PeterFell

FINISHING PROCESS

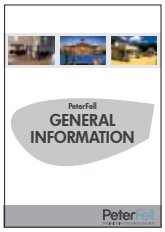
Guide

PeterFell

SPECIALISTS IN COLOURED CONCRETE

The PeterFell Finishing Process Guide contains full product information and application instruction for the PeterFell Finishing Process - the cleaning, grouting, preparation, and sealing of coloured concrete floors. This guide is essential for all contractors or home handy persons executing this part of the PeterFell System.

For an overview of the PeterFell System, or for full technical specifications, please refer to the following documents. For more information, including colour swatches, product information, and photo galleries, please visit www.peterfell.co.nz.



The PeterFell General Information Booklet provides an overview of the PeterFell System and is recommended to be read by anybody interested in using this system in their concrete project.

The PeterFell Technical Specifications Guide details all specification requirements for the PeterFell System. It is designed for use by specifiers, architects, designers and project managers. This guide details all aspects of the PeterFell System, including practical and design considerations, to enable successful execution in any project.

These documents, along with full product information, can be downloaded from our website at

www.peterfell.co.nz

version 1.0

The PeterFell Finishing Process

The PeterFell System is not just about colour, it is about creating long lasting, durable and comfortable environments. To this end, this booklet details the last steps in the PeterFell System – the Finishing Process. This includes concrete cleaning, the grouting of cuts, and the preparation and sealing of concrete floors. This process can be conducted by any competent handy person - Peter Fell Ltd provides all required products, full easy to follow application instruction, and on-call help and support.

It is essential that all concrete floors are sealed. Sealing protects the concrete colour and the floor surface. The sealer acts to protect the concrete in several ways:

- By preventing staining and marking of the concrete surface.
- Minimising the build-up of dirt and contaminants on the concrete surface.
- Stopping water intrusion which can result in concrete dusting (efflorescence).

In the PeterFell System, internal concrete floors are further protected with PFL CoverSeal. This unique floor treatment is applied over the sealer, and provides a scuff resistant, non-slip, and stain repellent coating. This significantly reduces floor maintenance, giving the comfort and security required on an internal surface. In addition to the protective qualities, all PeterFell sealers also enhance the natural surface, resulting in a softer texture that looks great while being easy to clean. For example, as well as protecting the surface, application of PFL CoverSeal elevates the aesthetic appeal of even the most tired of concrete surfaces.

This guide serves to support the information provided in the PeterFell General Information booklet by describing the PeterFell Finishing Process in detail, including product details, health and safety information, and full application methodology. All PeterFell products described are manufactured to the highest standards, have a proven application history, and are all quality assured. The correct products must be selected and applied in accordance with the guidelines set out in this guide.

The PeterFell Finishing Process can be broken into the following steps:

The PeterFell Finishing Process

Clean up

Protective covers are removed and any stains or contaminants removed.

Grouting

Decorative cuts are filled with PFL Non-Shrink Grout.

Surface Preparation

Surface laitance (efflorescence) is removed with PFL Surface Preparation and PFL Neutralizer & Cleaner to prepare the concrete for sealing

Sealing

Sealer is applied to enhance the colour and protect the concrete from staining and marking.

The team at Peter Fell Ltd can advise on material and quantities required for your job, as well as providing help and support at any time. If any of the processes are unclear, or you require professional assistance, please contact Peter Fell Ltd before proceeding with any work.

Contents

The steps in the PeterFell Finishing Process, and the products required for each step, are outlined below.

Step 1 Clean up

When the concrete floor is fully cured, and all major construction or landscaping has been completed, it can then be sealed. First, the floor must be thoroughly cleaned, and any contaminants or marks removed.

When can I seal my floor?

Concrete can only be sealed when it has completely cured:

Do not seal any concrete under 28 days old.

If concrete is sealed before it is completely cured both the concrete surface and the sealer will be compromised, necessitating removal and re-application of the sealer.

Can I seal the floor myself?

Yes - The PeterFell Finishing Process can be conducted by any competent handyperson. This guide provides comprehensive instruction on all processes, while the team at Peter Fell Ltd can provide additional help and support. However, if you are unsure about any aspect of application it is recommended that a professional tradesperson is employed. For more information contact Peter Fell Ltd.

When do I start preparing my floor for sealing?

You must wait at least 28 days after the concrete is placed before it can be sealed. After this period the first step is to remove protective covering placed over the concrete during the curing process.

Protective covers must be removed at least 1 week prior to sealing.

This period may be longer in winter, and is required to ensure all moisture trapped in the surface of the concrete under the covers is allowed to dissipate. To facilitate the drying process, protective covers may be lifted from internal surfaces once curing is complete and the site is weather tight. Under floor heating (run at low temperature), and dehumidifiers will also aid the drying process. Do not use heaters to dry the floor as this will increase humidity which will slow the drying process. Externally, once the slab is cured the polythene may be discarded or replaced with more protection that allows the concrete to dry more efficiently i.e. cardboard. However, once the polythene is removed, caution should be exercised to minimise the risk of staining and marking of the concrete surface.

My floor looks like a mess - what happened?

Don't panic! When the covers are first removed the floor will look patchy, dusting, and blotchy - this is completely normal. These elements will not be present in the finished floor, and simply represent surface laitance present on all new concrete. As there is colour in the floor this laitance is more 'dramatic' in appearance, but is removed as part of the finishing process. Only when this laitance is removed (using PFL Surface Preparation) will the true colour of the floor be revealed.

Clean up

It is critical ALL contaminants are removed from the floor prior to commencement of sealing - any marks or stains will be amplified on by the sealer.

Precautions:

- When cleaning or removing contaminants, take care not to excessively abrade the surface - changes in surface texture and appearance will be highlighted by the sealer
- Ensure appropriate method is employed to remove contaminant, and that the cleaning agent or procedure will not have a detrimental effect onto the concrete surface, or prevent subsequent application of a sealer.

Application:

First, remove all loosely adhering contaminants using broom and/or brush and vacuum cleaner.

- Use a clean, stiff bristle broom or brush to further loosen contaminants, taking care not to excessively abrade the surface as this will change the texture and appearance of the floor, which will be highlighted once sealed.
- Use industrial vacuum cleaner to remove loosened contaminants, taking care not to scratch or drag the head over the floor unnecessarily
    - Vacuum cleaning is the most effective means of removing contaminants from internal floors as it reduces the generation of air borne contamination (dust) which can re-settle.

PFL Neutralizer & Cleaner can be used to remove remaining dust and dirt, and also spot clean other contaminants as appropriate

- see over page for full application instructions for PFL Neutralizer & Cleaner.

The table below lists common contaminants and how they are best removed.

- If contaminant is not listed, or you are unsure how to treat the affected area, contact Peter Fell Ltd before proceeding.

Contaminant	Removal
Dirt	Use PFL Neutralizer & Cleaner at a 20:1 dilution (see following page for application instructions).
Paint	Paint is extremely difficult to remove totally. Carefully scrape off as much of the paint as possible, taking care not to excessively abrade the surface. Treat remaining paint contamination with appropriate paint stripper according to manufacturers instructions. Consult with a paint professional to ensure stripper will have no adverse effects on concrete.
Crayon	Crayon marks arising from the marking of concrete cuts (or other construction markings) can be easily removed using 1:6 dilution of PFL Neutralizer & Cleaner in hot water (see over page) and gentle scrubbing. Solvent based cleaners such as 'White spirits' can also be used (ensure solvent chosen will have no adverse effect on concrete).
Plaster/ Gib dust	Remove all loose contamination as described above (i.e. vacuum). Use 1:20 dilution of PFL Neutralizer & Cleaner (see following page for application instructions) to remove remaining contaminants.
Mortar	Do not use water to clean wet mortar - allow mortar to dry then carefully 'chip off'. Any residual mortar contamination will be removed by standard surface treatment of PFL Surface Preparation prior to sealing.

PFL Neutralizer & Cleaner

PFL Neutralizer & Cleaner is a biodegradable cleaner designed to neutralize PFL Surface Preparation and for the general cleaning of concrete surfaces.

Description:

PFL Neutralizer & Cleaner is used to neutralize the action of PFL Surface Preparation (and PFL Eco Surface Preparation), to clean the surface in preparation for sealing, and for the general cleaning of concrete floors. PFL Neutralizer & Cleaner has been specially formulated to remove calcium salts and other concrete specific contaminants, in particular those released following treatment with PFL Surface Preparation ('etching'). PFL Neutralizer & Cleaner is a highly built liquid detergent that will effectively emulsify fats and oils, and remove inorganic soils and other contaminants from concrete. PFL Neutralizer & Cleaner is biodegradable and NZFSA Approved (C31).

Precautions:

PFL Neutralizer & Cleaner is a strongly alkaline solution and can cause irritation with prolonged exposure - please ensure all safety guidelines are read prior to use, and are strictly adhered to during application.

Application:

Equipment: Bucket (for dilution), safety equipment (see 'Safety and Handling').
Preparation: No preparation required.
Dilution: Dilute PFL Neutralizer & Cleaner with clean water as follows:

Neutralization of PFL Surface Preparation	1 part to 20 parts water
General concrete cleaning	1 part to 20 parts water
Removal of grease or oil	1 part to 5 parts water
Treatment of extreme contamination	1 part to 2 parts water

Application:

Neutralization of PFL Surface Preparation and PFL Eco Surface Preparation:

- Dilute PFL Neutralizer & Cleaner as above
- Apply solution directly to concrete surface (over PFL Surface Preparation), distributing solution with a broom.
    - Apply so solution is visible on surface and leave to dwell for a few minutes.
- Rinse off solution with clean water.
    - Internal - use wet and dry vacuum cleaner to remove solution.
    - External - can use hose to remove solution with excess water.
- Repeat rinse process until floor shows no surface bubbles when fresh water is applied - usually 2 - 3 applications.
- Following application (12 - 24 hours) a fine dust may form on the surface (residual detergent) which must be removed with a damp cloth prior to sealing.
    - Dust will prevent correct adhesion of sealer to concrete, increasing the chance of delamination.
    - Dust will highlight marks (i.e. footprints) which may also remain after sealing.

