ACTFLEX ULTRA SHIELD.

Technical Data Sheet TWO COMPONENT POLYASPARTIC FLOOR COATING 10/10/2025

Description

ACTFLEX ULTRASHIELD is a high-performance polyaspartic coating with a 90% solids composition, designed for exceptional durability and fast curing. This elastomeric solution offers superior resistance to yellowing and is engineered to withstand high-traffic environments, making it ideal for both industrial and commercial applications. It can be directly applied to well-prepared concrete surfaces or used in combination with **FLAKE X** flake systems to create a decorative finish in either flake or solid-color options. ACTFLEX ULTRASHIELD is known for its extended pot life, quick return-to-service time, and outstanding durability, providing robust tensile strength and puncture resistance. Additionally, its unique formulation allows it to bridge hairline cracks and absorb minor substrate movements. Available in UV-stable standard colours and with an option to enhance surface friction, this versatile coating ensures long-lasting, visually appealing floors that remain functional and resilient in demanding environments.

Roller, Brush, or Spray Grade	Colour	Packaging (Weight)		
	CLEAR, CUSTOM COLOURS	4L	20L	40L

ACTFLEX ULTRA SHIELD Advantages and Applications:

- Fast cure time
- High UV stability
- Maintaining permanent flexibility
- Being well-suited for water immersion applications
- Demonstrating commendable resistance to chemicals
- Displaying high strength and puncture resistance
- Providing a seamless membrane, eliminating joints or laps
- Facilitating straightforward repairs and maintenance
- Yields an odourless (subjectively perceived) cured state
- Engineered to deliver enduring protective benefits
- Offers easy application
- Garage floors and various commercial, industrial, or residential flooring contexts
- Flooring within food processing plants
- High-wear and traffic-prone scenarios
- Permanent immersion situations
- Offering robust UV protection
- Exhibiting high abrasion-resistant vehicular traffic durability
- Demonstrating strong hydrostatic resistance
- Can be used with **FLAKE X** system.
- Creates a Luxurious colours high strength finish on the surface.
- Excellent adhesion

ACTFLEX ULTRA SHIELD Properties

Colour	Clear or Coloured	**No Fatigue Cracking**	Pass
Solids Content	90%	**Recoat time at 25°C 50% R.H.**	1-4 Hours
Elongation at Break	<100%	**Hard Through Time at 25°C 50% R.H.**	3.5 Hours
ASTM E96 Moisture Vapour Transmission	Pass	**Full Cure time at 25°C 50% R.H.**	48 Hours
Physical Or Chemical Damage	No	**Application Temperature**	10-30°C
Shore Hardness A	93	**Flash Point**	97°C
Shore Hardness D	56	**Pot Life**	30 mins

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Preparation

Surface Inspection:

- Thoroughly inspect the floor to ensure it is structurally sound, clean, and free of any damage. Check for cracks, holes, or any other surface imperfections that may affect the coating's adhesion or performance.

Cleaning:

- Clean the surface to remove all contaminants such as dust, grease, oil, wax, paint, or any other residues. Use a degreaser if necessary, followed by a thorough rinse with water. The surface must be completely dry before applying **ACTFLEX ULTRASHIELD**.

Surface Preparation:

- **Concrete**: Ensure the concrete is sound, free of laitance, and properly prepared for coating. Use diamond grinding, shot blasting, or mechanical abrasion to achieve a clean, textured surface. The surface should have a profile similar to CSP-2 or CSP-3 for proper adhesion.
- **Old Coatings**: If the surface is previously coated with paint or another resin, ensure complete removal of the old coating using suitable stripping methods such as sanding or abrasive blasting.

Crack and Repair Work:

- Any cracks or spalling must be repaired using **FORSPEC Concrete Repair Systems**. These systems provide durable and reliable repairs to ensure the surface is level and structurally sound before applying **ACTFLEX ULTRASHIELD**. Allow the repaired areas to cure fully before proceeding with the coating application.

