions may reduce its effectiveness.

Cleaning

To clean tools and equipment used with **ACTFLEX POLYCRETE**, it is important to act promptly before the product sets. Clean immediately after use with a solvent such as xylene or alcohol while the product is still wet. Use a clean cloth or sponge to remove any residue. For mechanical mixers, ensure all surfaces are thoroughly

cleaned by running the solvent through the equipment and wiping down all areas that have come into contact with the product. In cases where the product has dried on surfaces, mechanical cleaning methods or a more aggressive solvent may be necessary. Always dispose of cleaning materials in accordance with local regulations.

Safety Precautions

When handling DO NOT eat, drink or smoke. **ACTFLEX POLYCRETE** is hazardous and may cause skin and eye irritation. Immediately take off all contaminated clothing and thoroughly rinse area that has been in contact with product. Breathing vapours is harmful and may cause asthma like reaction. Use breathing respirators at all times. Organic vapour respirators with particulate pre- filters and powered, air-purifying respirators are NOT suitable. Wear protective gloves, clothing, and safety goggles with side shields and face protection. In case of eye contact, rinse with plenty of water for at least 15 minutes and contact Doctor or Poisons Information Centre. If swallowed do not induce vomiting and immediately contact Doctor or Poisons Information centre on 131 126 (AUS). Avoid release to the environment. Additional information is listed in the Material Safety Data Sheet SDS can be downloaded from www.thewaterproofingshop.com.au.

When handling DO NOT eat, drink or smoke. Always use in a well-ventilated areas and wear Personal Protection Equipment (PPE). Use breathing respirators at all times. Wash hands immediately after use. 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: or if swallowed, 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 containers in a well-ventilated place and tightly closed. 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

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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