Application continued over page...

Application (continued):

Concrete Cleaning:

- Dilute PFL Neutralizer & Cleaner as appropriate.
    - For extreme contamination or to aid removal of fats and oils dilute PFL Surface Preparation with hot water.
- Thoroughly wet area to be cleaned with solution and brush in thoroughly with scrubbing brush or stiff broom.
- Allow to soak for as long as practical, but do not allow to dry.
- Rinse off thoroughly with clean water.
- Repeat process until contamination is removed.

Drying time: Drying time is dependent on application and site conditions.
- Concrete must be completely dry before any sealer can be applied.

Coverage: Coverage is dependent on dilution rate and application.

Clean-up: Rinse tools with excess water to clean.

Safety and Handling:

Hazard: PFL Neutralizer & Cleaner is a **STRONGLY ALKALINE SOLUTION** and can cause irritation with prolonged exposure.

Safety: Wear suitable protective clothing, gloves and eye/face protection.

Pack sizes: 1, 2, 5, 10 and 20 L.

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, peroxides, hypochlorites), acids, anionic detergents (e.g. soap), heat sources, and foodstuffs. Ensure container is sealed when not in use, and checked regularly for leaks or spills. PFL Neutralizer & Cleaner can be stored for up to 12 months.

First Aid:

Swallowed: Do not induce vomiting. Give water or milk to drink. Obtain medical attention immediately.

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.

Physical and Chemical Properties:

Colour.....blue liquid
Odour..... sweet fragrant odour
pH..... 11.3
Solubility (in water).....soluble
Specific Gravity.....approximately 1.0 kg/L
Vapour Pressure.....18.0 mm Hg @ 20°C

Step 2 Grouting

All decorative cuts are filled with PFL Non-Shrink Grout, which can be coloured and finished to your specifications.

What do I fill the cuts with?

All decorative cuts should be filled with **PFL Non-Shrink Grout** (see following page for application instructions). PFL Non-Shrink Grout is specially designed shrinkage-compensated grout with excellent substrate adhesion, is non-corrosive, non-toxic, and impact resistant. It is recommended that grouting is conducted using a **PFL Grout Gun**, although it can be applied by trowel providing cut lines are prepared with **PFL Grout Tape**.

What colours does PFL Non-Shrink Grout come in?

PFL Non-Shrink Grout can be coloured using any of oxide in the PFL Colour range. Most commonly, the concrete colour is also used as the grout colour. As PFL Non-Shrink Grout is a slightly darker base colour than concrete when oxide is used in the grout it will also appear darker, offering a subtle contrast whilst retaining the same colour tone as the concrete. However a lighter or darker colour can be used for a contrast, or the grout can be left in its natural colour. As the colour is added to the grout on site, colour tone can be adjusted to suite individual requirements.

Is it like grouting ceramic tiles?

No - PFL Non-Shrink grout must be delivered as directly to the cut lines as possible. If grout is spread over the concrete surface it will contaminate the concrete. Similarly, when applying the grout any wet grout must not be cleaned up (either with water or a wet cloth), as this will simply spread the grout leading to increased contamination. For this reason it is recommended that a **PFL Grout Gun** is used to apply PFL Non-Shrink Grout. While very easy to use, the PFL Grout simplifies application, significantly reducing the chance of contamination. For full application instructions see following page.

Should I seal the floor before I grout?

No - while sealing protects the floor from staining and marking, it is recommended that sealing is the last step. If the floor is sealed prior to grouting it will be damaged and stained by the grout and will need to be removed, the surface prepared again, and re-sealed. The grout will also need to be sealed.

Can I grout the construction cuts?

Construction (or expansion) joints are typically only 3 mm wide with a much greater depth than decorative cuts making them very difficult to grout. It is recommended that a decorative cut is placed over top of the construction cut (even if no other decorative cuts are being done), to simplify grout application.

Will the grout pull away from the sides or crack?

PFL Non-Shrink Grout is engineered with a unique 2-stage shrinkage compensation mechanism. Along with excellent substrate adhesion means the grout is specifically designed not to pull away from the sides of cuts. However, in cases of excessive slab movement, due to design or environment, any stresses or cracking will occur down construction cuts (what they are designed for). This movement can result in cracking (typically fine hairline cracks) or 'popping' of cementitious grout - even PFL Non-shrink grout with impact resistant compounds. In these extreme cases a more flexible material should be used - contact Peter Fell Ltd for further information

PFL Non-Shrink Grout

PFL Non-Shrink Grout is a shrinkage compensated cementitious grout designed for decorative grouting in the PeterFell system.

Description:

PFL Non-Shrink Grout is used to fill in decorative cut lines in the PeterFell System. This grout is specially designed to counteract the effects of shrinkage usually associated with cementitious grouts. PFL Non-Shrink Grout displays excellent adhesion to the substrate, is non-corrosive, non-toxic, and impact resistant. It is a single component material, just add water. It is designed to develop high early strength, enabling quick cure time and project progression. PFL Non-Shrink Grout can be coloured with any of PFL oxides, or left as natural grey.

Precautions:

- Grouting should not be conducted as for ceramic tiles - this will lead to contamination of the concrete.
- Do not use excess water to clean wet grout from the concrete surface during application as this can lead to contamination of the concrete surface. Ensure only clean water is used.
- In cases of excessive slab movement, due to design or environment, any stresses or cracking will occur down construction cuts (what they are designed for). This movement can result in cracking (typically fine hairline cracks) or 'popping' of cementitious grout (even PFL Non-shrink grout with impact resistant compounds). In these extreme cases a more flexible material should be used - contact Peter Fell Ltd for further information.

Application:

Equipment: Bucket (for mixing), PFL Grout Gun or trowel and PFL Grout Tape, hose (for concave finish), safety equipment (see 'Safety and Handling').
- **PFL Grout Guns'** and **PFL Grout Tape** are available from Peter Fell Ltd.

Preparation: Concrete surface should be clean, and cut lines free of water, loosely adhering particles, and any other contaminants.

Mixing: The table below outlines mixing guidelines:

Cuts (lineal metres)#	Grout weight	Water		PFL Colour (5% dose)*
		Suggested	Maximum	
up to 15 m	5 kg	0.8 L	0.9 L	70 ml
up to 35 m	10 kg	1.6 L	1.8 L	140 ml
up to 50 m	15 kg	2.4 L	2.7 L	210 ml
up to 70 m	20 kg	3.2 L	3.6 L	280 ml
up to 85 m	25 kg (bag)	4.0 L	4.5 L	350 ml

\# Measurements based on standard decorative cut 10 mm wide by 10 mm deep
* For colours dosed at different rates or for full colour dose rate and weight information contact Peter Fell Ltd.

Mixing instructions continued on following page...

Mixing (continued):

- It is recommended to mix small quantities at a time (i.e. 5 kg). It is strongly recommended grout is mechanically mixed (i.e. using drill attachment). PFL Non-Shrink Grout should be prepared as follows:
  - Measure suggested water and add approximately 3/4 of this volume to the mixing container
  - If adding colour measure into water, rinsing container to ensure all colour is added.
    - Important to add colour in same way in all subsequent mixes to ensure colour consistency.
  - Add grout to liquid and mix thoroughly (mechanical mixing recommended)
    - If hand mixing ensure ALL grout thoroughly incorporated.
  - Add remaining water as required to achieve desired consistency.
    - Do not add extra water as this will effect the colour.

Application:

There are two methods for the grouting of decorative cuts:

(i) Grout Gun:	The recommended method. The PFL Grout Gun allows controlled application, reducing the risk of spillage and contamination of the surrounding surface.
(ii) Trowel:	A more time consuming method that requires the surround of the cut lines to be protected using PFL Grout Tape.

- Both methods are described below. For both methods it is recommended to start in the least obvious location, working in small lengths at a time. Both methods can be finished in the same way (see 'Finishing' below) yielding the same final results.

(i) Grout Gun Method:

- PFL Non-Shrink Grout should be mixed as described above to a reasonably fluid consistency
- Cut PFL Grout Gun nozzle to required width at a 45° angle.
- Remove trigger mechanism and fill gun with prepared grout mixture.
- Replace trigger mechanism and secure.
- Walk slowly backwards dispensing grout evenly into cut lines, controlling flow by pressure on the trigger.
- Ensure grout totally fills cut lines and is contacting all internal cut faces, and grout is slightly proud to top surface (i.e. marginally above level of the concrete).
- Finish grout in desired fashion (see 'Finishing Options' below) before it sets (within 30 minutes of mixing).

(ii) Trowel Method:

- PFL Non-Shrink Grout should be mixed as described above to a firm consistency.
- Line both sides of ALL cut lines with PFL Grout Tape
- Apply grout into cut lines using trowel, taking care not to spread excess onto unprotected concrete.
- Ensure grout completely fills cuts, ensuring contact with all internal cut faces, and is slightly proud at top surface (i.e. marginally above level of the concrete).
- Finish grout in desired fashion (see 'Finishing Options' below) before it sets (within 30 minutes of mixing).

Finishing Options:

Grout can be finished either flush or set down (concave) from the concrete surface, depending on personal preference. Finishing should be done only when grout has started to cure (stiffen), approximately 5 - 25 minutes from time of mixing - this will vary depending on mix consistency, application and drying conditions.

Flush: Once grout is sufficiently stiff, run a trowel or equivalent tool parallel to the surface, cutting grout flush with surface. To close the surface, work the trowel over the grout until desired finish is achieved. Any excess grout should be allowed to harden completely before attempting to remove.

Flush finish

Concave: Once grout is sufficiently stiff, run a trowel or equivalent tool parallel to the surface, cutting grout flush with surface. Run a pointing tool along grout to achieve desired curvature. Alternatively, a piece of hose (approximately 13 mm diameter works well) can be used. Any excess grout should be allowed to harden completely before attempting to remove.

