



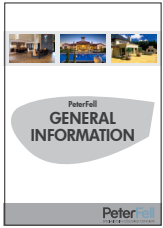
PeterFell

# SUPERCEM

Guide

This booklet provides technical information and application instruction for Supercem. To view the standard colour range, for custom colouring, or to obtain a test pot please contact Peter Fell Ltd.

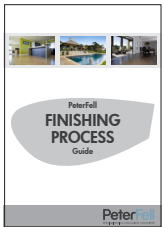
For more detailed information on the PeterFell System, including product information, application instruction, and technical specifications, please refer to the following documents:



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 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.



The 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 who are using the PeterFell System.

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

[www.peterfell.co.nz](http://www.peterfell.co.nz)

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# Introduction

If you require a time proven traditional cement wash that has performed under New Zealand conditions for over the past 60 years, you need to look no further than Supercem. Supercem is classified as an architectural coating, thereby being functional as well as decorative. The majority of other types of cement paints, or lime washes require a sealing coat applied to the surface prior to the application of the main coat. With Supercem this is not necessary. Two coats of Supercem applied to the surface will weatherproof any plaster or concrete structure.

A major benefit when using Supercem is that it can be applied to new plaster after a couple of days – there is no need to wait for the 28 days standard curing time. Supercem will actually help the curing of plaster. This early application will also save costs in regard to scaffold. You do not need to be paying for scaffold while waiting for the plaster to cure.

Supercem being a cement based product gives a natural finish to any type of building. It has been used on historical buildings because of its durability and non-plastic appearance. Innovative designers are extending the application range of Supercem. Used as an interior finish, it gives the aged look without the rub off that is characteristic of traditional lime washes. It can be treated for application in wet areas and high traffic situations.

Supercem can be applied by virtually anyone - you do not need a specialist applicator. Follow simple, easy instructions and a new world of creative colouring unveils itself.

The range of colours are endless, starting with a standard range of 24 varied colours. Supercem can also be custom coloured enabling complete freedom of choice to the discerning home owner. Matching to paint charts, fabric, or simply images in a magazine can be easily achieved.

This booklet provides technical information and application instruction for Supercem. To view the standard colour range, for custom colouring, or to obtain a test pot please contact Peter Fell Ltd.

**A** Supercem - Frequently Asked Questions pg 4

**B** Application Instructions pg 6

**C** Sealing and Maintenance pg 8

**C** Troubleshooting pg 9

### ? What is Supercem?

Supercem is a traditional cement paint. Classified as an architectural coating, providing a functional and decorative treatment for virtually any cementitious wall surface including plaster, masonry, and concrete blocks.

### ? What colours does Supercem come in?

Supercem comes in 24 standard colours, and can also be custom coloured to match any colour pallet.

The standard colour range is in the Supercem brochure, available from Peter Fell Ltd.

### ? Where can I use Supercem?

Supercem can be applied to any cementitious wall surface. Most commonly applied over plaster, Supercem is easily applied over bricks, masonry, and concrete blocks. Supercem can be applied to new house walls or a simple garden retaining wall. Supercem can also be used on interior masonry or plaster walls, and is perfect for creating a unique feature wall. Supercem can also be sealed in high use areas to lock in the colour and make it easy to clean and maintain.

### ? How much does Supercem Cost?

The cost of Supercem is similar to that of other paint products. Assuming average coverage of Supercem (3m<sup>2</sup> per kg), two coats of Supercem over standard plaster surface will cost:

approximately

\$8-10/m<sup>2</sup>

Cost will vary depending of substrate being coated and on the area. For more pricing information please contact Peter Fell Ltd.

### ? When can I apply Supercem?

A major benefit when using Supercem is that it can be applied to new plaster after a couple of days – there is no need to wait for the 28 days standard curing time. Supercem will actually help the curing of plaster. This early application will also save costs in regard to scaffold. You do not need to be paying for scaffold while waiting for the plaster to cure.

Supercem can also be applied to any existing masonry or plaster walls, requiring no priming or undercoating. However this can only occur if no previous coating has been applied i.e. sealers, paints etc.

### ? What finish do I get with Supercem?

One of the great advantages of Supercem over standard paints is the ability to generate a natural textured finishes. Supercem can be applied in an even controlled manner to give a simple clean finish, or with bold brush strokes to give a more rustic appearance. Simply by adjusting the manner of application it is easy to create a surface finish that suits any setting.

