

# Epoxy Sealer

Epoxy Sealer is a hard-wearing, water-based concrete sealer that provides a protective coating to interior residential concrete floors.

## 1. DESCRIPTION

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Epoxy Sealer is recommended for use on interior residential concrete floors. This sealer forms a hard surface coating that displays excellent impact resistance and protects the concrete from staining and marking. Designed in New Zealand, this water-based epoxy is solvent-free free making it safe to handle and friendly on the environment.

*Applications:*

- Interior residential concrete floors.

*Characteristics:*

- Water based - no odour and VOC free (certified).
- Designed and manufactured in New Zealand.
- Excellent impact and stain resistance.
- Easy to mix and apply, and quick drying.

*Limitations:*

- For application on interior residential floors only.
- Cannot be used as a waterproofing agent.
- Does not act as a filler - cracks and defects should be repaired prior to application.
- Epoxy Sealer is a coating, so whilst very durable, it is still susceptible to scratching.
- Full cure takes 7 days (but can be walked on after 24 hours).

This product guide covers the preparation, application, and maintenance of Epoxy Sealer - if there is any question as to the suitability or application of this product please contact Peter Fell Ltd prior to use. Refer to the SDS for full Health and Safety information.

## 2. PRECAUTIONS

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- Do not seal any concrete under 28 days old.
- Do not apply to external concrete surfaces or vehicular traffic areas (i.e. garages).
- Do not apply to highly burnished or very 'tight' floors.
- Do not apply to concrete surfaces that have been treated with concrete densifiers/hardeners.
- Do not apply to concrete surfaces that are not *completely* dry, not just surface dry.
- Do not apply to any surface that has been previously treated with another product i.e. other sealers, curing compounds, etc.
- Do not seal concrete if the concrete temperature (not atmospheric) is below 12°C or above 30°C.
- Do not dilute.
- Do not add Anti-Slip.
- Do not use as a filler – any cracks, pitting or pinholes must be treated prior to application.
- Do not cover the sealed floor until fully cured.
- Clean up any spills immediately to avoid staining.

## 3. TEST AREA

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Prior to application of the sealer to the entire area it is recommended that a test area is conducted first.

This test area is to ensure that the sealer adheres correctly to the surface and gives the desired look and finish.

It is recommended that test area of 0.5-1.0 m<sup>2</sup> is executed according to the following protocol.

- If possible do the test area on a part of the floor that will be covered or hidden when the job is complete i.e. in a wardrobe or under a kitchen island.

Test pots and small volumes of all the sealer and preparation and cleaning products are available from Peter Fell Ltd.

## 4. PREPARATION

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Prior to application, it is important to establish that Epoxy sealer can be applied to the floor.

- Epoxy Sealer cannot be applied to new floors treated with curing compounds or other similar products.
- Some highly burnished or ground/honed floors are too dense or 'tight' to allow adequate adhesion.
- Old floors previously treated with other sealing compounds, or contaminated and stained, will also not accept a water-based sealer.

A simple 'water test' can quickly show if the floor will 'accept' the coating:

- Drop a small amount of water on the concrete surface.
- If the water penetrates (darkens) the concrete within 15 - 30 seconds the concrete is likely to accept the sealer.
- If the water beads on the surface this would indicate that the concrete has high surface tension (too dense) and is not suitable for sealing with Epoxy Sealer.
- Beading could be due to other factors such as contaminants or other treatments in or on the concrete.
  - These contaminants or treatments must be removed prior to any sealer application.

If Epoxy sealer is able to be applied to the floor, then prepare the floor as follows:

### New power float finished concrete floors:

- Remove all protective covers at least one week prior to sealing to allow the floor to dry.
  - If a non-breathable cover was used (i.e. polythene) it will need to be lifted much earlier to allow drying.
  - Ensure good air flow over the floor (open all doors and windows) to allow moisture from the building.
- If it is uncertain whether the floor is dry, conduct a Plastic Sheet Test (ASTM D4263) to confirm:
  - Tape a plastic sheet (45 x 45 cm) onto the concrete surface being tested; ensuring an airtight seal between the concrete and the plastic is formed. After 24 hours remove the plastic sheet. Concrete can be coated if no moisture/condensation is present on the underside face of the sheet, or if concrete has not darkened (compared to adjacent concrete).
    - Use low tack tape to avoid marking the concrete surface.
  - If moisture is present, allow to dry and repeat test.
- If dirty, clean the floor with Neutralizer & Cleaner or Concrete Cleaner (see Product Guides for application instructions).
  - Repeat cleaning procedure if required to ensure all stains and marks are removed before proceeding.
- Prepare the floor for sealing with Surface Preparation or Surface Prep Lite followed by Neutralizer & Cleaner (see Product Guide's for application instructions).