Concave finish

Application (continued):

Drying time: While grout will harden within 3 hours of application, PFL Non-Shrink Grout requires a minimum of 24 hours to attain full cure.

Clean-up: Do not use excessive water to clean grout as this will spread the grout and contaminate the concrete, especially if using coloured grout. Use only clean water when cleaning grout during application. Excess grout should be allowed to completely harden prior to removal from concrete surfaces. Hardened grout can be removed from concrete by broom or brushing. A damp sponge or cloth can be used to ensure a final clean up of the grout line. Ensure water is continuously changed and clean the cloth/sponge regularly to prevent contamination during this process. All tools and equipment are to be cleaned immediately in water after use. The hardened grout can only be removed mechanically once it has set.

Safety and Handling:

Hazard: PFL Non-Shrink Grout is considered non-hazardous. However, as this product is a cement based powder it is recommended appropriate precautions are taken during use, including use of dust mask when handling in a confined space. Avoid prolonged contact.

Safety: Wear suitable protective clothing, gloves, eye protection, face mask (when handling dry powder).

Pack Sizes: 2, 5, and 25 kg bags.

Storage: Store in cool, dry, well ventilated place away from all liquids. Store out of reach of children. Store away from oxidizing agents (e.g. nitrates, peroxides, hypochlorites), acids, heat sources, and foodstuffs. Ensure bag is securely stored when not in use, and checked regularly for leaks or spills. PFL Non-Shrink Grout can be stored for up to 12 months.

First Aid:

Swallowed: Do not induce vomiting and seek medical attention if irritation persists. Drink water to remove from mouth and throat. Give water or milk to drink.

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 soap and 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.

Physical and Chemical Properties:

Appearance.....grey flowing powder
pH (viscous slurry in water).....12-14
Solubility (in water)..... negligible
Bulk density (of dry powder).....approximately 1.0 kg/L
Ignition temperature..... >350°C

Step 3 Surface Preparation

The application of an 'etching' solution is essential to remove surface laitance present on the surface of all new concrete. The use of a PFL Surface Preparation solution, in conjunction with PFL Neutralizer & Cleaner, remove this laitance and prepare the floor for sealing.

Do I have to 'etch' my floor before sealing?

Yes - it is critical that the floor is treated with **PFL Surface Preparation** or **PFL Eco Surface Preparation** prior to application of any sealer. PFL Surface Preparation removes surface laitance (efflorescence) present on the surface of all new concrete. This contamination can only be removed through use the PFL Surface Preparation solutions, PFL Neutralizer & Cleaner (or any other detergent based cleaner) will not effectively remove surface laitance. If this laitance is not correctly removed the sealer will not be able to adhere correctly to the concrete surface, resulting in the delamination of the sealer

Will PFL Surface Preparation change the appearance of my concrete?

PFL Surface Preparation removes surface contamination (laitance) and subsequently acts to reveal the 'true' colour and finish of the floor. This standard application (mild etch) is essential in the preparation of the floor for sealing, and will not alter the inherent floor characteristic.

However, PFL Surface Preparation can be used to alter both the texture and finish of the floor by adjusting solution strength and treatment time. It is essential that PFL Surface Preparation is correctly diluted and that a test area is completed to ensure dilution is appropriate for you application. The table below gives an indication of the effects of different dilution effects of PFL Surface Preparation or PFL Eco Surface Preparation:

Use of different PFL Surface Preparation strengths

Mild etch	Recommended for preparation of internal floors, or areas with minimal surface laitance. Will not significantly alter the texture and colour of the floor.
Medium etch	Recommended for preparation of external surfaces, or areas with significant surface laitance. Prolonged treatment exposes sand (and eventually aggregate), increasing surface texture and change the concrete appearance.
Heavy etch	Recommended only when heavy exposure or 'Sandstone Finish' of the concrete surface is required. Will significantly alter the appearance and texture of the concrete - proceed with caution!

Will PFL Surface Preparation remove all contaminants?

No - While the PFL Surface Preparation solutions will remove surface laitance and other 'concrete specific' contaminants, they will not other common contaminants i.e. dirt, paint stains etc. It is critical that these contaminants are removed prior to treatment with PFL Surface Preparations - see 'Step 1. Clean up' for full instruction.

Won't PFL Surface Preparation damage my walls, joinery, garden...?

While PFL Surface Preparations are dilute solutions they are extremely corrosive and will corrode most surfaces they come in contact with.

All susceptible surfaces must be protected prior to application of PFL Surface Preparation solutions

All vertical surfaces (walls, joinery etc) should be covered to an appropriate height to protect from spurious surface preparation solution (splashing). Ensure run-off from application does is properly neutralized (using **PFL Neutralizer & Cleaner**) before it contacts non-target surfaces i.e. paths, asphalt, gardens etc. All surrounding surfaces can be treated with PFL Neutralizer & Cleaner (diluted 20:1) prior to application of surface preparation solutions. Corrosive activity of PFL Surface Preparation solutions can be neutralized at any time by PFL Neutralizer & Cleaner.

Do I need to use PFL Surface Preparation on ground concrete or exposed aggregate concrete?

It is not essential to prepare ground concrete using PFL Surface preparation solutions as the grinding process removes the surface laitance. Similarly, the exposing of concrete also removes surface laitance. However, if laitance returns prior to sealing, treatment with 'mild' solution of PFL Surface Preparation (or PFL Eco Surface Preparation) may be required.

Test Area

Prior to full application of PFL Surface Preparation or PFL Eco Surface it is recommended that a small test area away from the main visual area of the floor is prepared (following instructions) to ensure that the Surface Preparation is correctly diluted for your application.

Correctly diluted	The Surface Preparation 'bubbles' lightly on the surface, and following short exposure (<1 min), neutralization, and drying, the area appears free of surface laitance (dusty or 'chalky' substance on surface).
Too dilute	Little to no 'bubbling' evident following application of the Surface preparation, and following neutralization and drying, the area appears unchanged.
Too concentrated	Aggressive bubbling is observed on application of the Surface Preparation, and after a short period (<1 minute) concrete starts to corrode, exposing sand grains, then aggregate particles. Following neutralization and drying, concrete appears darker with 'grainy' or textured appearance.

If the concrete surface is still 'soft' (if concrete is not fully cured or incorrectly finished) the Surface Preparation will have a corrosive effect, similar to that of a 'too concentrated' solution.
Always start with the weakest applicable dilution as the concentration can always be increased.

- Conversely, if the solution is too concentrated and adversely alters the concrete surface, the effects are a lot more difficult to remedy, if at all!

If you are unsure about the appropriate dilution or application of PFL Surface Preparation contact Peter Fell Ltd before proceeding with the entire area.

PFL Surface Preparation

PFL Surface Preparation is a traditional etching solution used to prepare concrete surfaces for sealing.

Description:

PFL Surface Preparation is a concentrated acidic solution which, when correctly diluted, removes surface laitance (efflorescence). PFL Surface Preparation is primarily employed to lightly 'etch' the floor in preparation for sealing, but can also be used to change the appearance and texture of concrete floors.

Precautions:

- PFL Surface Preparation is a STRONGLY ACIDIC solution and should be used with extreme care. Ensure all safety guidelines are read prior to use, and are strictly adhered too.
- PFL Neutralizer & Cleaner should be used in conjunction with PFL Surface Preparation to control and neutralize its corrosive activity.
- All susceptible surfaces i.e. walls and joinery, should be protected from splashing during application.
- The concrete surface must be well buffered with water prior to application of PFL Surface Preparation - failure to do so will result in 'acid burns' to the concrete surface.
- Ensure runoff during application is correctly neutralized to prevent corrosion of surrounding surfaces i.e. untreated concrete, asphalt etc.
- Do not dispose of PFL Surface Preparation down drains or waterways.

Application:

Equipment: Bucket (for dilution), broom, plastic watering can (for distribution), tray or polythene (to place bucket on), PFL Concrete Neutralizer & Cleaner (prepared diluted solution), wet and dry vacuum cleaner (for internal floors), safety equipment (see 'Safety and Handling').

Preparation: Floor should be cleaned and any contaminated areas treated prior to application of PFL Surface Preparation as described earlier in this booklet (refer to 'Step 1 Clean up').

- Prepare working solution of PFL Concrete Neutralizer & Cleaner (see pg 6).
- Ensure all susceptible surfaces i.e. walls, joinery etc, are protected.

Test Area: Ensure test area is completed prior to application - see previous page for instruction.

Dilution: Dilute PFL Surface Preparation with clean water as appropriate:

- always add PFL Surface Preparation to water (not the other way around).

Strength	Dilution (Prep:water)	Description
Mild etch	1:30	Recommended for preparation of internal floors, or areas with minimal surface laitance. Will not significantly alter texture of the floor.
Medium etch	1:20	Recommended for preparation of external surfaces, or areas with significant surface laitance. Prolonged treatment exposes sand (and eventually aggregate), increasing surface texture and changing concrete appearance.
Heavy etch	1:10	Recommended only when heavy exposure or a Sandstone Finish of concrete surface is required. Will significantly alter appearance and texture of the concrete - proceed with caution!

Application (continued):

- Prepare and 'etch' small areas at a time (initially 2 - 4 m^2), and start away from main parts of the floor to get comfortable with procedure.

