

NATURAL SEALER

Natural Sealer is a penetrating sealer that protects exterior concrete surfaces and walls while retaining the natural look and feel of concrete.

1. Description

Natural Sealer is a penetrating sealer for use on external concrete surfaces where a natural finish is desired. This sealer can also be used to protect walls, both pre-cast and masonry, without forming a coating on the surface. This sealer forms a cross linked matrix below the concrete surface, minimising the ingress of dirt and surface water into the concrete. As the sealer does not coat the surface, staining and marking of the concrete surface is possible. Natural Sealer is not recommended for internal concrete floors, or areas where staining and protection is likely.

Applications:

- Exterior residential concrete floors and walls.

Characteristics:

- Does not alter appearance or texture of the concrete
- Designed and manufactured in New Zealand.
- Can withstand vehicular traffic

Limitations:

- Non-coating so surface still prone to marking and staining.
- Not for use on commercial floors.
- Not recommended for interior floors.
- Cannot be used as a waterproofing agent.

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

2. Precautions

- Do not seal any concrete under 28 days old.
- Do not apply to highly burnished or very 'tight' floors.
- 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.
- Do not seal concrete if the concrete temperature (not atmospheric) is below 12°C or above 30°C.
- Do not apply in the middle (hottest part) of the day or in high humidity.
- Do not use as a filler – any cracks, pitting or pinholes must be treated prior to application.

3. Test Area

Prior to application of the sealer it is recommended that a test area is undertaken. 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 m² is executed according to the following protocol.

- Do the test area in a discrete part of the concrete that will be covered or hidden when the job is complete i.e. on side paths or under any fixtures.

4. Preparation

Prior to application it is important to establish that Natural Sealer can be applied to the concrete.

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

The concrete must be completely dry before applying Natural Sealer. 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 Natural Sealer can be applied to the concrete, then prepare the concrete as follows:

New concrete surfaces:

- If dirty, clean the floor thoroughly
- Prepare the floor for sealing with Holcim Acid (see Product Guide's for application instructions).

Ground or burnished concrete floors:

- Natural 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 Holcim Acid (acid wash).
- Ensure the floor is clean and dust free.

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 thoroughly and then rinse once with fresh clean water.

Walls and pre-cast:

- Ensure surface is clean and free of any loose debris
- Ensure there is no release agent present on the surface, if so remove according to manufacturer's recommendation.

5. Equipment

- Bucket or paint tray.
- The sealer can be applied with any of the following:
 - Soft bristle broom: recommended for textured surface and exposed aggregate concrete.
- Sprayer: HPLV (High pressure, low volume) or airless sprayers that are solvent proof can be used. Some standard pump-up garden sprayers can be used, but solvent typically breaks down working components of the sprayer (i.e. seals and gaskets) so single use only.
- Nozzle: 20 - 30° fan angle and 10 thousands orifice size with 2,000 psi pressure or equivalent. Adjust nozzle type to suit application.
- Roller: Solvent proof, 5mm nap mohair roller or similar.
- Safety Equipment – see section '10. Safety and Handling'.

6. Application

Natural Sealer should only be applied when new concrete floors are fully cured (at least 28 days after pouring), and as with old concrete surfaces, concrete prepared as above.

- Apply in thin coats, avoid pooling (or dripping on vertical surfaces)
- Apply minimum 2 coats.
 - 'open' or porous floors may require a third coat to form an even surface coating.
- Apply second coat *before* the first coat has dried completely.
 - The surface should appear wet while second (and subsequent) coats are applied.
- Drying time between coats is typically 2 - 4 hours after application.

Drying Time:

- Allow 24 hours curing (drying) before use.
- Vehicles can be used on the sealed surface 48 hours after sealing.

Clean-up:

- All equipment can be cleaned with Holcim Thinners, HOWEVER it is recommended that applicators are simply disposed of.
 - Holcim Thinners contain dangerous chemicals and must be handled with extreme care, that is why we advise disposing of any application equipment to avoid handling these chemicals.

7. Maintenance

- Concrete sealed with Natural Sealer should be cleaned using with PFL Concrete Cleaner.
 - Refer to the Product Guide or contact Peter Fell Ltd for product information.

8. Re-sealing

Natural Sealer can be re-applied over sealed concrete that is in good condition.

For standard re-sealing of surface in good condition do the following:

- Clean floor thoroughly.
- Ensure concrete is completely dry.
- Apply sealer with preferred method of application.
- Avoid pooling.

9. Removal

Removal of Natural 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.

10. Health and Safety

Pack Sizes: 5 and 20 L units.

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. PFL Natural Sealer can be stored for up to 12 months.

11. Personal Protection 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. Refer to SDS for full safety information.

Refer to the SDS for full Health and Safety information.

12. First Aid

Swallowed: DO NOT induce vomiting. Give water or milk to drink. Obtain medical attention immediately. For emergency information contact the National Poisons Centre (0800 764 766).

Eyes: Immediately flood with copious quantities of water, holding eye open if necessary, for at least 15 minutes. Seek urgent medical attention.

Skin: 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.

Inhalation: 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

<i>Appearance (in pack):</i>	Colourless liquid
<i>Appearance (when dry):</i>	does not change appearance of concrete
<i>Odour:</i>	aromatic 'solvent' odour
<i>Solubility:</i>	insoluble (in water)
<i>Wet film thickness:</i>	approximately 0 – 0.5 micron
<i>Dry film thickness :</i>	approximately 0 micron
<i>UN Number:</i>	1263
<i>HSNO Approval:</i>	n/a
<i>Hazchem code:</i>	3Y
<i>DG Class:</i>	3
<i>Packing Group:</i>	III
<i>Poison Schedule:</i>	5

Product Warranty

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