



Driven by Innovation

CONCRETE SEALERS

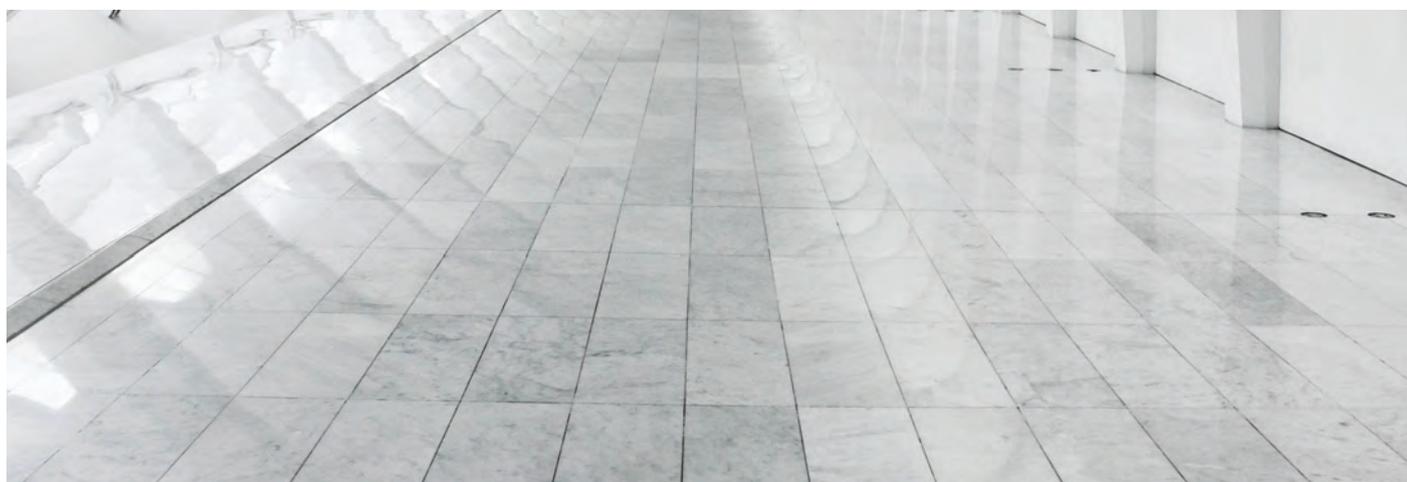
INFORMATION BOOKLET



A family
owned
Australian
business

CONTENTS

Intro	P 2
Products	P 3
750 Concrete Sealer	P 4
750 Tint Colours	P 4
309 & 409 2K Epoxy	P 5
314 & 414 2K Polyurethane - Slow	P 5
Surface preparation Information	P 7
Cures & Moisture	P 7
Curing Agents & Other Compounds	P 8
Surface Preparation	P 19
Contaminants	P 11
Concrete Defects	P 11
Surface Application Information	P 12
Contact Information	P 15





INTRO

Concept Paints' Concrete Sealers, feature 1K and 2K clear sealers with colour tints available, these Acrylic, Polyurethane and Epoxy based coatings are ideal for protecting concrete surfaces from the penetration of contaminants, on new and old concrete floors.

The following booklet is a compilation of all the information on Concept Paints concrete sealer products, including surface preparation before application of the product.

**MAINTAIN, SEAL, & PROTECT
CONCRETE AND OTHER
FLOORING WITH SEALERS
FROM CONCEPT PAINTS.**



PRODUCTS

IK CLEAR SEALERS

- An acrylic based coating ideal for protecting most concrete surfaces from the penetration of dirt, oil, and grease, on new and old concrete floors.
- Ideal for industrial shed floors, brickwork, and driveways for dust reduction, or new homes prior to carpeting.
- Tintable with the concentrates listed across, to achieve the desired colour, and packed in 19Lt to enable the addition of 1Lt tints.

750 Concrete Sealer



Codes:

18LT: IN75090000018

20LT: IN75090000020

This product is an acrylic based concrete coating suitable for most concrete surfaces. It provides a highly durable surface, with excellent adhesion that blocks the penetration of dirt, oil, grease, chemicals and stains, making the concrete easier to clean and maintain. It is wear resistant making it suitable for high traffic areas. Can be made into a satin or matt finish by either adding the 399 Flattening Base or Factory Packed. The 750 Concrete Sealer can be used with the Unicote 300 Tinter range. 750 Concrete Sealer is Available in 18LT & 20LT.