Internal Application:

- When using PFL Surface Preparation on interior floors, extreme care must be taken to prevent collateral degradation of other surfaces.
    - All walls, skirting, and metal joinery should be covered, while other peripheral surfaces should be pre-treated with PFL Neutralizer & Cleaner.
- Prepare diluted solution of PFL Surface Preparation in bucket as described above
    - Always add PFL Surface Preparation to water (not other way around).
    - If using a watering can, carefully transfer solution to watering can.
- When using diluted solution, place bucket/watering can on a tray or sheet of polythene to prevent any spillage onto the concrete surface while working.
    - Care must also be taken when taking broom/brush from bucket.
- Wet down area with clean water, making sure water is always visible on the surface where PFL Surface Preparation is applied.
    - If surface is not properly wet, the PFL Surface Preparation will react directly with the concrete surface resulting in 'acid burns', which significantly alter both the concrete colour and texture.
- Disperse solution with watering can or using broom in circular motion, lightly working solution over surface
    - Ensure solution is applied evenly over surface.
    - Care must be taken not to exceed area which has been pre-wetted.
- Once initial reaction has stopped, treat area with PFL Neutralizer & Cleaner, leave on surface for a few minutes (solution turns 'milky' in patches), then vacuum up with wet and dry vacuum.
- Repeat process over whole area to be treated, remembering to keep surface wet as you move from area to area.

External Application:

- Prepare surface as described above
- Ensure surface is kept wet during application
    - Care must be taken in regard to evaporation of surface water
- If working on a slope, start at the bottom and work back up the slope.
    - Ensure active solution does not run over already treated or non-buffered concrete as will over 'etch' these areas.
- Solution can be removed with excess water, or following neutralization with PFL Neutralizer & Cleaner (described above).
    - Ensure runoff does not go down waterways, or onto areas susceptible to pH changes i.e. gardens.

Coverage: Coverage is dependent on dilution rate and application.

Clean up: All equipment used should be neutralized and cleaned with appropriately diluted solution of PFL Neutralizer & Cleaner. Ensure PFL Surface Preparation is not disposed of down drains or waterways.

Safety and Handling:

Hazard: PFL Surface Preparation is a STRONGLY ACIDIC solution producing vapour irritable to eyes and respiratory tract. It is extremely corrosive, capable of causing burns to skin. extreme care must be taken. For full safety information refer to MSD sheet available from Peter Fell Ltd.

UN Number: 1789 **DG Number:** 8 **Hazchem code:** 2(R)

Active Ingredient: Hydrogen Chloride (CAS 7647-01-0)

Safety: Wear suitable protective clothing, impervious footwear, eye protection, protective gloves, and respirator.

Pack Sizes: 1, 2, 5, 10, and 20 L.

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, peroxides, hypochlorites), acids, anionic detergents (e.g. soap), heat sources and foodstuffs. 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 Surface Preparation can be stored for up to 12 months.

First Aid:

Swallowed: Do not induce vomiting. Give water or milk to drink. Obtain medical attention immediately. If patient becomes unconscious treat for 'Inhalation' below.

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. If respiration is failing, apply artificial respiration. Seek immediate medical attention.

Physical and Chemical Properties:

Appearance..... colourless to yellow liquid
Odour..... pungent irritating fumes
Solubility..... miscible with water in all proportions
Reactivity.....highly corrosive to most metals with evolution of hydrogen gas.
.....reacts violently with alkali
.....reacts with sodium hypochlorite to evolve chlorine
Specific Gravity.....1.15 kg/L

PFL Eco Surface Preparation

PFL Eco Surface Preparation is an environmentally friendly, less corrosive alternative to traditional etching products used to prepare concrete surfaces for sealing.

Description:

PFL Eco Surface Preparation can be used as an alternative to PFL Surface Preparation to prepare concrete floors for sealing. Utilizing the latest 'acid avoidance' technology, PFL Eco Surface Preparation is a more environmentally friendly 'etching' solution, with reduced corrosive effect on paint and metal surfaces.

Precautions:

- PFL Eco Surface Preparation is a CORROSIVE SOLUTION and should be used with extreme care. Ensure all safety guidelines are read prior to use, and are strictly adhered to during application.
- PFL Neutralizer & Cleaner should be used in conjunction with PFL Eco Surface Preparation to control and neutralize its corrosive activity.
- All susceptible surfaces i.e. walls and joinery, should be protected from splashing during application.
- The concrete surface must be well buffered with water prior to application of PFL Eco Surface Preparation - failure to do so will result in 'acid burns' to the concrete surface.
- Ensure runoff during application is correctly neutralized to prevent corrosion of surrounding surfaces i.e. untreated concrete, asphalt etc.
- Do not dispose of PFL Eco Surface Preparation down drains or waterways.

Application:

Equipment: Bucket (for dilution), broom, plastic watering can (for distribution), tray or polythene (to place bucket on), PFL Concrete Neutralizer & Cleaner (prepared diluted solution), wet and dry vacuum cleaner (for internal floors), safety equipment (see 'Safety and Handling').

Preparation: Floor should be cleaned and any contaminated areas treated prior to application of PFL Eco Surface Preparation as described earlier in this booklet (see 'Step 1. Clean up').

- Prepare working solution of PFL Concrete Neutralizer & Cleaner.
- Ensure all susceptible surfaces i.e. walls, joinery etc, are protected.

Dilution: Dilute PFL Eco Surface Preparation with clean water as appropriate:

- always add PFL Eco Surface Preparation to water (not the other way around).

Strength	Dilution (Prep:water)	Description
Mild etch	1:6	Recommended for preparation of internal floors, or areas with minimal surface laitance. Will not significantly alter texture of the floor.
Medium etch	1:4	Recommended for preparation of external surfaces, or areas with significant surface laitance. Prolonged treatment exposes sand (and eventually aggregate), increasing surface texture and changing concrete appearance.
Heavy etch	1:1	Recommended only when heavy exposure or a Sandstone Finish of concrete surface is required. Will significantly alter appearance and texture of the concrete - proceed with caution!

Application (continued):

- Prepare and 'etch' small areas at a time (initially 2-4 m^2), and start away from main parts of the floor to get comfortable with procedure.

Internal Application:

- When using PFL Eco Surface Preparation on interior floors, extreme care must be taken to prevent collateral degradation of other surfaces.
    - All walls, skirting, and metal joinery should be covered, while other peripheral surfaces should be pre-treated with PFL Neutralizer & Cleaner.
- Prepare diluted solution of PFL Eco Surface Preparation in bucket as described above
    - Always add PFL Eco Surface Preparation to water (not other way around).
    - If using a watering can, carefully transfer solution to watering can.
- When using diluted solution, place bucket/watering can on a tray or sheet of polythene to prevent any spillage onto the concrete surface while working.
    - Care must also be taken when taking broom/brush from bucket.
- Wet down area with clean water, making sure water is always visible on the surface where PFL Eco Surface Preparation is applied.
    - If surface is not properly wet, the PFL Eco Surface Preparation will react directly with the concrete surface resulting in 'acid burns', which significantly alter both the concrete colour and texture.
- Disperse solution with watering can or using broom in circular motion, lightly working solution over surface
    - Ensure solution is applied evenly over surface.
    - Care must be taken not to exceed area which has been pre-wetted.
- Once initial reaction has stopped, treat area with PFL Neutralizer & Cleaner, leave on surface for a few minutes (solution turns 'milky' in patches), then vacuum up with wet and dry vacuum.
- Repeat process over whole area to be treated, remembering to keep surface wet as you move from area to area.

External Application:

- Prepare surface as described above
- Ensure surface is kept wet during application
    - Care must be taken in regard to evaporation of surface water
- If working on a slope, start at the bottom and work back up the slope.
    - Ensure active solution does not run over already treated or non-buffered concrete as will over 'etch ' these areas.
- Solution can be removed with excess water, or following neutralization with PFL Neutralizer & Cleaner (described above).
    - Ensure runoff does not go down waterways, or onto areas susceptible to pH changes i.e. gardens.

Coverage: Coverage is dependent on dilution rate and application.

Clean up: All equipment used should be neutralized and cleaned with appropriately diluted solution of PFL Neutralizer & Cleaner. Ensure PFL Eco Surface Preparation is not disposed of down drains or waterways.

Safety and Handling:

Hazard: PFL Eco Surface Preparation is a STRONGLY CORROSIVE solution producing vapour irritable to eyes and respiratory tract. It is extremely corrosive, capable of causing burns to skin. EXTREME CARE must be taken. For full safety information refer to MSD sheet available from Peter Fell Ltd.

UN Number: 1760 **DG Number:** 8 **Hazchem code:** 2(R)

Safety: Wear suitable protective clothing, impervious footwear, eye protection, protective gloves, and respirator.

Pack Sizes: 1, 2, 5, 10, and 20 L.

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, peroxides, hypochlorites), acids, anionic detergents (e.g. soap), heat sources and foodstuffs. 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 Surface Preparation can be stored for up to 12 months.

First Aid:

Swallowed: Do not induce vomiting. Give water or milk to drink. Obtain medical attention immediately. If patient becomes unconscious treat for 'Inhalation' below.

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. If respiration is failing, apply artificial respiration. See immediate medical attention.

Physical and Chemical Properties:

Appearance.....green liquid
Odour.....mild odour
Solubility.....miscible with water in all proportions
Vapour Pressure.....24.0 mm Hg @ 25°C
Specific Gravity.....1.08 kg/L

Step 4 Sealing

Sealing is the final step in the PeterFell System. The sealer protects the concrete, and will ultimately determine the final look and finish of the floor. A range of sealers are available from Peter Fell Ltd, and it is essential that the correct sealer type is chosen for the appropriate application.

? Do I need to seal my concrete?

Yes - Sealing is essential to enhance and protect any coloured concrete floor. Sealing will determine the final appearance, both colour and texture, of the concrete. Sealing stops 'dusting' (efflorescence) forming on the concrete surface which masks the concrete colour (often mistaken for colour fading), maintaining the true floor colour. More importantly, sealing protects the concrete from staining and marking, an essential aspect of any flooring system.

? When do I seal my concrete?

The concrete must be completely cured and dry before it can be sealed.

Do not seal any concrete under 28 days old

If concrete is sealed before it is completely cured both the concrete surface and the sealer will be compromised, necessitating removal and re-application of the sealer.

