RETEK EST.1990
EPOXY COATINGS
Resintek (Pty) LTD 2022/734768/07

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Retek Floor Epoxy Coatings Application Process:

Preparing New or Old Concrete

REMEMBER: Preparation is Key!

The coating can only perform as well as the surface it is bonding to.
Correct floor preparation is essential to ensure your Retek Epoxy Floor Coating achieves optimal appearance, adhesion and long-term durability.

All surfaces must be clean, dry and free of oils, grease, rust, moisture, laitance, and loose or friable material.

Preparing New Concrete

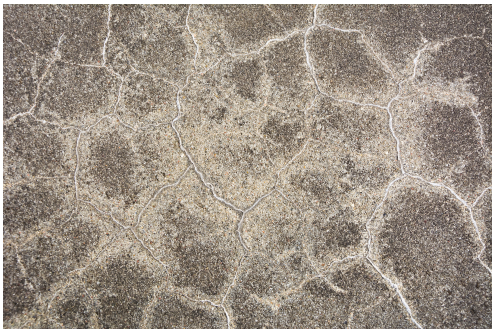
- New concrete must be allowed to cure for a minimum of 28 days before coating. Cold weather and high humidity may extend curing times.
- Power-floated or hand-trowelled smooth (not polished) concrete is suitable for light traffic areas.
- For heavy traffic, industrial, or abrasive environments, diamond grinding is strongly recommended to achieve long-lasting performance.
- If the concrete surface is uneven or rough, use a concrete surface grinder to achieve the correct surface profile for epoxy adhesion.

Efflorescence on New Concrete

New cement-based substrates may exhibit efflorescence, a chalky white residue caused by soluble salts migrating to the surface.

Any dusting, chalking, or efflorescence must be completely removed by sanding or diamond grinding the surface back to hard, clean and sound finish before coating.

Examples of eflorescence:



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Previously Coated Concrete (Currently an Epoxy Coating)

- If the existing coating is sound, well-adhered, intact, and not worn through, flaking, or peeling, follow steps 1 - 5 & 7 of the preparation as specified in the application guide.
- If the existing coating is loose, peeling, blistering, or if adhesion is uncertain, it must be completely removed.
- Removal methods may include:
  - Power washing
  - Mechanical sanding
  - Diamond grinding back to bare concrete

Once the old coating is removed, prepare the surface as new concrete.

Important Disclaimer

Remember, and epoxy coating is only as strong as the surface it bonds to.
For this reason, Retek Epoxy Coatings cannot be held liable for coating failure resulting from inadequate or incorrect surface preparation, which will be deemed as preparation failure.

Floor Epoxy Coatings Application Process:

Step 1: initial Cleaning & Inspection

Sweep the surface to be coated thoroughly to remove all loose debris and dust.
This allows for a detailed inspection of the substrate so that any problem areas can be identified and addressed as outlined in Steps 2 to 4.

Step 2: Crack, Hole & Joint Repairs

Inspect the surface for cracks, holes and joints.

Please note that the primer, epoxy and poly urethane coatings are not designed to fill cracks, joints, level uneven surfaces, or conceal imperfections in the substrate.

Concrete floors naturally contain joints and seams that allow for movement and expansion.

- Fill joints using a suitable joint sealer designed for concrete flooring.
- Fill cracks and holes using Polycell Rockset or another appropriate repair product recommended by your local hardware supplier.
- Always follow the repair product manufacturer's instructions.
- Once all repair materials have fully cured, sand repaired areas back to flat, even surface using 60 - 80 grit sandpaper

Step 3: Degreasing & First Wash

Wash the entire floor using Retek's Power Degreaser to remove surface contaminants.
Thoroughly scrub, sweep and rinse the surface to eliminate all dust, dirt, grease, and residues.
This step serves as the initial general wash.

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Step 4:
While the floor surface is clean and damp, inspect for any signs of water beading or surface filming. These indicate the presence of contaminants such as oil, grease, or silicone, which must be removed before coating.

If contaminated areas are still present after the initial wash:

- Treat affected areas with Retek's Two - Phase Heavy Duty Cleaner.
- Follow the instructions on the product label carefully.
- After treatment, thoroughly rinse the area and reinspect to confirm that all contaminants have been removed before proceeding.

Step 5: Final Rinse & Drying
Rinse the floor two to three times with clean water to flush away all remaining soaps, degreaser, cleaner, soils, residues, and debris. Remove any standing water by sweeping, soaking or vacuuming.
Ensure the floor is completely clean, fully dry, and free of contaminants before commencing the application of any coatings.

Step 6: Application (Retek's Epoxy Concrete Primer)
Retek's Primer, Epoxy, and Poly Urethane systems consist of two components:

- **Part A** - Base product
- **Part B** - Hardner

These components must be mixed strictly in the ratio specified on the product label.
DO not cross-mix primers, epoxies or poly urethane hardners. Each hardner is formulated specifically for its corresponding product and is not interchangeable.