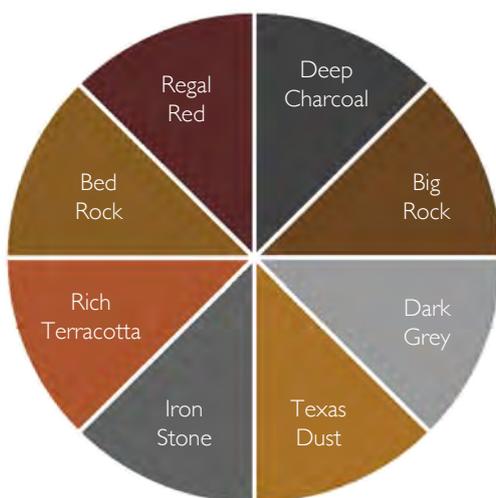
370 Tint Colours



1LT tint concentrates are designed to be added to the 750 Concrete Sealer **18LT** creating a transparent tint in a range of colour options.

The 750 Concrete Sealer can be used with the Unicote 300 Tinter range.

The 750 Tints are available in the following colours: Deep Charcoal, Big Rock, Dark Grey, Texas Dust, Iron Stone, Rich Terracotta, Bed Rock, and Regal Red. (2-3 Litres of tint can be used for higher opacity)



Code:

Deep Charcoal: A06C/750/6017

Big Rock: A06C/750/3073

Dark Grey: A06C/750/6045

Texas Dust: A06C/750/3071

Iron Stone: A06C/750/6044

Rich Terracotta: A06C/750/3007

Bed Rock: A06C/750/3072

Regal Red: A06C/750/3008

Concept Paint's 750 Concrete Sealers are fast drying, high gloss, and have superior performance.

PRODUCT	MINIMUM FILM THICKNESS	THEORETICAL SPREADING RATE
750 Concrete Sealer	20 - 25 microns	Approx. 10.0 m ² /L

309 & 409 2K Epoxy



The 309 & 409 2K Epoxy is a 2K epoxy topcoat, suitable for most industrial and commercial applications. It is characterised by excellent adhesion and anti-corrosive properties with high abrasion and solvent resistance. The 309 & 409 2K Epoxy can be used with the Unicote 300 Tinter range. These products are factory special colours, and are available in a 5LT and 20LT kit. The 309 2K Epoxy when hardened can be used as a sealer.

Code:
G/409

314 & 414 2K Polyurethane - Slow



The 314 & 414 2K Polyurethane - Slow, is a 2K acrylic urethane topcoat, characterised by its durability, excellent flow and gloss. It is suitable for large industrial and commercial applications where a slower system with a longer open time is required. The 314 & 414 2K Polyurethane - Slow can be tinted with the Unicote 300 Tinter range. These products are factory special colours, and come in a 20LT kit. The 314 2K Polyurethane - Slow when hardened can be used as a sealer.

Code:
G/414

PRODUCT	MINIMUM FILM THICKNESS	THEORETICAL SPREADING RATE
309 & 409 2K Epoxy	80 - 100 microns	Approx. 4.0 m ² /L
314 & 414 2K Polyurethane - Slow	50 microns	Approx. 8.0 m ² /L