### ? How is Supercem different from coloured plaster?

While Supercem is a cement based product it differs from plaster as it is applied as a paint. Subsequently, Supercem can be applied by any handyperson, requiring little preparation or expertise.

Peter Fell Ltd provides a range of colours that can be used in plaster. For more information please contact us.

### ? How is Supercem different from normal paint?

As Supercem is a cement based paint it gives a very natural finish to coated surfaces. Acrylic paints give a very flat, 'plastic' appearance. Conversely, Supercem maintains or enhances the surface texture, resulting in a more natural surface appearance. Supercem is also influenced by the environment, and will weather and change with nature. While sealing the Supercem locks in the colour, it can also be left to age naturally with the surrounding environment.

### ? Will Supercem waterproof my wall?

Supercem will weatherproof but NOT waterproof a wall. Supercem is a cement based product like plaster, and is thus porous. While such mediums will withstand constant weathering, they will not provide a water impermeable seal on the wall. Such sealing should be done using an appropriate waterproofing agent prior to application of Supercem.

### ? Will Supercem crack?

Supercem is a cement based coating design for application over cementitious wall products. Subsequently, any cracking or movement in the substrate will be reflected in the Supercem. The Supercem itself will not cause the substrate to crack.

For more information on cracking see 'Troubleshooting' or contact Peter Fell Ltd.

PFL Supercem is a traditional cement paint for use on cementitious walls such as plaster, masonry, and concrete blocks.

## Description:

PFL Supercem is a traditional cement wash that has been used in New Zealand for over 60 years. Supercem is classified as an architectural coating, providing a functional and decorative treatment for virtually any cementitious wall surface including plaster, masonry, and concrete blocks. As Supercem is a cement based product it provides a natural surface coating, not the 'plastic' look of conventional paints. Supercem can be left to age naturally to blend with the environment, or the colour and finish can be locked in by treating with PFL Natural Sealer. PFL Supercem is simple to apply, requiring no priming or sealing coat prior to application. Supercem comes in 24 standard colours, and can also be custom coloured to match any colour pallet.

## Precautions:

DO NOT apply Supercem in extreme or inclement weather conditions i.e. rain or very hot and dry conditions.  
DO NOT apply directly to cementitious surface - surface must be wet misted first (see instructions below).

## Application:

**Equipment:** Brush (standard 100-150 mm flat brush), garden sprayer/mister.

**Preparation:** All areas to be coated with PFL Supercem must be sound, clean and free from oils, grease or surface contaminants. Any existing coatings should be completely removed. Loose material, dirt and dust must be removed by brushing and if necessary washing and waterblasting.

- Mixing:**
- Measure clean water - **750 ml per 1 kg Supercem**
    - for 5 kg pack 3.75 L water required
    - It is important that the water added remains constant for subsequent batches as variation in water will result in variation in colour.
  - Place half Supercem powder into a clean bucket, and add approximately half of the water.
  - Pour contents of colour pottle into container, and use remaining water to rinse pottle ensuring ALL colour is extracted.
    - Ensure pottle is rinsed in the same manner for all subsequent batches to minimise chance of colour variation.
  - Add remaining Supercem powder and mix well to combine
    - If mix is still a little stiff, add small amount of water to achieve workable consistency.
  - It is important to ensure colour consistency between each batch, so ensure protocol is repeated uniformly for each mix.
  - Once mixed, Supercem has a **pot life of approximately 1 hour**

## Application:

- Wet mist area PFL Supercem is to be applied – **DO NOT HOSE OR SATURATE!**
  - A standard garden sprayer capable of generating a fine mist is ideal.
  - Do not apply Supercem while water sheen is still visible on the surface i.e. surface is too wet.
- Apply the first coat of Supercem using brush, ensuring the substrate is well coated and Supercem is brushed well into the substrate to maximise adhesion.
  - If Supercem appears chalky and dry immediately on application, wet mist surface again before continuing.
- Stir Supercem in bucket regularly to maintain workability.
- Clean brush in water periodically during application to prevent hardening.
- Ensure first coat is completely dry before applying a second coat.
- Wet mist surface again prior to application of second coat.

Application continued over page...

## Application (continued):

- Application of the second coat will determine the final finish of the PFL Supercem i.e. thicker, broader brush strokes result in more textured finish, while a more even application will result in a more uniform finish.
- Apply fine mist over final coat (or at the end of the day) as it dries.

