

ACTFLEX CRYSTAL COAT

TECHNICAL DATA SHEET

TWO COMPONENT EPOXY FLOOR COATING

DESCRIPTION

ACTFLEX CRYSTAL COAT Epoxy Floor Coating is a two-component High Build, 100% solids (solvent-free), cycloaliphatic, low viscosity epoxy resin formulated for heavy-duty, decorative, institutional, and commercial flooring. Its unique chemistry minimizes colour change and provides long-lasting protection. This 100% solids cycloaliphatic epoxy system is designed for use in the civil and construction industries. It is solvent-free, low viscosity, and suitable for application on concrete, metal, and timber surfaces. It can be filled with sand and other fillers to create a super-strong repair mortar, render, or grout. Additionally, when mixed with suitable coloured oxides, it can be utilized for non-slip, highly durable flooring. ACTFLEX CRYSTAL COAT can be applied within a thickness range of 0.2mm to 1mm.

**ROLLER,
BRUSH OR
SPRAY GRADE****COLOUR**

CLEAR, CUSTOM COLOURS

PACKAGING (weight)

• 30L

ACTFLEX CRYSTAL COAT IS SUITABLE FOR THE FOLLOWING APPLICATIONS:

- Two-component epoxy resin
- 100% solids formulation (solvent-free)
- Cycloaliphatic chemistry
- Low viscosity for easy application
- Designed for heavy-duty flooring
- Suitable for decorative flooring applications
- Ideal for institutional and commercial settings
- Minimizes color change over time
- Provides long-lasting protection
- Solvent-free formulation
- Low viscosity allows for smooth application
- Can be used on concrete surfaces
- Suitable for metal flooring applications
- Compatible with timber surfaces
- Can be filled with sand for added strength
- Other fillers can be added to create repair mortar
- Can be mixed with colored oxides for non-slip flooring
- Offers high durability
- Versatile application options
- Provides a seamless finish
- Can add MICA pigment for metallic colours

ACTFLEX CRYSTAL COAT PROPERTIES

Colour	Clear Or Coloured (AS2700)	No Fatigue Cracking	Pass
Mixing Ratio	2:1	Recoat Time At 25°C 50%RH	4 Hours
Solids Contents	100%	Hard Through Time At 25°C 50% RH	4 Hours
Elongation At Break	<100%	Full Cure Time At 25°C 50% RH	5 Hours
Physical Or Chemical Change	No	Application Temperature	10 - 30°C
Shore Hardness A	95	Flash Point	97°C
Shore Hardness D	60	Pot Life	45 Mins
Abrasion Resistant	98 - ASTM C501-84, H18 Wheel @ 1,000rpm With 1,000g Weight		

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 CRYSTAL COAT serves as a self-priming option for expedited application on surfaces exhibiting favourable 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 CRYSTAL COAT 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 CRYSTAL COAT.
 - 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: 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 2:1 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 CRYSTAL COAT directly onto the concrete. In cases of concrete exhibiting high absorbency ("hungry" concrete), two coats may be requisite.
 - Flake Incorporation: While applying ACTFLEX CRYSTAL COAT 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 CRYSTAL COAT CLEAR.
 - Clear Topcoat Application: Apply a single coat of ACTFLEX CRYSTAL COAT clear to the treated surface. Another coat of ACTFLEX CRYSTAL COAT 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 CRYSTAL COAT.
 - Excess Chip Removal: Once dry, eradicate excess chips using methods such as vacuuming, blowing, or sweeping prior to the application of the clear ACTFLEX CRYSTAL COAT topcoat.
 - Smooth Finish Enhancement: For a smooth finish, consider sanding the chips before applying the clear ACTFLEX CRYSTAL COAT topcoat.
4. Car parks, Laboratories, Gymnasiums, Podiums, Factories and faculties:
 - Direct Application: Apply ACTFLEX CRYSTAL COAT 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 CRYSTAL COAT 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 CRYSTAL COAT showcases a coverage rate of 5m² per litre when applied to porous concrete surfaces.
- Coverage on Non-Porous Surfaces: When administered on non-porous surfaces, ACTFLEX CRYSTAL COAT offers a coverage rate of 6m² per litre.
- When utilizing it as a high-build epoxy for decorative finishes with mica pigments, expect coverage of approximately 2 square meters per liter.
- 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 CRYSTAL COAT application. Upon the complete curing of the primer, administer ACTFLEX CRYSTAL COAT at an 5m² per litre rate to achieve a Dry Film Thickness (DFT) of 200 microns or 0.200mm.
- Drying and Initial Use: ACTFLEX CRYSTAL COAT attains touch-dry status within 4 hour and becomes safe for cautious foot traffic after 4 hours.
- Cure Progression: A 95% cure is reached after 24 hours, culminating in full cure after 48 hours.

LIMITATIONS

- Minor Color Change: Expect slight color alteration and surface chalking over time when exposed to UV light.
- Potential Bubbling: There's a risk of bubbling or cratering on concrete surfaces prone to outgassing from high temperatures or moisture content. To mitigate this, prime the concrete with ACTFLEX CRYSTAL COAT or apply a thin coat of Aralox first. Ensure thorough surface coverage, filling all pores and holes.
- Second Coat Timing: Apply the second coat within 4 hours to 4 weeks after the first coat, ensuring the surface is clean and dust-free. If the waiting period exceeds 4 weeks, mechanically remove any shiny surfaces with an 80 grit sanding disc before recoating.
- Pot-life Management: Avoid mixing excessive amounts at once to prevent shortening the pot-life. For large areas, pour the mixed product directly onto the concrete and then roll it in.
- Primer Selection: Always use ACTFLEX CRYSTAL COAT on old, oily, or slightly damp concrete surfaces before applying Aralox.
- Temperature Considerations: Do not apply if the substrate temperature is less than 3°C above the dew point.
- Timing and Weather: Avoid applying late in the afternoon during cold, damp weather conditions.

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 CRYSTAL COAT 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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