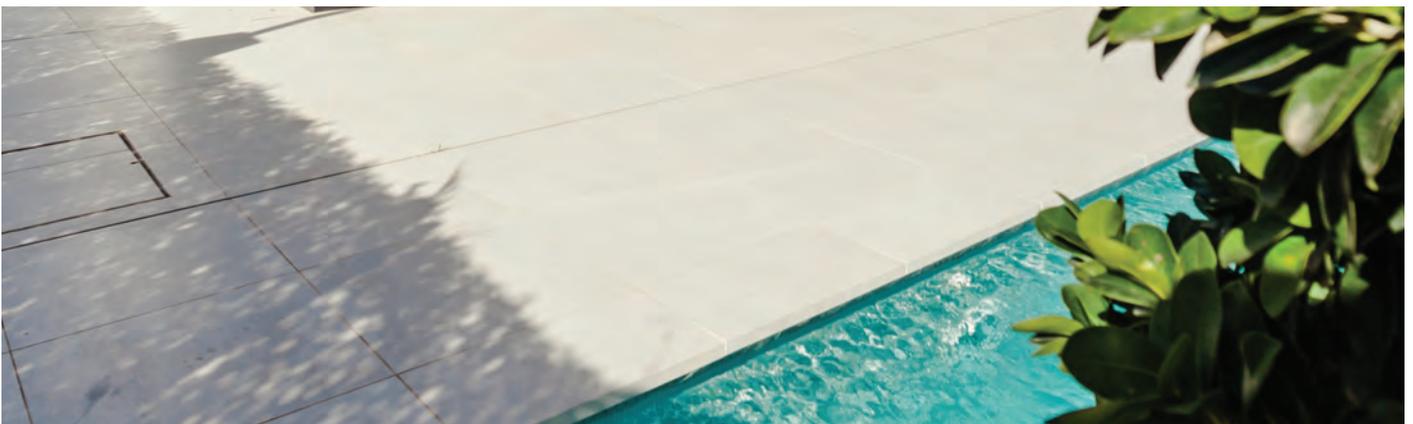


SURFACE PREPARATION INFORMATION

CURES AND MOISTURE

Curing New Concrete

New Concrete floors are very alkaline, usually having a pH of 13-14. A curing period of at least 30 days is required for the concrete to react and become less alkaline. This curing period also allows the initial high moisture content to drop or normalise. pH paper should be used to verify curing. When cured, the pH of the concrete should be around 9.0-10.0. In the event that the pH has been determined not to have dropped sufficiently, additional curing time, acid etching, and/or the use of an alkali resistant primer, such as an epoxy type, will be necessary. Once it is determined that the concrete is of sufficient pH other surface preparations can begin.



Excess Moisture in Concrete

Concrete must test negative for excess moisture before coating. The plastic sheet method test, is an easy, generally reliable method to detect the presence of moisture. If excessive moisture is detected in the concrete slab, painting should not commence until the moisture is removed.

The Plastic Sheet Method Test

Tape a large plastic sheet (45cm x 45cm) onto the concrete surface being tested, ensure an airtight seal between the concrete and plastic is formed. After 24 hours remove the plastic sheet, if condensation appears on the underside of the plastic or if the underlying concrete is darker, excessive moisture in the concrete is indicated. With these results painting should not be undertaken, if moisture is present, retest after another 14 days. However concrete can be coated if no moisture or condensation is present on the underside face of the sheet, or if concrete has not darkened (when compared to adjacent concrete).

Another possible cause of moisture on a concrete slab is if the concrete's temperature is too close to the dew point temperature. A surface at or below the dew point will attract condensation, whilst a surface that is at least 3°C above the dew point will remain dry.

Incomplete Curing & Curing Agents

The optimum method of curing concrete is by keeping it wet for as long as possible after pouring, usually 7-10 days. If concrete can't be cured with this method, curing agents are often used. If the wet cure is improper or inadequate, the concrete is likely to crack more than normal and carbonate more extensively.

SURFACE PREPARATION

For surface preparation on new floors, *Laitance* and *Efflorescence* must be removed from the substrate that is to be coated. These two terms are often confused with each other, however they are distinctly different, *Laitance* occurs during concrete placement, finishing and curing, whilst *Efflorescence* can occur much later.

Efflorescence

Efflorescence is a result of lime (or calcium hydroxide) leaching out of a permeable concrete mass over time, which reacts with carbon dioxide and airborne acid pollutants, it is a white crystalline or powdery deposit that appears on the surface of concrete. Efflorescence occurs where water has leaked into the concrete, and shows itself as a white crystalline deposit around the crack or pinhole. This raises the question on how to prevent efflorescence recurring. The source of the efflorescence (water ingress), needs to be identified and fixed *before any surface preparation or coatings*. Efflorescence is preferably removed.

Laitance

Laitance is a weak non-durable layer of material containing cement and fines from aggregates. It is brought by bleeding water to the top of over-wet concrete at the time of pouring. Unlike efflorescence it is virtually invisible to the untrained eye. The amount of Laitance is increased by over-working or over-manipulating the surfaces of the concrete during finishing. The layer is not adhered well to the concrete proper, and *must be removed prior to coating* as Laitance will prevent good adhesion of the coatings. Laitance is usually eliminated mechanically. Abrasive blasting and diamond grinding are the best method to remove thin layers, although acid etching can be used when laitance is limited to surface deposits, providing that no significant surface profile is required for the coating application. In the cases of thick Laitance layers, filling materials may be required to restore the concrete to its original dimensions.