## Application Tips:

- Clean any splashes of Supercem immediately with water to avoid staining.
- Ensure that breaks occur at some form of architectural relief i.e. window bay, recess, etc.
- Where possible work from one corner to the next with the same mix.
- If painting a large area, it is important to plan the application prior to commencement of any work to minimise colour variation through mix variation or drying conditions.
  - Consistency from mix to mix is essential to ensuring colour continuity
  - Plan to keep wet flowing edge both vertically and horizontally.
  - Work around a building following the sun so as to keep the newly applied Supercem in the shade as much as possible.

**Drying time:** PFL Supercem 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 3 m<sup>2</sup>/kg

- Coverage will vary greatly depending on the porosity of the substrate.

**Cleanup:** All equipment can be cleaned in water.

## Maintenance:

- PFL Supercem is a natural product designed to weather and age naturally, therefore requires no ongoing maintenance.
- Supercem can be protected by sealing with PFL Natural Sealer without compromising the natural look and finish.
  - For more information on PFL Natural Sealer please contact Peter Fell Ltd or visit our website.

## Safety and Handling:

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

**Safety:** Wear suitable protective clothing.

**Pack sizes:** 1-5 kg and 5 kg bag (powder), colour pottle.

**Storage:** Store in cool, dry, well ventilated place in original container away from foodstuffs. Store out of reach of children. PFL Supercem 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 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 powder
Appearance (when dry).....	hard plaster-like coating
Odour.....	sweet 'cement' odour
pH.....	alkaline

PFL Supercem is a natural product designed to weather and age naturally, therefore requires minimal ongoing maintenance. Supercem can be sealed to reduce ongoing maintenance, or simply cleaned as described below.

## i Sealing

While Supercem is a natural product designed to weather and age naturally, it can be sealed to protect from staining and marking. However sealing Supercem with a coating sealer may compromise the natural texture and finish of the product, thus defeating its application in the first place. However, treatment with **PFL Natural Sealer** forms no surface coating, while protecting the surface from the ingress of water and contaminants. PFL Natural sealer reacts with the cement in the supercem to form a water repellent barrier just below the surface, without changing the surface texture or colour. For high use areas, or where a coating is desired (i.e. to enhance colour), other sealing options are available from Peter Fell Ltd.

For product information on PFL Natural Sealer, or other sealing options for Supercem please contact Peter Fell Ltd.

## ii Cleaning

Surface coated Supercem should be cleaned using **PFL Neutralizer & Cleaner**. PFL Neutralizer & Cleaner is a biodegradable cleaner designed for the general cleaning of concrete and plaster surfaces. Care should be taken not to scrub or abrade the surface too much as this may impact on the colour and appearance of the Supercem. Cleaning and maintaining Supercem surfaces is simplified if the surface is sealed.

For more information on PFL Neutralizer & Cleaner or on the cleaning of Supercem surfaces please contact Peter Fell Ltd.

## iii Removing Moss and Algae

Moss, lichen and algae can be removed from cementitious surfaces using **PFL Algaecide**. 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 delay their return, reducing ongoing maintenance.

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.

For full product information and application instructions contact Peter Fell Ltd.

Issues effecting the performance and appearance of Supercem are as follows:

i

## Excessive colour variation

While slight colour variation in Supercem contributes to its natural appearance, increased colour variation can occur for several reasons:

**Mixing** - If there is variation in mixes, either Supercem powder, colour, or water, this can contribute to variation in colour.

**Water** - The addition of further water to the Supercem in the bucket if sedimentation has begun to take place (apart from the colour variation) would also tie in with a dusting complaint.

**Repair** - If patches occur which show up brush marks in a more pronounced manner this is indicative of retouching. In other words, an operative has gone back on his work to touch up after the main part of the wall has been completed, this practice will always result in sub standard work.

**Efflorescence** - If a white bloom appears on the work either entirely or in patches, this is a case of where the decorator has come up against efflorescence, a phenomenon which can happen under certain weather conditions to all cementitious type products. To some people this is an appealing aspect of the Supercem but to others the appeal is not there. This will weather off in time.

