ACTFLEX CRYSTAL COAT.

Technical Data Sheet TWO COMPONENT EPOXY FLOOR COATING 07/02/2025

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, Squeegee

Colour

CLEAR, CUSTOM COLOURS

Packaging (Weight)

30L (20L part A, 10L part B)

Applications

- Industrial & Commercial Flooring: Warehouses, factories, retail stores, and showrooms.
- Institutional Spaces: Hospitals, schools, labs, and pharmaceutical facilities.
- Food & Beverage Industry: Kitchens, breweries, and food processing areas.
- Construction & Civil Projects: Car parks, ramps, and structural protection.
- Metal & Timber Surfaces: Durable coating for heavy-use areas.
- Non-Slip Flooring: Enhanced grip when combined with fillers.

Advantages

- 100% Solids, Solvent-Free: High-build, durable finish with minimal VOCs.
- High Strength & Durability: Withstands heavy traffic and mechanical wear.
- Cycloaliphatic Epoxy Technology: Superior UV and chemical resistance with minimal color change.
- Versatile Application: Suitable for concrete, metal, and timber surfaces.
- Seamless & Hygienic Finish: Ideal for food, medical, and industrial environments.
- Customizable: Can be filled with sand or oxides for strength, non-slip properties, or decorative finishes.
- Low Viscosity: Easy to apply with excellent substrate penetration.
- Adjustable Thickness: Can be applied from 0.2mm to 1mm.
- Luxurious Metallic Flooring: Compatible with FORSPEC Metallic Pigments and Paste for high-end decorative finishes.

ACTFLEX CRYSTAL COAT Properties

Colour	Clear or Coloured (AS2700)	**No Fatigue Cracking**	Pass
Mixing Ratio	2:1	**Recoat time at 25°C 50% R.H.**	4 Hours
Solids Content	100%	**Hard Through Time at 25°C 50% R.H.**	4 Hours
Elongation At Break	<100%	**Full Cure time at 25°C 50% R.H.**	5 Hours
Physical or Chemical Damage	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		

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Preparation

- **Substrate Condition:** Ensure the surface is dry, clean, and structurally sound, free from grease, oil, dust, or contaminants.
- **Concrete Preparation:** Mechanically grind or shot-blast the surface to achieve proper adhesion (minimum CSP 2-3). Avoid acid etching.
- **Moisture Testing:** Ensure the concrete moisture content is below 4%. If higher, apply a moisture barrier primer.
- **Crack & Joint Repair**: Use FORSPEC Epoxy Repair Adhesives, selecting the appropriate grade based on crack width.
- **Metal & Timber Preparation:** Clean, degrease, and abrade the surface before priming with an appropriate ACTFLEX primer.

Priming

Primer Selection:

- **For substrates with moisture content below 4.5% →** Use **ACTFLEX 700 PU PRIMER**.
- **For substrates with moisture content above 4.5% →** Use **ACTFLEX EP 250** (2 coats) as a moisture barrier.

Mixing & Application for ACTFLEX 700 PU PRIMER:

1. **Mixing:**
   - Stir the primer thoroughly before use.
   - Do not dilute or mix with other substances.
2. **Rolling Application:**
   - Apply a thin, even coat using a roller or squeegee.
   - Ensure full coverage without puddling.
   - Allow to dry for **4-6 hours** before proceeding with the topcoat.

Mixing & Application for ACTFLEX EP 250 (Moisture Barrier, 2 Coats):

1. **Mixing:**
   - Combine **Part A** and **Part B** in a **2:1** ratio by volume.
   - Use a low-speed mixer for **2-3 minutes** until fully blended.
   - Avoid over-mixing to prevent air entrapment.
2. **Rolling Application:**
   - Apply the first coat evenly using a roller or squeegee.
   - Allow **6 hours** of drying time before applying the second coat.
   - Apply the second coat in the same manner, ensuring full coverage.
   - Allow **24 hours** of curing before applying ACTFLEX CRYSTAL COAT.

Application Instructions

General Mixing Guidelines (For All Applications):

- **Pre-mixing is required** for all components before combining Part A and Part B.
- Always **mix in batches** that can be applied within **30 minutes** to prevent premature curing.
- Use a **low-speed mechanical mixer** for **2-3 minutes** to ensure a uniform blend.