As well as being fully cured, the concrete MUST be completely dry before any sealer can be applied. As the surface is protected during curing it is essential that all covers are removed to allow sufficient time for the concrete to completely dry.

Protective covers must be removed at least 1 week prior to sealing.

This period may be longer in winter, and is required to ensure all moisture trapped in the surface of the concrete under the covers is allowed to dissipate. To facilitate the drying process, protective covers may be lifted from internal surfaces once curing is complete and the site is weather tight. Under floor heating (run at low temperature), and dehumidifiers will also aid the drying process. Do not use heaters to dry the floor as this will increase humidity which will slow the drying process. Externally, once the slab is cured the polythene may be discarded or replaced with more protection that allows the concrete to dry more efficiently i.e. cardboard. However, once the polythene is removed, caution should be exercised to minimise the risk of staining and marking of the concrete surface.

? Can I seal the floor myself?

Yes - The PeterFell Finishing Process can be conducted by any competent handyperson. This guide provides comprehensive instruction on all processes, while the team at Peter Fell Ltd can provide additional help and support. However, if you are unsure about any aspect of application it is recommended that a professional tradesperson is employed. For more information contact Peter Fell Ltd.

? How long does the sealer last?

No concrete sealer will last forever. The life of your sealer is determined by sealer application, use, and environment. For typical application PeterFell sealers have a floor life of approximately 3 - 5 years but this is not guaranteed as the floor life of the sealer is very much dependent on preparation and application of the sealer which is beyond the control of Peter Fell Ltd. The sealer can easily be re-applied (see 'Step 5. Maintenance' for re-sealing instruction), to provide ongoing protection of the concrete surface.

What do I seal my the concrete with?

Peter Fell Ltd offers a range of sealing and finishing products (outlined below) designed specifically for use on concrete floors. For further information on any of these products please contact Peter Fell Ltd.

PeterFell Sealer Range

PFL Acrylic Sealer	PFL Acrylic Sealer is a durable sealer designed for application on internal and external concrete floors. - Retains natural colour and finish of coloured concrete - Commonly used on internal floors with PFL CoverSeal - Not for high use areas or those subject to vehicular traffic i.e. driveways.
PFL Glaze Sealer	PFL Glaze Sealer is a highly durable, multi-purpose sealer, ideal for driveways and high-use areas. - Accentuates the colour in concrete giving a 'wet look' finish. - Can be used with PFL Anti-Slip to improve grip on smooth concrete surfaces. - Can be used with PFL Glaze Primer to achieve a natural finish, similar finish to that of PFL Acrylic Seal, with the advantage of PFL Anti-Slip.

In addition to these two sealers, Peter Fell Ltd has the following sealer related products:

PFL Glaze Primer	PFL Glaze Primer is used to prime concrete surfaces prior to application of PFL Glaze Sealer. - Enables natural colour finish with PFL Anti-Slip. - NOT for high use areas or those subject to vehicular traffic i.e. driveways.
PFL CoverSeal	PFL CoverSeal must be applied to all internal sealer floors. It is a water based, high gloss, anti-scuff, stain repellent floor polish for use on interior sealed PeterFell coloured concrete floors. - Can be applied over both PFL Acrylic and PFL Glaze sealers.
PFL Anti-Slip	PFL Anti-Slip can be added to PFL Glaze Sealer to provide improved texture and grip to smoothly finished concrete surfaces.

Which sealer do I use?

While all PeterFell sealers are of the highest quality, they were each designed for specific applications.

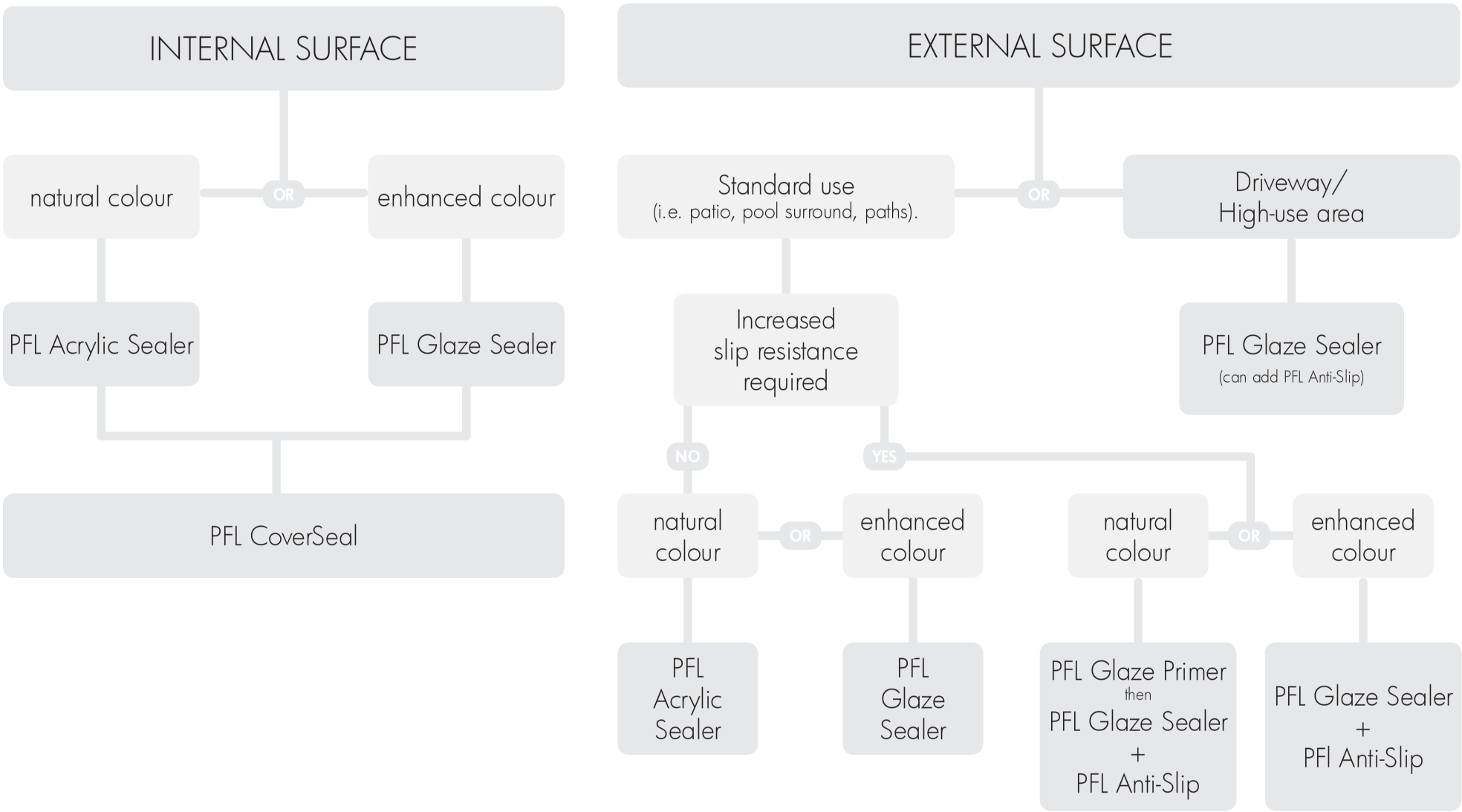
It is essential that the sealer selected is suitable for the intended application

The chart on the following page outlines which various sealer applications. If further assistance is required in selecting the sealer best suited to the project, please contact Peter Fell Ltd.

Do I need to polish my floor?

While PeterFell floors can be polished, the typical finish and 'look' of the PeterFell System is simply achieved by sealing the floor. Polishing, as with grinding, alters the concrete surface, and requires specialist equipment and expertise, and subsequently additional costs.

Which PeterFell Sealer do I use?



For assistance in selecting the appropriate sealer for the intended application please contact Peter Fell Ltd.

Will the sealer make my floor slippery?

A common misconception is that if you seal the floor it will become slippery. The grip and texture of the finished surface is generated simply but the concrete itself. While the sealer coats the surface, the texture of the concrete is retained through PeterFell Sealers. All external concrete surfaces i.e. decks, driveways, pool surrounds, should be finished with a texture appropriate for the situation i.e. non-slip. However, if the concrete is not of a suitable texture, the concrete should be sealed with PFL Glaze Sealer containing **PFL Anti-Slip**. PFL Anti-Slip is simply added to the sealer, and improves slip-resistance on all flat concrete surfaces.

Can I use PFL Anti-Slip in PFL Acrylic Sealer ?

No - PFL Anti-slip is unable to be used with PFL Acrylic Sealer as the sealer does not have the appropriate properties to hold the anti-slip particles in suspension during application, to correctly adhere the particles to the concrete surface. However, **PFL Glaze Primer** used in conjunction with PFL Glaze Sealer will give similar finish, but with advantage of PFL Anti-Slip (in PFL Glaze Sealer). While PFL Glaze Primer cannot be applied to high-use areas or areas subjected to vehicular traffic (i.e. driveways), it is perfect for residential application on decks, patios and pool surrounds.

What gloss levels do the sealers come in?

As with slip resistance, the final gloss level of the sealer is also dependent on the finish and texture of the concrete. The flatter the concrete the higher the gloss. Subsequently, if a high gloss is required i.e. for internal living areas, the concrete should be finished with as little texture as possible. Conversely, external surfaces are finished with more textured in order to introduce grip and slip resistance, and subsequently will be more matt finish. On internal floors, the gloss level is maintained using **PFL CoverSeal** - a water based, high gloss, stain repellent floor polish that is applied over PeterFell sealers. It is simple to apply, and can be built to a high gloss.

What do I seal my ground concrete floor with?

All ground floors should be sealed. It is important to realise that grinding exposes air voids and may make pits in the concrete surface. The voids must be filled prior to sealing - sealers do not act as fillers. This is typically achieved by applying a light skim coat over the surface and re-grinding.