### Ground or burnished concrete floors:

- Epoxy Sealer can be applied to floors ground to 120 metal bond or less only if they have *not* been densified.
- Ground or honed floors typically do not require treatment with Surface Preparation (acid wash).
- Ensure the floor is clean and dust free – clean with Concrete Cleaner if required then rinse the floor with fresh clean water.

### Old concrete floors:

- Any existing coating should be removed by grinding and the water test repeated to ensure all remnants have been removed.
- Any contaminated areas should be treated with appropriate cleaning agents and pass the water test prior to application of the sealer.
- Once any coatings have been removed and contaminated areas treated, clean the floor with Concrete Cleaner, then rinse once with fresh clean water.
  - A wet and dry vacuum cleaner should be used to remove all residual water from the concrete surface

## 5. EQUIPMENT

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- Bucket (to mix).
- Mechanical mixer – drill attached paint mixer or equivalent.
- Roller (5mm nap mohair roller or similar) or microfiber mop, and paint tray.
- Safety Equipment – see section 11. Safety and Handling.

## 6. APPLICATION

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### Mixing:

- Shake Part A and Part B well.
- Strain Part A through filter provided into a suitably sized bucket.
- Add equal part by volume of Part B to Part A.
- Mix thoroughly using a mechanical stirrer – drill attachment recommended.

### Application:

#### *New power float finished concrete floors:*

- Apply with roller in thin coats, avoid pooling.
- Apply minimum 2 coats.
  - 'open' or porous floors may require a third coat to form an even surface coating.
- Drying time between coats is typically 1 - 2 hours after application.
- Recoating must be done within 24 hours.
  - sanding between coats is recommended if more than 24 hours between coats.

#### *Ground or burnished concrete floors:*

- Epoxy Sealer can be applied to floors ground to 120 metal bond or less only if they have *not* been densified.
- Apply with roller or microfiber mop in thin coats, avoid poling.
  - Roller is recommended for the first coat.
- Apply minimum 2 coats.
  - most ground floors will require a third or fourth coat to form an even surface coating.
- Drying time between coats is typically 1 - 2 hours after application.
- Recoating must be done within 24 hours
  - sanding between coats is recommended if more than 24 hours between coats.

#### *Old concrete floors:*

- Apply the same as the appropriate type of floor above.

### Drying time:

- Allow 24 hours curing (drying) before light foot traffic.
- The sealer will be fully cured after 7 days.
  - Joinery and furniture should not be placed onto the newly sealed floor until the coating is fully cured to minimise scratching and marking of the sealer.
- Apply CoverSeal ONLY when sealer is fully cured (i.e. after 7 days).

### Coverage:

- Approximately 8 – 14 m<sup>2</sup>/L
  - Coverage will vary greatly depending on the porosity and texture of the concrete.

### Clean-up:

- All equipment can be cleaned with water.

## 7. MAINTENANCE

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- Floors sealed with Epoxy Sealer should be cleaned using with Concrete Cleaner.
  - Refer to the Product Guide or contact Peter Fell Ltd for product information.
- Do not use ammonia or amine containing cleaners (e.g. Janola) – they will damage the sealer.
- Do not use steam mops to clean the floor.
  - Excess heat and steam from the mop can breakdown the sealer leading to 'cloudy' patches

- We recommend that felt pads are used on the bottom of all furniture (i.e. chair and table legs) to minimise scratching or damaging the sealer.
- ALL internal concrete floors sealed with Epoxy Sealer should be maintained with CoverSeal.
  - CoverSeal should be applied routinely (every 6 months) to maintain sealer appearance and performance – refer to the Product Guide or contact Peter Fell Ltd for product information.

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## 8. RE-SEALING

Epoxy Sealer can be re-applied over sealed floors that are in good condition. If the sealer or concrete surface is worn, stained, or damaged it is recommended that the floor is ground/honed prior to re-sealing. This process will alter the surface appearance by exposing the aggregate which should be considered prior to re-sealing.

For standard re-sealing do the following:

- Clean floor thoroughly with Concrete Cleaner.
- Using low grit sandpaper (less than 240 grit) lightly sand the floor to provide a key for re-seal.
  - Ensure any worn or damaged areas of sealer are sanded back appropriately.
- Clean floor thoroughly with Concrete Cleaner and then rinse once with fresh clean water and allow to dry completely.
- Apply sealer with a roller or microfiber mop in thin coats, avoid pooling.
- Apply additional coats as required to form an even surface coating
- Drying time between coats is typically 1-2 hours after application.
- Recoating must be done within 24 hours.
  - sanding between coats is recommended if more than 24 hours between coats.