Acid Etching

Concrete can be cleaned and etched with acid because it is alkaline. Surface contaminants such as grease, oil, waterproofing materials, etc, must first be removed for the acid to work properly. Proper etching will permit good adhesion of many thin film coating systems, provided the coated surface will not be exposed to impact, heavy methods can not be utilised. Concrete slabs containing steel or synthetic fibers are not recommended for acid etching. *Ensure that, when using an acid cleaner that all instructions regarding application, removal and safety requirements are understood and followed, and that personal protective equipment is used.*

Water Cleaning

Low and high pressure water cleaning can be effective for cleaning but have no or little effect on the surface profile, however there are various other equipments and pressures available on the market that would be considered water cleaning methods which we will not be covering here. Low pressure water cleaning, often referred to as water blasting, removes dirt and other loose friable material, however high pressure water cleaning will remove more tightly held dirt and other surface contaminants.



CONTAMINANTS

Any defects, bugs, rough edges or surfaces, concrete splatter, contaminants to be removed, repaired, cleaned up, or filled, should be completed prior to coating operations.

Premature failure of the coating system, usually in the form of delamination, can be caused by contamination of the concrete. Contamination can be introduced to the concrete from other sources after placement. Examples of this type of contamination include; fats, oils, contamination from boots, building materials, or spillage, other sources of contamination may be present on aged concrete surfaces. Things such as, dust, dirt, grease, oil, chalk, chemicals, etc, are examples of contamination that must not be forced deeper into the concrete or spread over a larger area. A combination of different cleaning methods may be used to remove the contamination. If the contamination is severe, the affected area may have to be removed and reinstated with new concrete.

CONCRETE DEFECTS

For a smooth and fair surface once coated, defects, must be either removed or filled prior to surface preparation. Common defects are voids, rough finish, bug holes, honeycombs, tie rod holes, protrusions, and splatter. Removing defects or preparing cavities for filling is usually achieved with hand or power tools, suitable fillers can include grout plaster, mortars, putties, surfacers and fillers.

The selection of the 'right' filler for the job depends on a number of factors, such as:

- Strength compatibility with selected coatings.
- Adhesion strength to concrete being filled.
- Ease of Application.
- Sag resistance on vertical surfaces
- Shrinkage during cure.
- Cure Speed.