Moisture Testing:

- Ensure the concrete has a moisture content below 4%. Moisture can negatively impact the adhesion of the coating. Allow the floor to dry for at least 3-5 days without rain or water exposure before proceeding with application.

Priming

Porous Surfaces with Moisture Content Below 4.5%:

- For porous surfaces with a moisture content of less than 4.5%, use **ACTFLEX 700 PU PRIMER**. Apply a coat at a Dry Film Thickness (DFT) of 0.2mm. Ensure the primer is evenly spread over the surface, providing a uniform base for the application of **ACTFLEX ULTRASHIELD**.
- **Porous Surfaces with Moisture Content Below 4.5% (Alternative Primer):**
- Alternatively, for porous surfaces, **ACTFLEX EP 250 PRIMER** can be used. Apply at a DFT of 0.2mm. This primer is specifically designed for porous surfaces, offering superior adhesion and durability.

High Moisture Content Above 4.5%:

- For areas with a moisture content exceeding 4.5%, apply **ACTFLEX EP 250 PRIMER** in two coats. Ensure the first coat is applied evenly and allowed to cure as per the manufacturer's instructions before applying the second coat. This double-layer application will provide an effective moisture barrier and a strong foundation for the **ACTFLEX ULTRASHIELD** coating.

Application Notes:

- Ensure that each primer coat is fully cured before applying subsequent layers or the **ACTFLEX ULTRASHIELD**.
- Always follow the manufacturer's instructions for curing times and application conditions to achieve the best results.

Application Instructions

1. General Application Procedure:

- **Substrate Preparation**: Ensure thorough substrate preparation is executed to achieve successful outcomes. Follow standard protocols for steel or concrete, and meticulously address joints, corners, and other surfaces.
- **Component Mixing:** Before blending both components, individually mix each component at a low speed for approximately 1 minute.
- **Mixing Ratio:** Maintain the recommended 1:1 mixing ratio. Utilize a drill homogeneously for consistent blending. Xylene may be incorporated up to 10% for adjustments if needed.

2. FLAKE X Vinyl flake Decorative Coating:

- **Direct Application:** Apply **ACTFLEX ULTRA SHIELD** directly onto the concrete. In cases of concrete exhibiting high absorbency ("hungry" concrete), two coats may be requisite.
- **Flake Incorporation:** While applying **ACTFLEX ULTRA SHIELD** to the substrate, concurrently integrate FLAKE X as desired for the desired outcome.
- **Drying and Excess Flake Removal:** Allow 24 hours for drying. Subsequently, eliminate any surplus flakes from the surface.
- Scrape off and vacuum any excess flakes. For a smoother finish, consider using a poly vac before applying **ACTFLEX ULTRA SHIELD CLEAR**.
- **Clear Topcoat Application:** Apply a single coat of **ACTFLEX ULTRA SHIELD** clear to the treated surface. Another coat of **ACTFLEX ULTRA SHIELD CLEAR** can be applied if deemed necessary.

3. Concrete - Chip or Granite Look:

- Following the Procedure: Employ the above procedure as a foundation.
- Chips Incorporation: Broadcast decorative chips onto the final wet coat of **ACTFLEX ULTRA SHIELD**.
  Excess Chip Removal: Once dry, eradicate excess chips using methods such as vacuuming, blowing, or sweeping prior to the application of the clear **ACTFLEX ULTRA SHIELD** topcoat.

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4. Car parks, Laboratories, Gymnasiums, Podiums, Factories and faculties:

- **Direct Application:** Apply **ACTFLEX ULTRA SHIELD** directly onto the cured primed surface
- **Application Tools:** Employ a roller or squeegee for floor areas and a brush for upturn areas.
  Second Coat Recommendation: For optimal inter-coat adhesion bonding and to obviate the necessity for re-priming, it's advisable to apply a second coat of **ACTFLEX ULTRA SHIELD** within 24 hours.
- If nonslip rating is needed, Broadcast **ACTFLEX ANTI SLIP** into the first coat while wet. After first coat cures, remove any excess **ACTFLEX ANTI SLIP** before applying second coat

Application Rates

	DFT RATE	Number of Coats	Recoat Time at 25°C 50%RH	Full Cure Time at 25°C 50%RH
Wall Applications	0.10mm or 100 microns	1	4 Hours	48 Hours After Final Coat
Colour	0.20mm or 200 microns	1	4 Hours	48 Hours After Final Coat

Coverage Drying and Curing

Concrete Surfaces (with Primer):

- Coverage: 7-9m² per litre on porous concrete surfaces when applied over primer.