**Substrate** - Variation in substrate density or porosity can result in colour variation as Supercem can get 'sucked' into some areas and not others.

ii

## Failure to harden

Supercem is a cement based product, and as such requires water in order to harden and set properly. If insufficient water is available, the Supercem will appear dry, chalky and patchy. If this occurs immediately following application, moisture should be applied to the surface by fine mist, enabling the Supercem to properly cure. If the atmosphere is hot and dry or a surface very absorbent, always give the treated walls a fine spray of water at the end of the days work to replace water lost from the Supercem by evaporation or suction.

iii

## Flaking

Flaking generally occurs when Supercem has been applied to an unsuitable surface. The effects of frost can also be responsible for flaking. An indication that Supercem has been applied to softer materials than itself, and is therefore unsuitable, is the presence of some of this soft material on the back of the Supercem. Flaking can also occur when Supercem is applied to a very smooth surface. Contamination of substrate also has an impact on adhesion.

iv

## Dusting

If the surface appears dusty and chalky following application of Supercem, the first thing to check is that the Supercem was wet misted following application to ensure curing. If the complaint comes within 8 hours of application it is possible for the surface to be wet misted once or twice and within a day the surface will harden and dusting cease.

The other cause of dusting is use of excess mix water. Adding too much water to the Supercem weakens it, resulting in a soft and often dusty finish. Commonly extra water is inappropriately added due to:

- Easier application/better coverage: Diluted Supercem appears easier to apply with greater coverage (thus more cost effective). However this simply results in a poor finish, often requiring several additional coats to repair the surface. If more than two coats are required, this indicates the applicator was using a diluted (weakened) mix, which will result in a dusted, substandard finish.
- Revive hardened Supercem: As Supercem goes off it stiffens and sets. Adding excess water will soften the Supercem and make it workable, however this simply weakens the Supercem resulting in dusting. This hardening may result from excess amounts of Supercem being prepared, resulting in the product standing around too long prior to application.

The use of excess, or varied amounts of mix water can also contribute to colour variation (see below).

v

## Efflorescence (Chalking/whitening)

Efflorescence is a naturally occurring phenomenon in all cement based products. Manifesting as chalky or dusty surface, efflorescence can occur randomly on the surface. This dusting does not cause any damage or degradation to the surface, however will mask the Supercem colour - in particular with darker colours. Efflorescence will not occur on every surface, and even if prevalent will dissipate over time.

A simple way to eliminate efflorescence is to treat the Supercem with PFL Natural sealer. PFL Natural Sealer is a non-coating penetrating sealer that retains natural look and feel of Supercem and will lock in the colour.

Never apply Supercem in bad or showery weather, such weather aggravates efflorescence.

## Cracking

Supercem is a cement based coating design for application over cementitious wall products. Subsequently, any cracking or movement in the substrate will be reflected in the Supercem. The Supercem itself will not cause the substrate to crack.

Most plasters will develop some form of cracking, when a plaster coat which is bonded to a background shrinks, tensile stresses occur within the plaster, these stresses tend to crack the plaster because it cannot or should not move relative to the background. While precautions can be taken by the plasterer to avoid problems of cracking, plaster will not hide cracks in the supporting background that are subject to moisture or thermal linear movements. The subsequent thermal and moisture movement will tend to follow any earlier planes of weakness. Patching of this sort of crack is not always successful as the crack tends to reflect through the repair. To control this, the only foolproof way to avoid reflective cracking is using control joints over the effected area.

Another form of cracking is what is referred to as craze cracking. This is caused by differential cracking of the outer surface of a plaster coat in relation to it's under surface. These cracks are normally shallow in depth and do not extend through the plaster coat. Such cracking is particularly prevalent in dense trowelled surfaces, where excessive cement paste has been worked to the surface, fine sands, premature drying, rich mixes all add to the cause.

There are numerous other forms of cracking but a most important but often neglected source of cracking is inadequate curing of the plaster. Water is needed for the hydration of cement, which must progress if the cement is to utilize and develop its cementing properties. If water is dried out prematurely the hydration process ceases and the plaster becomes brittle and powdery, it will have no abrasion resistance and low resistance to crazing and cracking. Plaster should be kept damp after application, and all efforts to restrict air circulation in the vicinity of new plaster should be done. Coverings of areas with screens may be necessary under extreme conditions. Random wetting often achieves more damage than good.

# Customer Notes

## Peter Fell Ltd

81 Patiki Road, Rosebank, 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](mailto:info@peterfell.co.nz)

[www.peterfell.co.nz](http://www.peterfell.co.nz)