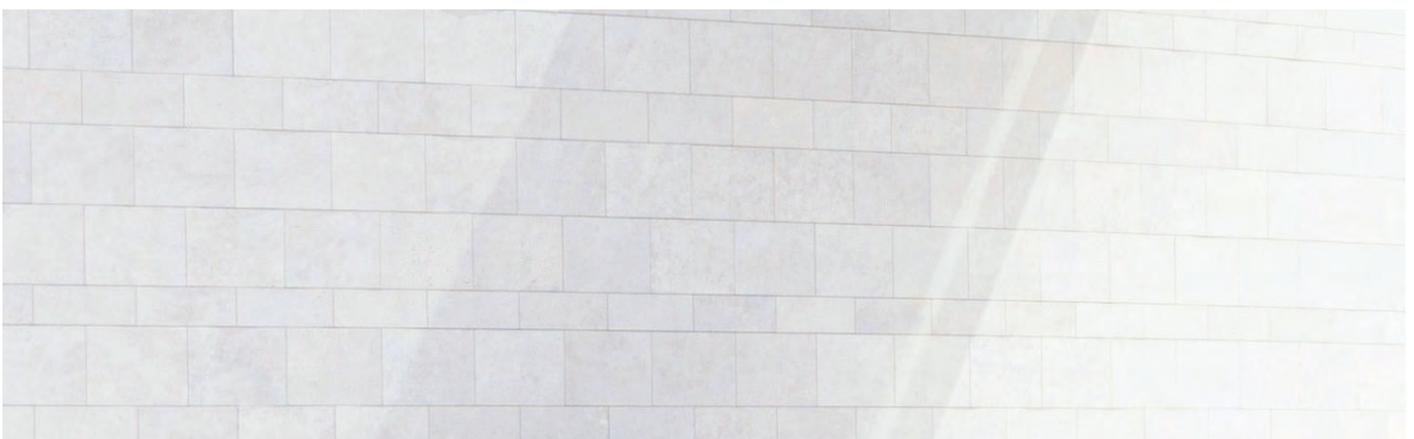
SURFACE APPLICATION INFORMATION

Application of 750 Concrete Sealer and 750 Tint Colours

Step 1: Ensure all surfaces are clean and dry, all dust, etc, is removed from the surface. The 20LT 750 Concrete Sealer does not require mixing, the 1LT 750 Colour tints are designed to be mixed with the 750 Concrete sealer 19LT product. As these products are supplied ready to use they do not require a reducer or thinner.

Step 2: Seal and saturate the concrete using the product, to achieve this by brush or roller you must apply multiple passes. The practical spreading rate required to cover for film build can vary considerably, due to a multitude of different factors. Ensure that the area is well ventilated to remove fumes from the coating during application.

Step 3: Wait 5-10 minutes between coats, 2-3 coats are required for full coverage, avoid heavy wet coats. Do not allow pools or puddles of thick coating to form, remove any excessive build up. Air dry the area for at least 40-60 minutes to allow the sealer to dry completely.



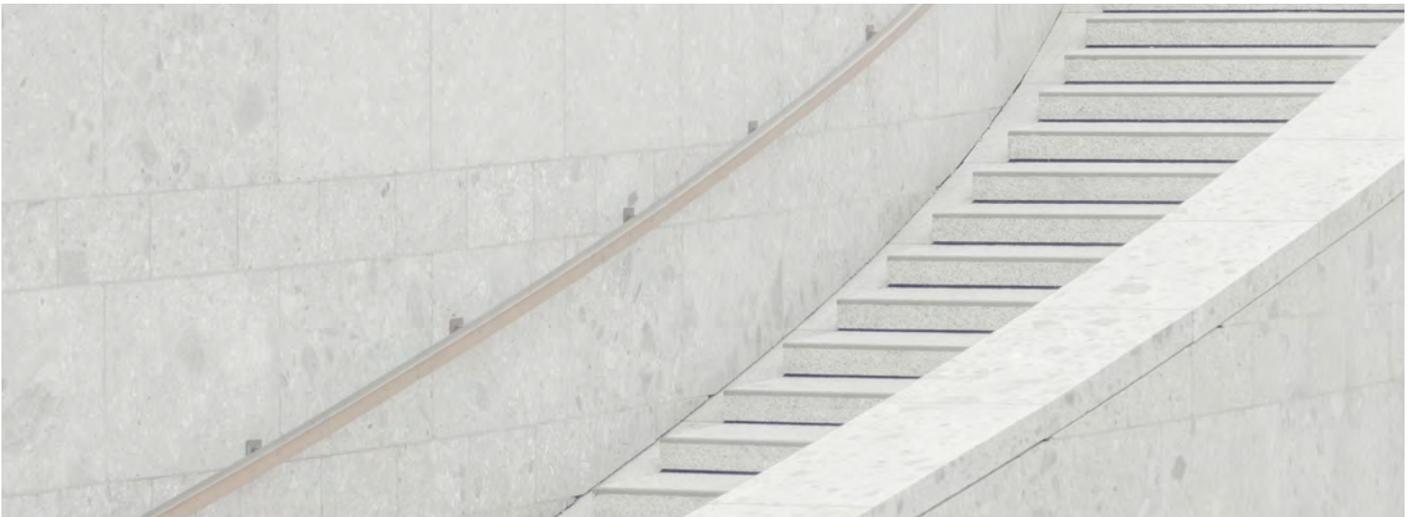
Application of 309 & 409 2K Epoxy

Step 1: Ensure all surfaces are clean and dry, all dust, etc, is removed from the surface. The 309 & 409 Mixed Colours can be reduced up to 20% using the 831 2K Thinner Slow if required. For a satin finish add 30% of the 399 Flattening Base, for a matt finish add 45%. Never add more than 50% of the 399 Flattening Base, this must be added before thinners or hardeners, and will reduce coverage. This product is not light or UV stable in direct sunlight. It will lose its gloss over time. For optimum durability, use the 314 & 414 2K Polyurethane - Slow.