Non-Porous Surfaces:

- Coverage: 9-10m² per litre on non-porous surfaces.

Direct Substrate Application:

- **First Coat (Primer)**: Apply a single coat of ACTFLEX ULTRASHIELD with a coverage of 4-6m² per litre. Allow this primer coat to dry before proceeding to the next coat.
- **Second Coat**: Apply the second coat at a coverage of 8-10m² per litre for full coverage, ensuring a solid finish.

Using ACTFLEX EP 250 Epoxy Primer:

- For challenging surfaces or inadequate substrate preparation, use 1 coat of ACTFLEX EP 250 Epoxy Primer. Once fully cured, apply ACTFLEX ULTRASHIELD at 8-10m² per litre to achieve a Dry Film Thickness (DFT) of 200 microns (0.2mm).

Drying and Curing Time:

- **Touch Dry**: Within 1 hour.
- **Foot Traffic Safe**: After 2-3 hours.
- **95% Cure**: Achieved within 24 hours.
- **Full Cure**: Complete after 48 hours.

Limitations

- Gel time and thin-film dry times are heavily dependent on temperature, humidity and film thickness.
- Thicker films will take longer to cure through. High humidity and temperature will shorten thin-film cure time.
- Mix smaller batches in extreme conditions.
  Test the Gel time and thin-film dry times before commencing a large job.
  Stop application 5 minutes before the product gels in order to minimize air-bubble entrapment.
- Not to be used as a UV blocker to prevent discolouration of non-colour fast products underneath. The only way to ensure colour-fastness of the product underneath is to use a coloured **ACTFLEX ULTRA SHIELD**, daily foot traffic, footwear that can pierce the membrane or machinery.

Clean Up

- 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.

Storage

9 months in the original unopened containers stored in cool, dry conditions 10-22°C. Protect the material against moisture and direct sunlight. Storage above this temperature may reduce storage life. Uncured product is combustible so keep all sources of ignition away from product and its vapours and DO NOT store in pits, depressions, basements or areas where vapours may be trapped. **ACTFLEX ULTRA SHIELD** is sensitive to airborne moisture. It is preferable to use all contents of the container after opening.

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Safety Precautions

ACTFLEX ULTRA FC is hazardous and may cause skin and/or eye irritations. Always use in a well-ventilated area and wear PPE gloves, safety boots and protective eyewear (against splashes). Use breathing respirators at all times. Organic vapour respirators with particulate pre- filters and powered, air-purifying respirators are NOT suitable. 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 the Poisons Information centre and seek medical attention. KEEP OUT OF REACH OF CHILDREN. Uncured product is combustible so keep all sources of ignition away from product and its vapours. 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

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 info@forspec.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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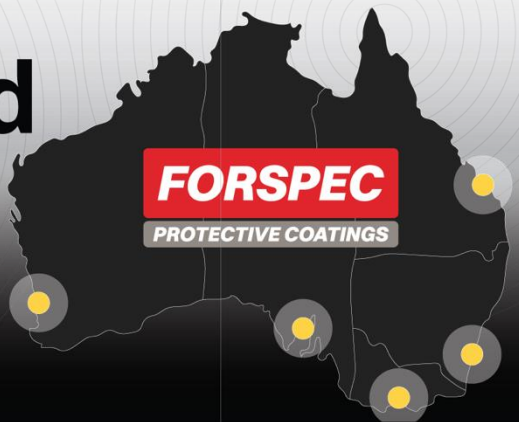

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