The choice of sealer is important as it must form an even coating on the ground surface. As most sealers will not soak into the aggregate, but will penetrate into the surrounding cement matrix, following the application of several coats an uneven 'dimple' effect can result. For this reason epoxy type sealers are recommended as they provide an even coating. To improve the slip-resistance of the ground floor (which are very smooth and subsequently can be slippery) non-slip additives or an even graded sand should be incorporated into the sealer. Consult with the concrete grinder to choose an appropriate sealer.

What do I use to seal my exposed aggregate concrete?

ALL exposed aggregate concrete should be sealed. Sealing will not only protect the concrete, it will also enhance the natural colour of the aggregate. Most commonly, exposed aggregate concrete is sealed with PFL Glaze Sealer. This is the only option if the concrete is subjected to vehicular traffic i.e. driveways. Contact Peter Fell Ltd for further information on the sealing of exposed aggregate concrete.

? Can I seal my old concrete?

PFL Sealers can be applied to any concrete providing the surface is properly prepared. When sealing old concrete:

All existing coatings must be completely removed.

PFL Sealers must be applied directly to the concrete surface. Any previous sealers or coatings which prevent this must be completely removed. In many cases this will have to be done mechanically i.e. grinding the concrete.

All surface contaminants must be completely removed.

Use appropriate cleaning agents to remove ALL surface contaminants. If floor is heavily contaminated or existing coatings cannot be completely removed it is recommended that PFL sealers are not used as chance of sealer delamination will be high.

Sealing Rules

The following list of rules are CRITICAL to the successful application of sealer to your floor.

Do not seal any concrete under 28 days old.

- It is essential that concrete is fully cured before PFL sealers are applied.

Do not apply to any surface that has been previously with any curing compound or any other surface treatment.

- PFL Sealers must be applied directly to the concrete surface, any coatings or compounds that prevent this must be completely removed prior to application.

Do not seal if the concrete (not atmospheric) temperature is below 12°C or above 30°C.

- The sealer will not cure properly if the concrete is too hot or too cold.

Do not apply in direct sunlight (i.e. midday) or high humidity.

- This will cause sealer to dry incorrectly affecting sealer cure.

Do not apply externally if rain is likely within 8 hours of application.

- If rain occurs before sealer is cured, sealer must be removed and re-applied.

Do not dilute any PFL sealer.

- Dilution compromises sealer durability and performance.

Do not add PFL Anti-Slip to PFL Acrylic Sealer/PFL Glaze Primer/PFL CoverSeal

- PFL Anti-Slip can only be added to PFL Glaze Sealer.

Do not apply PFL Acrylic Sealer/PFL Glaze Primer/PFL CoverSeal on high-use areas or areas subjected to vehicular traffic.

- PFL Glaze Sealer is only sealer to be used on vehicular traffic areas.

Do not apply PFL Glaze Primer only - must apply subsequent coats of PFL Glaze Sealer.

- PFL Glaze Primer is not a sealer.

PFL Acrylic Sealer

PFL Acrylic Sealer is a durable sealer designed for application on internal and external concrete floors.

Description:

PFL Acrylic Sealer is a transparent serviceable sealer for use on concrete floors. It can be applied to both internal and external concrete floors, excluding vehicular traffic areas. PFL Acrylic Sealer gives a semi-gloss finish, but can be used to generate a high gloss finish on internal floors when used in combination with PFL CoverSeal. PFL Acrylic Sealer displays excellent adhesion to correctly prepared surfaces, is non-hazardous, solvent free, and is very easy to apply.

Precautions:

Do not seal any concrete under 28 days old.
Do not apply to any surface that has been previously treated with any curing compound or any other surface treatment.
Do not seal if concrete (not atmospheric) temperature is below 12°C or above 30°C.
Do not apply in direct sunlight (i.e. midday) or high humidity.
Do not apply externally if rain is likely within 8 hours of application
Do not dilute PFL Acrylic Sealer.
Do not add PFL Anti-Slip to PFL Acrylic Sealer.
Do not apply PFL Acrylic Sealer on vehicular traffic areas i.e. driveways.

Application:

Equipment: Roller/broom/brush/sprayer, safety equipment (see 'Safety and Handling').
- **PFL Brooms** (complete or head only), ideal for application of PFL Acrylic Sealer, are available from Peter Fell Ltd.

Preparation: Prepare floor as described previously in this booklet.

Application:

- PFL Acrylic Sealer can be applied with a brush, broom, roller, or sprayer.
  - Internal: Roller is the recommended method of application - 5 mm nap hair roller or similar gives best results.
  - External: Broom or sprayer are the recommended methods of application:
    - Broom: use standard soft bristle broom (available from Peter Fell Ltd), ensuring all textural elements of concrete surface are coated.
    - Sprayer: use standard sprayer with an air assisted airless spray10 Thou nozzle orifice (or equivalent), 20° - 30° fan angle, spaying with 2,000 psi pressure.
- Apply PFL Acrylic Sealer in thin coats, avoid pooling.
- Apply minimum 2 coats PFL Acrylic Sealer
  - Porous and ground concrete floors *will* require additional coats to be properly sealed.
  - Do not apply further coats until previous coat is completely dry.

Application continued over page...

Application (continued):

Drying time: PFL Acrylic Sealer typically dries within 4-6 hours of application.
- This period may be longer in cold climates, and varies depending on atmospheric conditions, the condition of the prepared surface, and application.

Coverage: Approximately 10 m^2/L
- Coverage will vary greatly depending on the porosity and texture of the concrete.

Clean up: All equipment can be cleaned in water.

Maintenance:

- PFL Acrylic Sealer can be maintained by cleaning with **PFL Neutralizer & Cleaner** or water blasting.
  - Refer to the 'PeterFell Finishing Process Guide' or contact Peter Fell Ltd for product information.
- If sealed concrete is affected by algae, lichen or moss, treat with **PFL Algaecide** (refer to Appendix A. Maintenance).

Removal: PFL Acrylic Sealer can be removed using PFL Sealer Stripper.
- Contact Peter Fell Ltd for product information and application instructions.

Safety and Handling:

Hazard: PFL Acrylic Sealer is considered non-hazardous. For full safety information refer to MSDS or contact Peter Fell Ltd.

Safety: Wear suitable protective clothing.

Pack sizes: 1, 2, 5, 10 and 20 L.

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, peroxides, hypochlorites), acids, anionic detergents (e.g. soap), heat sources, and foodstuffs. Ensure container is sealed when not in use, and checked regularly for leaks or spills. PFL Acrylic Sealer can be stored for up to 24 months.

First Aid:

Swallowed: Do not induce vomiting. Give water or milk to drink. Obtain medical attention immediately.

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, 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.

Physical and Chemical Properties:

Appearance	off-white emulsion
Appearance when dry	transparent ('semi-gloss' finish)
Odour	pleasant faint odour
pH	8.5 - 9.2
Solubility (in water)	dispersible
Specific Gravity	approximately 1.0 kg/L
Vapour Pressure	24.0 mm Hg @ 20°C
Wet film thickness	typically 50 - 100 micron
Dry film thickness	typically 25 - 50 micron

PFL Glaze Sealer

PFL Glaze Sealer is a highly durable, multi-purpose sealer, ideal for driveways and high-use areas.

Description:

PFL Glaze Sealer is a hard wearing sealer for use in the PeterFell System. Able to be applied to internal or external floors, PFL Glaze Sealer is designed for application in high-use areas, and can withstand vehicular traffic, making it an ideal driveway sealer. PFL Glaze Sealer gives concrete a 'wet-look' finish, enhancing the colour in the concrete. PFL Glaze sealer can be used with PFL Primer Seal to achieve a more natural finish, while PFL Anti-Slip can also be added to PFL Glaze Sealer to provide increased slip resistance.

Precautions:

Do not seal any concrete under 28 days old.
Do not apply to any surface that has been previously treated with any curing compound or any other surface treatment.
Do not seal if concrete (not atmospheric) temperature is below 12°C or above 30°C.
Do not apply in direct sunlight (i.e. midday) or high humidity.
Do not apply externally if rain is likely within 8 hours of application.
Do not dilute PFL Glaze Sealer.
Do not use PFL Glaze Primer with PFL Glaze sealer on vehicular traffic areas.

Application:

Equipment: Broom/brush/roller/sprayer, safety equipment (see 'Safety and Handling').
- **PFL Brooms** (complete or heads only), ideal for application of PFL Glaze Sealer, are available from Peter Fell Ltd

Preparation: Prepare floor as described previously in this booklet.

Application:

- If using PFL Glaze Sealer with PFL Primer Seal, apply PFL Primer Seal first.
- If using PFL Anti-Slip, add appropriate unit to PFL Glaze Sealer and stir well to suspend.
- PFL Glaze Sealer can be applied with a brush, broom, roller, or sprayer:
  - Internal: Roller is the recommended method of application - 5 mm nap hair roller or similar gives best results.
  - External: Broom is the recommended method of application:
    - Broom: use standard soft bristle broom (available from Peter Fell Ltd), ensuring all textural elements of concrete surface are coated.
    - Sprayer: use standard sprayer with an air assisted airless spray10 Thou nozzle orifice (or equivalent), 20°-30° fan angle, spraying with 2,000 psi pressure.
- Apply PFL Glaze Sealer in thin coats, avoid pooling.
- Apply ***minimum* 2 coats** PFL Glaze Sealer
  - Porous and ground concrete floors ***will*** require additional coats to be properly sealed.
  - Do not apply further coats until previous coat is completely dry.

Application continued over page....

Application (continued):

Drying time: PFL Glaze Sealer typically dries within 2-4 hours of application.
- This period may be longer in cold climates, and varies depending on atmospheric conditions, the condition of the prepared surface, and application.

Coverage: First coat: Approximately 5-6 m^2/L
Second (and subsequent coats): Approximately 6-8 m^2/L
- Coverage will vary greatly depending on the porosity and texture of the concrete.

Clean up: All equipment can be cleaned with **PFL Glaze Clean-up** or equivalent xylene-based cleaner.