Epoxy Primers are a preparatory coating specifically designed to enhance adhesion by penetrating deeply into the concrete substrate, creating a strong, durable bond for subsequent coating layers.
They also assist in reducing bubbles and pinholes caused by concrete outgassing, resulting in a smoother, more uniform final finish.

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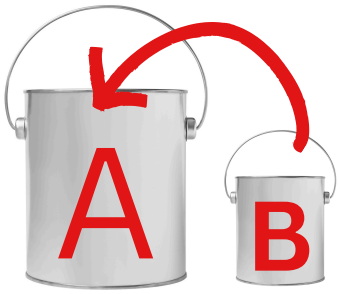
To prepare the primer, add Primer Part B (hardener) to Primer Part A (base product) and mix thoroughly using a flat paddle or low-speed electric mixer.



Avoid excessive agitation to prevent air entrapment and foaming.

During application, stir the mixture periodically to prevent component separation and to maintain a consistent, homogeneous blend throughout the process

Once mixed, allow the primer mixture to stand for 5 - 10 Minutes before commencing application.
The ideal application temperature is 21°C.

- Pot life: Once mixed, the product must be used within 2 hours.

Application Method

- Begin by cutting in along wall edges and around fixtures or objects where they meet the floor, using a 50 - 75mm trim paint brush.
- Apply the epoxy primer using a 225mm mohair epoxy roller, ensuring a thick, even, and uniform coat across the surface.

Cleanup & Drying

- Clean all tools immediately after use with Retek Thinners.
- It is recommended to use a new roller for each coating layer. In many cases, replacing rollers and brushes between coats is more cost-effective than attempting to clean them.
- Allow the primer to dry for approximately 12-24 hours before proceeding with subsequent coatings. Drying times may vary depending on temperature and humidity.

Step 7: Application Heavy-Duty Epoxy / Poly Urethane Application

Add Heavy-Duty Epoxy Part B (Hardener) to Part A (Base Product) and mix thoroughly using a flat paddle or low-speed electric mixer.
Avoid excessive agitation to prevent air entrapment and foaming. During application, stir periodically to maintain a consistent blend and prevent component separation.

Once mixed, allow the epoxy to stand for 5-10 minutes before commencing application.
The Ideal application temperature is 21°C.

- Pot Life: Once mixed, the epoxy must be used within 2 hours.

Application Method

- Depending on the floor requirements and colour selection, apply one to two even coats of Retek's Heavy-Duty Epoxy or Poly urethane.
- Allow a minimum of 24 hours between coats.

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Drying & Curing Times

- Allow the floor to dry for at least a minimum of 24 hours before foot traffic.
- Cooler temperatures may extend curing times.

Curing Guide

- Touch Dry: 24 Hours
- Light Traffic: 48 Hours
- Full Cure: 7 Days

Avoid heavy traffic, mechanical loads, or chemical exposure until the coating has fully cured.

Important Tips

- Surface preparation is critical. The performance and durability of the coating depend entirely on the quality of the prepared substrate.
- Never cross-mix hardeners between products. Each product uses a specific hardener and is not interchangeable.
- Use new or thoroughly clean tools for each coat to maintain finish quality and prevent contamination.
- Always adhere strictly to pot life and curing times as specified. Failure to do so may result in coating defects or premature failure.

Non-Slip (Grit / Bead) Application

- Follow steps 1 - 5 to thoroughly prepare the floor surface.
- Apply Retek Epoxy Concrete Primer in accordance with Step 6 and allow it to dry completely.
- Apply Retek Heavy-Duty Epoxy or Retek Poly Urethane Coating.
- While the coating is still wet, evenly broadcast grit, stone or glass beads over the surface.
- Adjust the broadcast rate to achieve the desired light, medium or heavy slip-resistance.
- Allow the coating to dry for a minimum of 24 hours.
- Once dry , remove all loose, unbonded beads by sweeping or wiping the surface with a soft broom.
- Apply the final topcoat to encapsulate the aggregate and lock the non-slip finish in place.

Application of Final Topcoat *(Retek Heavy-Duty Epoxy / Retek Poly Urethane)*

Add Heavy-Duty Epoxy Part B (Hardener) to Part A (Base Product) and mix thoroughly using a flat paddle or low-speed electric mixer.

Avoid excessive agitation to prevent air entrapment and foaming. During application, stir periodically to maintain a consistent blend and prevent component separation.

Once mixed, allow the epoxy to stand for 5-10 minutes before commencing application.

The Ideal application temperature is 21°C.

- Pot Life: Once mixed, the epoxy must be used within 2 hours.

Same Drying & Curing Times apply as in Step 7.