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1. Standard Epoxy Coating on Substrates

Surface Preparation:

- Ensure the substrate is **clean, dry, and free of dust, oil, or contaminants**.
- Repair cracks using **FORSPEC Epoxy Repair Adhesives** (select based on crack width).
- Prime with **ACTFLEX 700 PU PRIMER** for dry substrates or **ACTFLEX EP 250** for moisture above 4.5%.

Mixing & Application:

1. Pre-mix **Part A** separately before combining with **Part B**.
2. Stir thoroughly for **2-3 minutes** with a low-speed mixer.
3. Pour the mixed epoxy onto the floor and spread using a **notched squeegee**.
4. Back-roll with a **short nap roller** for even distribution.
5. Allow **24 hours** of curing before light traffic, **7 days** for full cure.

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2. Coloured Epoxy Floor Coating

Surface Preparation:

- Follow the **standard preparation and priming process**.

Mixing & Pigment Addition:

1. Pre-mix **Part A** before adding **FORSPEC Pigment Paste** or **Coloured Oxides**.
2. Stir well, then add **Part B** and mix for **2-3 minutes**.
3. Mix only enough material that can be applied within **30 minutes**.

Application:

1. Pour the coloured epoxy onto the floor and spread using a **squeegee**.
2. Back-roll with a **short nap roller** to ensure a smooth finish.
3. Apply an **optional second coat** for enhanced colour depth.
4. Allow **24 hours** before light traffic, **7 days** for full cure.

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3. Metallic Epoxy System for Luxury Finish

Surface Preparation:

- Follow the **standard preparation and priming process**.

Mixing & Metallic Effect Creation:

1. Pre-mix **Part A** before adding **FORSPEC Metallic Pigments** or **Metallic Paste**.
2. Stir slowly to maintain the desired swirling effect.
3. Add **Part B** and mix thoroughly for **2-3 minutes**.
4. Mix in small batches to ensure **30-minute working time**.

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Application:

1. Pour the metallic epoxy in **ribbons** over the surface.
2. Use a **trowel or squeegee** to spread and blend the metallic colours.
3. Back-roll with a **soft roller** for a seamless finish.
4. Allow **24 hours** of curing before light traffic, **7 days** for full cure.

Optional: Apply a clear coat of ACTFLEX ULTRA FC for extra durability and gloss.

Application Rates

DFT (mm)	Coverage (m² per litre)	Coverage (m² per 10L kit)
0.3mm	3.3 m²/L	101 m² per 30L kit
0.6mm	1.7 m²/L	51 m² per 30L kit
1.0mm	1.1 m²/L	33 m² per 30L kit

Coverage Drying and Curing

- **Pot Life (Working Time @ 25°C):** 30 minutes
- **Recoat Time (Between Coats @ 25°C):** 6-24 hours
- **Touch Dry (@ 25°C, 50% RH):** 6-8 hours
- **Light Foot Traffic:** 24 hours
- **Full Cure (Heavy Traffic & Chemical Resistance):** 7 days
- **Environmental Factors:** Cooler temperatures slow curing, warmer conditions accelerate it.
- **Water Exposure:** Avoid within the first 24 hours.
- **Recoating After 24 Hours:** Light mechanical sanding is recommended for proper adhesion.

Limitations

- **Not suitable for application below 10°C** as curing will be significantly slowed.
- **Moisture-sensitive during curing;** avoid water exposure within the first 24 hours.
- **Requires proper surface preparation;** poor adhesion may occur on contaminated or improperly prepared substrates.
- **Must be mixed and applied within its pot life** (approximately 30 minutes at 25°C).
- **Recoating beyond 24 hours** requires light sanding to ensure adhesion.
- **Not UV stable;** requires a UV-resistant topcoat for external applications.
- **Substrate moisture content must be checked**; if above 4.5%, a moisture barrier primer is required.
- **Strict mixing ratios must be followed** to prevent improper curing and performance issues.
- **Not recommended for flexible substrates** or areas with excessive substrate movement.

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 CRYSTAL COAT** is sensitive to airborne moisture. It is preferable to use all contents of the container after opening.

Safety Precautions

ACTFLEX CRYSTAL COAT 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

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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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