Maintenance:

- PFL Glaze Sealer can be maintained by cleaning with **PFL Neutralizer & Cleaner** or water blasting.
  - See 'Step 1. Clean up' (pg 5) or contact Peter Fell Ltd for product information.
- If sealed concrete is affected by algae, lichen or moss, treat with **PFL Algaecide**.
  - See 'Appendix A. Maintenance' or contact Peter Fell Ltd for product information.

Removal: PFL Glaze Sealer can be removed using PFL Sealer Stripper.
- Contact Peter Fell Ltd for product information and application instructions.

Safety and Handling:

Hazard: PFL Glaze Sealer is a Class 3A hazard. For full safety information refer to MSDS or contact Peter Fell Ltd.
UN Number: 1263 **DG Number:** 3b **Poison Schedule:** 5 **Hazchem code:** 3(Y)E

Safety: Wear suitable protective clothing, eye protection, protective gloves, and respirator.

Pack Sizes: 1, 2, 5, 10 and 20 L.

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 Glaze Sealer can be stored for up to 12 months.

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 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.

Physical and Chemical Properties:

Appearance	colourless liquid
Appearance when dry	transparent ('wet-look' to gloss finish)
Odour	aromatic/solvent odour
Solubility	insoluble
Flash Point	24°C
Vapour Pressure	1000 mm Hg @ 20°C
Wet film thickness	typically 75 - 100 micron
Dry film thickness	typically 20 - 30 micron

PFL Anti-Slip

PFL Anti-Slip can be added to PFL Glaze Sealer to provide improved texture and grip to smoothly finished concrete surfaces.

Description:

PFL Anti-Slip is a fine silica powder that can be added to PFL Glaze Sealer to improve grip on smoothly finished concrete. PFL Anti-Slip remains suspended in the sealer, making application simple. It is completely transparent on application, and offers a subtly textured grip to the concrete surface.

Precautions:

Do not add PFL Anti-Slip to PFL Acrylic Sealer or PFL Glaze Primer

Application:

Equipment: Stirrer to suspend PFL Anti-Slip in PFL Glaze Sealer.
Preparation: No preparation required.

Application:

- Dispense correct pack size of PFL Anti-Slip into PFL Glaze Sealer and stir to suspend:

14 g	PFL Anti-Slip	into 1 L	PFL Glaze Sealer
28 g	PFL Anti-Slip	into 2 L	PFL Glaze Sealer
70 g	PFL Anti-Slip	into 5 L	PFL Glaze Sealer
140 g	PFL Anti-Slip	into 10 L	PFL Glaze Sealer
280 g	PFL Anti-Slip	into 20 L	PFL Glaze Sealer

Clean up: Discard of packaging responsibly.

Safety and Handling:

Hazard: PFL Anti-Slip is considered non-hazardous. For full safety information refer to MSDS or contact Peter Fell Ltd.
Safety: Wear suitable protective clothing, eye protection (if handling large amounts).
Pack Sizes: 14, 28, 70, 140, and 280 g.
Storage: Store in cool, dry, well ventilated place away from all liquids. Store out of reach of children. Store away from oxidizing agents (e.g. nitrates), acids, heat sources, and foodstuffs. Ensure bag is securely stored when not in use, and checked regularly for leaks or spills. PFL Anti-Slip can be stored for up to 12 months.

First Aid:

Swallowed: Do not induce vomiting and seek medical attention if irritation persists. Drink water to remove from mouth and throat.
Eyes: Immediately flood with copious quantities of water, holding eye open if necessary, for at least 15 minutes. Seek urgent medical attention.
Skin: Wash affected areas with soap and water. Seek medical attention if irritation persists. Launder clothing and clean shoes before re-use.
Inhalation: As with any fine granular product, inhalation can occur. Seek medical attention if irritation persists.

Physical and Chemical Properties:

Appearance.....white granules
Odour..... plastic
Solubility (in water)..... Insoluble
Bulk Density.....350 kg/L

PFL Glaze Primer

PFL Glaze Primer is used to prime concrete surfaces prior to application of PFL Glaze Sealer.

Description:

PFL Glaze Primer is an acrylic primer for application on concrete floors to be sealed with PFL Glaze Sealer. PFL Glaze Primer alters the appearance of PFL Glaze sealer, enabling a finish similar to PFL Acrylic Sealer to be achieved, while retaining the ability to use PFL Anti-Slip to increase slip resistance. While PFL Glaze Primer cannot be used on vehicular traffic areas (i.e. driveways), it is perfect for use on virtually all external surfaces, including patios, decks, and pool surrounds. PFL Glaze Primer displays excellent penetrance and adhesion to correctly prepared surfaces, is non-hazardous, solvent free, and is very easy to apply.

Precautions:

Do not apply PFL Glaze Primer only - must apply subsequent coats of PFL Glaze Sealer.
Do not dilute PFL Glaze Primer
Do not apply PFL Glaze Primer on vehicular traffic areas i.e. driveways
Do not seal any concrete under 28 days old.
Do not apply to any surface that has been previously treated with any curing compound or any other surface treatment.
Do not seal if concrete (not atmospheric) temperature is below 12°C or above 30°C.
Do not apply in direct sunlight (i.e. midday) or high humidity.
Do not apply externally if rain is likely within 8 hours of application

Application:

Equipment: Roller/broom/brush/sprayer, safety equipment (see 'Safety and Handling').

- **PFL Brooms** (complete or head only), ideal for application of PFL Glaze Primer are available from Peter Fell Ltd.

Preparation: Prepare floor as described previously in this booklet.

Application:

- PFL Glaze Primer can be applied with a brush, broom, roller, or sprayer.
  - Internal: Roller is the recommended method of application - 5 mm nap hair roller or similar gives best results.
  - External: Broom or sprayer are the recommended methods of application:
    - Broom: use standard soft bristle broom (available from Peter Fell Ltd), ensuring all textural elements of concrete surface are coated.
    - Sprayer: use standard sprayer with an air assisted airless spray10 Thou nozzle orifice (or equivalent), 20°-30° fan angle, spraying with 2,000 psi pressure.
- Apply PFL Glaze Primer in thin coats, avoid pooling.
- Apply **2 coats** PFL Glaze Primer.
  - Do not apply second coat until previous coat is completely dry (approximately 2 - 4 hours).
- Following application of PFL Glaze Primer floor should then be sealed with PFL Glaze Sealer.
  - See page 28 or contact Peter Fell Ltd for application instruction.

Application continued over page...

Application (continued):

Drying time: PFL Glaze Primer typically dries within 4-6 hours of application.
- This period may be longer in cold climates, and varies depending on atmospheric conditions, the condition of the prepared surface, and application.

Coverage: Approximately 10 m^2/L.
- Coverage will vary greatly depending on the porosity and texture of the concrete.

Clean up: All equipment can be cleaned in water.

Safety and Handling:

Hazard: PFL Glaze Primer is considered non-hazardous. For full safety information refer to MSDS or contact Peter Fell Ltd.

Safety: Wear suitable protective clothing.

Pack Sizes: 1, 2, 5, 10 and 20 L.

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, peroxides, hypochlorites), acids, anionic detergents (e.g. soap), heat sources, and foodstuffs. Ensure container is sealed when not in use, and checked regularly for leaks or spills. PFL Glaze Primer can be stored for up to 24 months.

First Aid:

Swallowed: Do not induce vomiting. Give water or milk to drink. Obtain medical attention immediately.

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.

Physical and Chemical Properties:

Appearance	off-white emulsion
Appearance when dry	semi-gloss
Odour	pleasant faint odour
pH	8.5 - 9.2
Solubility (in water)	dispersible
Specific Gravity	approximately 1.0 kg/L
Vapour Pressure	24.0 mm Hg @ 20°C

PFL CoverSeal

PFL CoverSeal is a water based, high gloss, anti-scuff, stain repellent floor polish for use on interior sealed PeterFell coloured concrete floors.

Description:

PFL CoverSeal gives a high gloss, non-slip, and stain resistant finish to interior PeterFell sealed floors. A unique stain blocking additive provides increased resistance to most common stain-causing agents, while a cross-linked metal additive provides increased slip resistance. Other features of PFL CoverSeal include:

- Treated floors exhibit exceptional gloss
  - Does not require buffing
  - Retains high gloss under scrubbing (see 'Precautions' below).
- Increased slip resistance.
- Increased scuff and scratch resistance.
- Easy to apply and re-apply.
- Safe to use – water based, low odour, no fumes.

Precautions:

- Recommended for interior use only.
- Do not apply if concrete (not atmospheric) temperature is below 12°C or above 30°C..
- Apply only on floors prepared and sealed following the PeterFell System.
- Do not use ammonia or amine containing cleaners or detergents on treated surface as they will cause irreparable damage to PFL CoverSeal, necessitating reapplication to restore gloss.
- The stain protection properties of PFL CoverSeal have been tested on smooth, steel-troweled, sealed concrete floors 72 hours after application, and have not been tested in conjunction with other liquid floor hardeners or on other surfaces, including tile and stone.
- PFL CoverSeal is intended to give a reasonable opportunity for clean up of spills. In some cases, PFL CoverSeal will act as sacrificial protection and will require reapplication once the spill has been cleaned.

Application:

Equipment: Sponge mop, safety equipment (see 'Safety and Handling').
Preparation: No preparation required.

Application:

- Apply PFL CoverSeal using standard sponge mop
  - Apply in thin coats, avoid pooling.
- Apply minimum of 2 coats
- Additional coats may be necessary to achieve desired appearance and stain protection.
- Do not apply additional coats until the previous application has completely dried, approximately 1 - 2 hours.

Application continued over page...

Application (continued):

Drying time: Typically 1 - 2 hours. Cool and humid conditions may prolong dry time.
- Keep treated surface dry for 24 hours following application for optimum results. Full stain resistance capabilities achieved after 72 hours.