Step 2A): The pot life of this product is 3-4 hours, spray viscosity at 25°C is BSB 4 Cup 17-19 s. Seal and saturate the concrete using the product with either gravity or suction feed spray guns for optimal results. The practical spreading rate required to cover for film build can vary considerably, due to a multitude of different factors. Ensure that the area is well ventilated to remove fumes from the coating during application.

B): For rolling applications, avoid excess re-rolling. For best result, use a wool roller. This product will provide better UV stability.

Step 3: Wait 5-10 minutes between coats, 2-3 coats are required for full coverage, avoid heavy wet coats. Do not allow pools or puddles of thick coating to form, remove any excessive build up. Air dry the area for 3-4 hours for tack free, and is re-coatable with itself after 7 hours minimum, 36 hours maximum.



Application of 314 & 414 2K Polyurethane - Slow

Step 1: Ensure all surfaces are clean and dry and all dust, etc, is removed from the surface. For a satin finish add 30% of the 399 Flattening Base, for a matt finish add 45%.

Never add more than 50% of the 399 Flattening Base, this must be added before thinners or hardeners, and will reduce coverage.

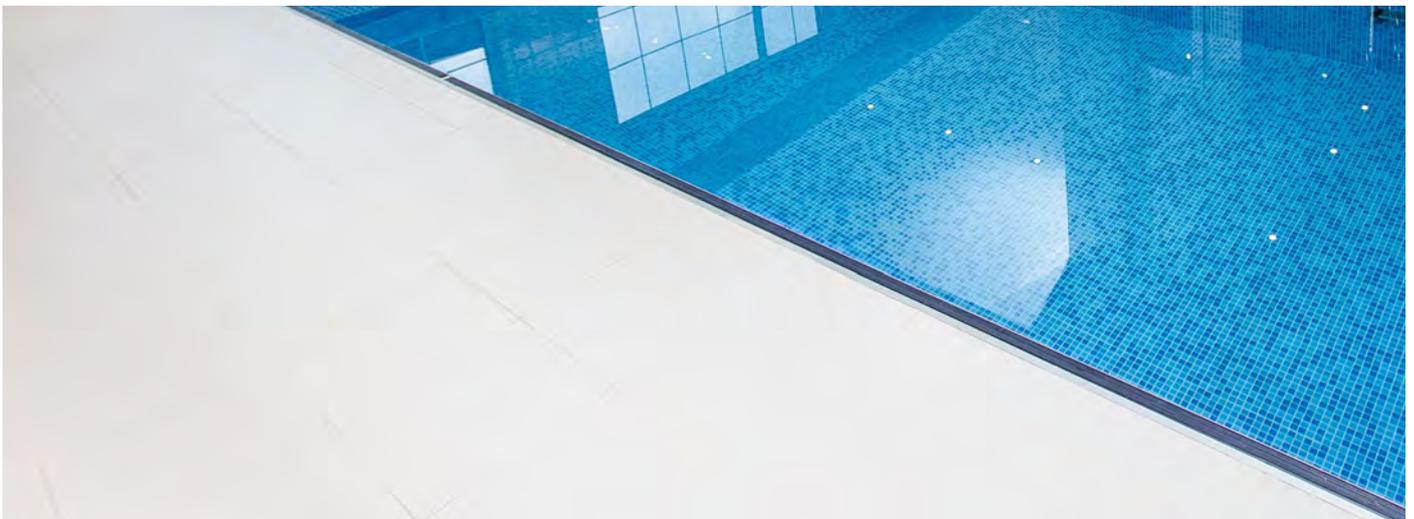
Step 2A): The pot life of this product is 2-3 hours, spray viscosity at 25°C is BSB 4 Cup 16-17 s. Seal and saturate the concrete using the product with gravity, suction feed, or HVLP spray guns for optimal results. The practical spreading rate required to cover for film build can vary considerably, due to a multitude of different factors.

Ensure that the area is well ventilated to remove fumes from the coating during application.

B): For rolling applications, avoid excess re-rolling. For best result, use a wool roller.

Step 3: Wait 15-20 minutes between coats, avoid heavy wet coats. Do not allow pools or puddles of thick coating to form, remove any excessive build up. Air dry the area

for 6 hours for tack free, and is re-coatable with itself after any amount of time.



CONTACT

Should you require further information of our flooring system range, concrete sealers, or any Concept Paints' products, feel free to contact us through any of the following methods:

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