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## 9. REMOVAL

Removal of Epoxy Sealer is difficult and can result in damage or alteration of the concrete surface and as such is not recommended. If required the sealer should be removed mechanically by grinding/honing the floor. This process will alter the appearance of the floor by exposing the aggregate (stones) which should be considered prior to removal of the sealer.

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## 10. STORAGE AND HANDLING

*Pack Sizes:* 2 L (2x 1L), 4 L (2x 2 L), and 10 L (2x 5 L) packs.

*Handling:* Wear suitable protective clothing – see section 11. Personal Protective Equipment.

*Storage:* Store in cool, dry, well ventilated place in original container. Store out of reach of children. Store away from direct sunlight, oxidizing agents (e.g. nitrates), acids, anionic, detergents, and foodstuffs. Keep away from naked flames and other heat sources. Take precautions against static discharge. Ensure container is sealed when not in use, and checked regularly for leaks or spills. Do not allow vapours to collect in enclosed spaces. Epoxy Sealer can be stored for up to 12 months.

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## 11. PERSONAL PROTECTIVE EQUIPMENT

*Eyes:* Avoid contact with eyes. Use safety glasses and/or chemical splash goggles.

*Skin:* Suitable protective workwear e.g. cotton overalls buttoned at the neck and wrist is recommended. Chemical resistance apron is also recommended where large quantities are handled. Protective gloves are recommended. PVA or Viton/Butyl gloves are recommended. Replace frequently. Gloves should be checked for tears or holes before use. Open cuts abraded, or irritated skin should not be exposed to this material. Rubber safety boots.

*Respiratory:* A respirator is recommended when airborne concentrations approach the Workplace Exposure Standard (WES) – see SDS for more information. Use a respirator with an organic vapour cartridge and a dust/mist filter. If using respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.

## 12. FIRST AID

<i>Swallowed:</i>	DO NOT induce vomiting. Give water or milk to drink. Obtain medical attention immediately. For emergency information contact the <i>National Poisons Centre (0800 764 766)</i> .
<i>Eyes:</i>	Immediately flood with copious quantities of water, holding eye open if necessary, for at least 15 minutes. Seek urgent medical attention.
<i>Skin:</i>	Remove contaminated clothing and shoes and wash skin thoroughly with excess water. If irritation occurs or persists, seek medical attention. Launder clothing and clean shoes before re-use.
<i>Inhalation:</i>	Remove patient from exposure, keep warm and at rest. If there is respiratory distress, give oxygen and seek immediate medical attention

Refer to the SDS for full Health and Safety information.

## 13. PHYSICAL PROPERTIES AND IDENTIFICATION

### Pack A:

<i>Appearance:</i>	white emulsion
<i>UN Number:</i>	3082
<i>HSNO Approval:</i>	HSR002670
<i>Hazchem code:</i>	3Z
<i>DG Class:</i>	9
<i>Packing Group:</i>	III

### Pack B:

<i>Appearance:</i>	clear amber liquid
<i>UN Number:</i>	3259
<i>HSNO Approval:</i>	HSR002658
<i>Hazchem code:</i>	2X
<i>DG Class:</i>	8
<i>Packing Group:</i>	III

### Pack A + Pack B:

<i>Appearance (mixed):</i>	white emulsion
<i>Appearance (when dry):</i>	Transparent
<i>Odour:</i>	Very faint 'plastic' odour
<i>Solubility:</i>	soluble (in water)
<i>Wet film thickness:</i>	approximately 50 - 75 micron
<i>Dry film thickness :</i>	approximately 25 - 50 micron

## PRODUCT WARRANTY

The information contained in this document is true and accurate to the best knowledge of Peter Fell Ltd. We cannot however anticipate all conditions under which this information and our products may be used. Peter Fell Ltd therefore accepts no responsibility and offers no warranty with respect to results obtained by the application of our products, their suitability, or for their safe use. Peter Fell Ltd offers our products for sale subject to, and 'The Customer' and all users are deemed to have accepted, our Terms and Condition of Trade. Peter Fell Ltd warrants our products to be free of manufacturing defects. If the product when purchased was defective and was within recommended storage life when used, Peter Fell Ltd will replace the defective product with new product without charge to the purchaser. Peter Fell Ltd makes NO OTHER WARRANTY, either expressed or implied, concerning our products.