

ACTFLEX ULTRA SHIELD

TECHNICAL DATA SHEET TWO COMPONENT POLYASPARTIC FLOOR COATING

DESCRIPTION

ACTFLEX ULTRASHIELD is a high-performance polyaspartic coating boasting a 90% solids composition. This elastomeric solution offers remarkable durability, fast-curing properties, and impressive resistance against yellowing. Engineered to withstand rigorous traffic, it demonstrates exceptional toughness. This versatile coating can be directly applied onto meticulously prepared concrete surfaces or used in conjunction with FLAKE X flake systems for a decorative coating. The outcome is visually appealing and enduring floors, attainable in both flake-finish or solid-color configurations. Notably, ACTFLEX ULTRASHIELD encompasses desirable attributes such as an extended pot-life, swift return-to-service interval, robust tensile strength, and resistance against punctures. Its unique formulation facilitates the bridging of hairline cracks and the absorption of minor substrate movements. Available in a spectrum of UV-stable standard colours, this coating accommodates a variety of applications, including an option designed to enhance surface friction.

ROLLER, BRUSH OR SPRAY GRADE

COLOUR

CLEAR, CUSTOM COLOURS

PACKAGING (weight)

• 4L, 20L, 40L

ACTFLEX ULTRA SHIELD IS SUITABLE FOR THE FOLLOWING 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 (AS2700)	No Fatigue Cracking	Pass
Solids Contents	90%	Recoat Time At 25°C 50%RH	1-4 Hours
Elongation At Break	<100%	Hard Through Time At 25°C 50% RH	3.5 Hours
ASTM E96 Moisture Vapour Transmission	Pass	Full Cure Time At 25°C 50% RH	48 Hours
Physical Or Chemical Change	No	Application Temperature	10 - 30°C
Shore Hardness A	93	Flash Point	97°C
Shore Hardness D	56	Pot Life	30mins

PREPARATION

1. Adherence to Standards: Ensure that all surfaces are installed following the manufacturer's guidelines and relevant Australian Standard(s), and possess structural integrity.
2. Surface Condition: Prior to application, the surface must meet specific criteria:
 - Clean: Free from oils, grease, wax, mold, dust, curing compounds, release agents, coatings, adhesive residues, loose particles, rust, and paints.
 - Dry: Completely devoid of moisture.
 - Smooth: Even and uniform surface.
 - Contaminant-Free: Unaffected by preceding trade activities to ensure a sound and clean substrate.
3. Surface Corrections: Rectify any irregularities on the surface:
 - Remove High Points: Eliminate any raised areas that could potentially puncture the membrane.
 - Defect Rectification: Address defects like blowholes and surface imperfections using a high-strength, non-shrink mortar.
 - Solidity: Verify that all applied surfaces, including screeds, are solid and free from crumbliness.
4. Skinning Removal: Given the moisture-cured nature of the product, any skinning that occurs in the container should be cut out and discarded.
5. Mixing for Homogeneity: Ensure proper mixture consistency:
 - Thorough Mixing: Employ an electric drill with a suitable mixer attachment, operating at a low speed, to achieve a uniform blend.

PRIMING

- Primer Utilization:
 - Self-Priming Convenience: ACTFLEX ULTRA SHIELD serves as a self-priming option for expedited application on surfaces exhibiting favorable conditions devoid of moisture traces.
 - Enhanced Adhesion and Cost-Efficiency: Opt for application over ACTFLEX EP 250 epoxy primer to elevate adhesion on challenging and inadequately prepared substrates, while simultaneously minimizing system expenditure.
 - Addressing Moisture Concerns: In instances where minor rising damp or low moisture levels are present, it's crucial to employ a double-coating of ACTFLEX EP 250 before proceeding with any ACTFLEX ULTRA SHIELD application.
- Primer Application and Drying:
 - Timely Drying: Ensure that primers are allowed to fully dry within the designated time frame before initiating subsequent coating procedures.
 - Effective Sealing: For absorbent surfaces like porous concrete or sand/cement screeds, it's imperative to meticulously work the priming systems into these materials. This process aids in sealing minute voids and curtailing excessive absorption of ACTFLEX ULTRA SHIELD.
 - Monitoring for Adequacy: Be vigilant for signs of inadequate priming, such as the presence of pin holes that manifest through the waterproofing membrane.

APPLICATION INSTRUCTIONS

1. General Application Procedure:
 - Substrate Preparation: Thorough substrate preparation is a pivotal prerequisite for successful outcomes. Standard preparation protocols for steel or concrete, as well as joints, corners, and other surfaces, must be executed.
 - Component Mixing: Prior to blending both components, it is essential to individually mix each component at a low speed for a duration of 1 minute.
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 FC topcoat.
 - Smooth Finish Enhancement: For a smooth finish, consider sanding the chips before applying the clear ACTFLEX ULTRA SHIELD topcoat.
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 non slip 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 PER COAT	Min 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
Floor & Upturn Applications	0.20mm Or 200 Microns	1	4 Hours	48 Hours After Final Coat

COVERAGE, DRYING AND CURING

- Guiding Factors: It's important to note that coverage, drying, and curing rates are indicative guidelines, subject to influences such as surface porosity, humidity levels, temperature variations, climate conditions, ventilation levels, application methodologies, and dry film thickness.
- Coverage on Concrete Surfaces: ACTFLEX ULTRA SHIELD showcases a coverage rate of **7-9m²** per litre when applied to porous concrete surfaces.
- Coverage on Non-Porous Surfaces: When administered on non-porous surfaces, ACTFLEX ULTRA SHIELD offers a coverage rate of **9-10m²** per litre.
- Direct Substrate Application: For direct substrate application, initiate with a single coat of ACTFLEX ULTRA SHIELD as a primer, rendering a coverage rate of 4-6m² per litre. Let this primer coat dry before proceeding with the application of a second coat, achieving a coverage rate of 8-10m² per litre, followed by a requisite setting and curing duration.
- Utilizing ACTFLEX EP 250 Epoxy Primer: In cases of suboptimal substrate preparation or challenging substrate conditions, it is advisable to apply 1 coat of ACTFLEX EP 250 Epoxy Primer. This serves to establish a clean, dry, and smooth surface for subsequent ACTFLEX ULTRA SHIELD application. Upon the complete curing of the primer, administer ACTFLEX ULTRA SHIELD at an 8-10m² per liter rate to achieve a Dry Film Thickness (DFT) of 200 microns or 0.0200mm.
- Drying and Initial Use: ACTFLEX ULTRA SHIELD attains touch-dry status within 1 hour and becomes safe for cautious foot traffic after 2-3 hours.
- Cure Progression: A 95% cure is reached after 24 hours, culminating in full cure 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 minimise 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.

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.

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.

SAFETY - WHEN HANDLING DO NOT EAT, DRINK OR SMOKE.

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

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 admin@actechpc.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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