Coverage: Approximately 20 m^2/L.
- Coverage will vary depending on application and substrate, but typical application range is 12 - 36 m^2/L.

Maintenance:

Regular cleaning may be done with water alone or PFL Neutralizer & Cleaner
- Do not use ammonia or amine containing cleaners or detergents on treated surface as they will cause irreparable damage to PFL CoverSeal, necessitating re-application to restore gloss.
- Dry buffing can restore gloss and repair scratches and scuff marks.

Removal: PFL CoverSeal can be removed using PFL CoverSeal Stripper.
- For full instructions on removal of PFL CoverSeal contact Peter Fell Ltd.

Safety and Handling:

Hazard: PFL CoverSeal is considered non-hazardous. For full safety information refer to MSDS or contact Peter Fell Ltd.

Safety: Wear suitable protective clothing.

Pack sizes: 1, 2, 5, 10 and 20 L.

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, peroxides, hypochlorites), acids, anionic detergents (e.g. soap), heat sources, and foodstuffs. Ensure container is sealed when not in use, and checked regularly for leaks or spills. PFL CoverSeal Plus can be stored for up to 12 months.

First Aid:

Swallowed: Do not induce vomiting. Give water or milk to drink. Obtain medical attention immediately.

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.

Physical and Chemical Properties:

Appearance	white liquid
Odour	sweet
Specific Gravity	1.0 kg/L
VOC	<400 g/L
Vapour Pressure	<17.0 mm Hg @ 20°C
Static Coefficient of Friction	>0.5

Appendix A Maintenance

The PeterFell System requires minimal on going maintenance. However, there are several processes that should be followed to maintain your concrete floor in optimal condition.

How do I keep my internal concrete floor clean?

Once floor is sealed and treated with PFL CoverSeal very little maintenance is required. The floor can be cleaned with **PFL Neutralizer & Cleaner** using a cloth or mop (see 'Step 1. Clean up' for application instructions). PFL Neutralizer & Cleaner can be diluted with hot water to improve cleaning efficiency. Replace diluted with solution when dirty.

Do not use amonia or amine containing cleaners or detergents

These detergents are very harsh and will cause irreparable damage to PFL CoverSeal (and other PFL Sealers), necessitating re-application to restore gloss and finish to the floor.

Clean up all spills immediately

PFL CoverSeal is designed to give a reasonable opportunity for clean up of spills. In some cases, PFL CoverSeal will act as sacrificial protection and will require re-application once the spill has been cleaned.

PFL CoverSeal must be routinely applied

To retain high gloss, anti-scuff, stain repellent properties of PFL CoverSeal it must be applied routinely - at least once every 6 months (see pg 29 for application instructions). The floor should be cleaned (as described above) prior to re-application.

How do I keep my external concrete floor clean?

Once floor is sealed very little maintenance is required. The area can be cleaned by hosing or water blasting. Any spills or contaminants should be cleaned with **PFL Neutralizer & Cleaner** using a mop or yard broom (see 'Step 1. Clean up' for application instructions). PFL Neutralizer & Cleaner can be diluted with hot water to improve cleaning efficiency. Replace diluted solution when dirty.

How do clean moss and algae off my concrete?

Moss, lichen and algae can be removed from concrete surfaces using **PFL Algaecide** (see following page for application instructions). PFL Algaecide is designed to kill moss, lichen, and algae, making it a more effective method of removing these contaminants than water blasting or cleaning alone. In targeting these organisms directly, it will also prolong their return, reducing ongoing maintenance required. While PFL Algaecide is designed to eliminate living moss, lichen and algae, it will not remove dead organisms. These are generally distinguishable as black surface contamination (as opposed to green contamination characteristic of living organism), and can only be removed by water blasting or cleaning as described above.

How do I re-seal my concrete?

If the concrete surfaces looks 'tired' and worn, it can easily be rejuvenated by re-sealing. The surface must first be thoroughly cleaned (using PFL Neutralizer & Cleaner and water blasting), and all loose debris, contaminants, stains and marks removed. There is not need to treat the with PFL Surface Preparation or PFL Eco Surface Preparation. Simply apply the appropriate sealer over the existing coating.

PFL Algaecide

PFL Algaecide is used to remove algae, moss, and lichen from concrete surfaces without the need for water blasting.

Description:

PFL Algaecide has been developed for cleaning algae, moss and lichen from concrete surfaces. There is no need to water blast. Simply spray on and leave to work. This product will stay active for up to 6 months. PFL Algaecide also has a low toxic level, making it safe for use around the house.

Precautions:

- PFL ALgaecide is designed to eliminate *living* algae, moss and lichen from concrete surface. PFL Algaecide will not remove any dead organisms. These are generally distinguishable as black surface contamination (as opposed green contamination characteristic of living organisms), and can only be removed by water blasting or scrubbing.

Application:

Equipment: Mist sprayer (or equivalent), safety equipment (see 'Safety and Handling').
Preparation: No preparation required.

Application:

- Dilute PFL Algaecide with clean water as follows:

Dilute 1 part PFL Algaecide with 5 parts water

- Apply diluted algaecide to dry surface.
  - This allows the algaecide to absorb into substrate enabling it to become active every time it rains.
- Apply over surface to be treated using mist sprayer or equivalent.
  - PFL Algaecide only needs to cover the surface being treated with a full mist spray and does not need to be 'flooded' on.

Coverage: Approximately 3 - 10 m^2/L of diluted product
- Coverage is dependent on substrate porosity, with sealed concrete (less porous) surfaces offering increased coverage.

Clean up: Rinse sprayer and other tools with excess water to clean.

Safety and Handling:

Hazard: PFL Algaecide is harmful if swallowed, inhaled or absorbed through the skin, and is an eye irritant. For full safety information refer to MSDS or contact Peter Fell Ltd.
Safety: Wear suitable protective clothing, gloves and eye/face protection.
Pack Sizes: 1, 2, 5, 10 and 20 L.
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, peroxides, hypochlorites), acids, anionic detergents (e.g. soap), heat sources, and foodstuffs. Ensure container is sealed when not in use, and checked regularly for leaks or spills. PFL Algaecide can be stored for up to 12 months.

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.

Physical and Chemical Properties:

Colour.....clear liquid
Odour..... mild odour
pH..... approximately 7.0
Solubility (in water).....soluble
Specific Gravity.....approximately 1.0 kg/L
Vapour Pressure.....18.0 mm Hg @ 20°C

Appendix B PeterFell Product Range

For full product information, application instruction, and pricing contact Peter Fell Ltd.

Colour	
PFL Special Oxides	PFL Special Oxides are liquid oxide colours for the integral colouring of concrete in the PeterFell System.
Grouting Products	
PFL Non-Shrink Grout	PFL Non-Shrink Grout is a shrinkage compensated cementitious grout designed for decorative grouting in the PeterFell System.
PFL Grout Gun	PFL Grout Gun is designed for delivery of PFL Non-Shrink Grout in to decorative cuts in the PeterFell System
PFL Grout Tape	PFL Grout Tape is used when grouting decorative cuts in the PeterFell System.
Surface Preparation Products	
PFL Surface Preparation	PFL Surface Preparation is a traditional etching solution used to prepare concrete surfaces for sealing.
PFL Eco Surface Preparation	PFL Eco Surface Preparation is an environmentally friendly, less corrosive alternative to traditional etching products used to prepare concrete surfaces for sealing.
Sealers	
PFL Acrylic Sealer	PFL Acrylic Sealer is a durable sealer designed for application on internal and external concrete floors.
PFL Glaze Sealer	PFL Glaze Sealer is a highly durable, multi-purpose sealer, ideal for driveways and high-use areas.
Sealer Related Products	
PFL Glaze Primer	PFL Glaze Primer is used to prime concrete surfaces prior to application of PFL Glaze Sealer.
PFL CoverSeal	PFL CoverSeal is a water based, high gloss, anti-scuff, stain repellent floor treatment for use on interior sealed PeterFell coloured concrete floors.
PFL Anti-Slip	PFL Anti-Slip can be added to PFL Glaze Sealer to provide improved texture and grip to smoothly finished concrete surfaces.
PFL Broom	PFL Brooms are perfect for application of PFL Sealers on exterior surfaces.
Cleaning and Maintenance Products	
PFL Neutralizer & Cleaner	PFL Neutralizer & Cleaner is a biodegradable cleaner designed to neutralize PFL Surface Preparation and for the general cleaning of concrete surfaces.
PFL Algaecide	PFL Algaecide is used to remove algae, moss, and lichen from concrete surfaces without the need for water blasting.

Appendix C Order Details

Job details:

Area: m^2 Concrete Colour PFL

Situation: Interior Patio/Deck Driveway Commercial

Ground/Polished Pool surround Other:

Grouting:

Cuts: m Finish: flush / concave

		cost
PFL Non-Shrink Grout:	units:	
Grout colour: PFL	Colour required: kg	
PFL Grout Gun or PFL Grout Tape		

Surface Preparation:

Strength: mild / medium / heavy

		cost
PFL Surface Preparation	units:	
or		
PFL Eco Surface Preparation	units:	
PFL Neutralizer & Cleaner	units:	

Sealing:

ENSURE SEALER TYPE SELECTED IS SUITABLE FOR INTENDED APPLICATION

		cost
PFL Acrylic sealer	units:	
or		
PFL Glaze sealer	units:	
PFL Anti-Slip	units:	
PFL Glaze Primer	units:	
PFL CoverSeal	units:	
PFL Broom complete head only handle only		

Cleaning and Maintenance:

		cost
PFL Neutralizer & Cleaner	units:	
PFL Algaecide	units:	

TOTAL COST:

Customer Notes

Peter Fell Ltd

81-83 Patiki Road, Avondale, Auckland, New Zealand

P.O. Box 90608, Victoria Street West, Auckland 1142, NZ

ph: 0800 422 6568 or (09) 828 6460 fax: (09) 820 0722

e-mail: info@peterfell.co.nz

www.peterfell.co.nz