

**Flowcrete**  
for the world at your feet



EUCLID CHEMICAL



## CONCRETE FLOOR REPAIR & MAINTENANCE

- ▶ Strengthen weak, damaged or failing concrete surfaces and spalling floor joints with a range of concrete repair and maintenance products from Euclid Chemical.

[www.flowcretesa.co.za](http://www.flowcretesa.co.za)

# Concrete Repair & Maintenance from Euclid Chemical

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Concrete is one of the most durable building materials that man has ever developed, but as tough as it is, concrete, at some point in its life, will need to be repaired and / or maintained.

Selecting the proper material for concrete repair and maintenance projects in industrial can be difficult and time consuming with all of the different material and solutions that are available.

In many instances, concrete repair and maintenance projects must take place in fully operational industrial facilities where any downtime must be minimised to avoid any slow down to production.

**The Euclid Chemical Company** offers a wide range of protective concrete repair and maintenance products available for sealing and densifying as well as joint filling & patching alongside products designed to stain concrete surfaces so that they look as good as new if not better.

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## Common Concrete Flooring Problems



Spalling Joints



Dusting



Wide Cracking



Discolouration



Tyre Marks



Crazing

## What is included?

✓	Reactive Sealers
✓	Liquid Densifiers
✓	Joint Fillers
✓	Polymeric Protectant
✓	Rapid Set Patch Repair
✓	Concrete Stains



For a full Technical Profile, contact your local Technical Department.

## Technical Profile

### VOC CONTENT

≤5 g/l

### ABRASION RESISTANCE

ASTM C 779  
(Compared to untreated  
concrete)

30 mins: ~80%  
improvement  
60 mins: ~20%  
improvement

### COEFFICIENT OF FRICTION

ASTM F 1679

Dry: 0.81  
Wet: 0.72

### LIQUID REPELLENCY (RILEM METHOD 11.4)

Water absorbed in 24 hours

Untreated Concrete: 5 ml  
Treated Concrete: 1 ml

### SPEED OF CURE

21°C

Light Traffic

4-6 hrs

Full Traffic

24 hrs

# Euco Diamond Hard



A liquid densifier & sealer for concrete which penetrates, chemically reacts and bonds to produce a harder, dust-proof and liquid repellent surface.

Provides an attractive, slip resistant sheen to concrete that never peels, fades or wears away.



Reduces porosity and increases durability of the concrete surface



Minimises tyre marks and enables them to be more easily cleaned and removed



Can be applied quickly and easily to new or existing concrete





## Application Suitability

✓	Warehousing Facilities
✓	Distribution Centres
✓	Manufacturing Plants
✓	Retail Outlets & Supermarkets

## The Science Behind Euco Diamond Hard

### 1 CSH GEL



The silicate in EUCO Diamond Hard reacts to form extremely hard crystals in the pores of concrete surfaces.

### 2 SILICONATE



The siliconate in EUCO Diamond Hard also reacts to create a liquid-repellent seal on the concrete surface.

### 3 CSH GEL & SILICONATE BLEND



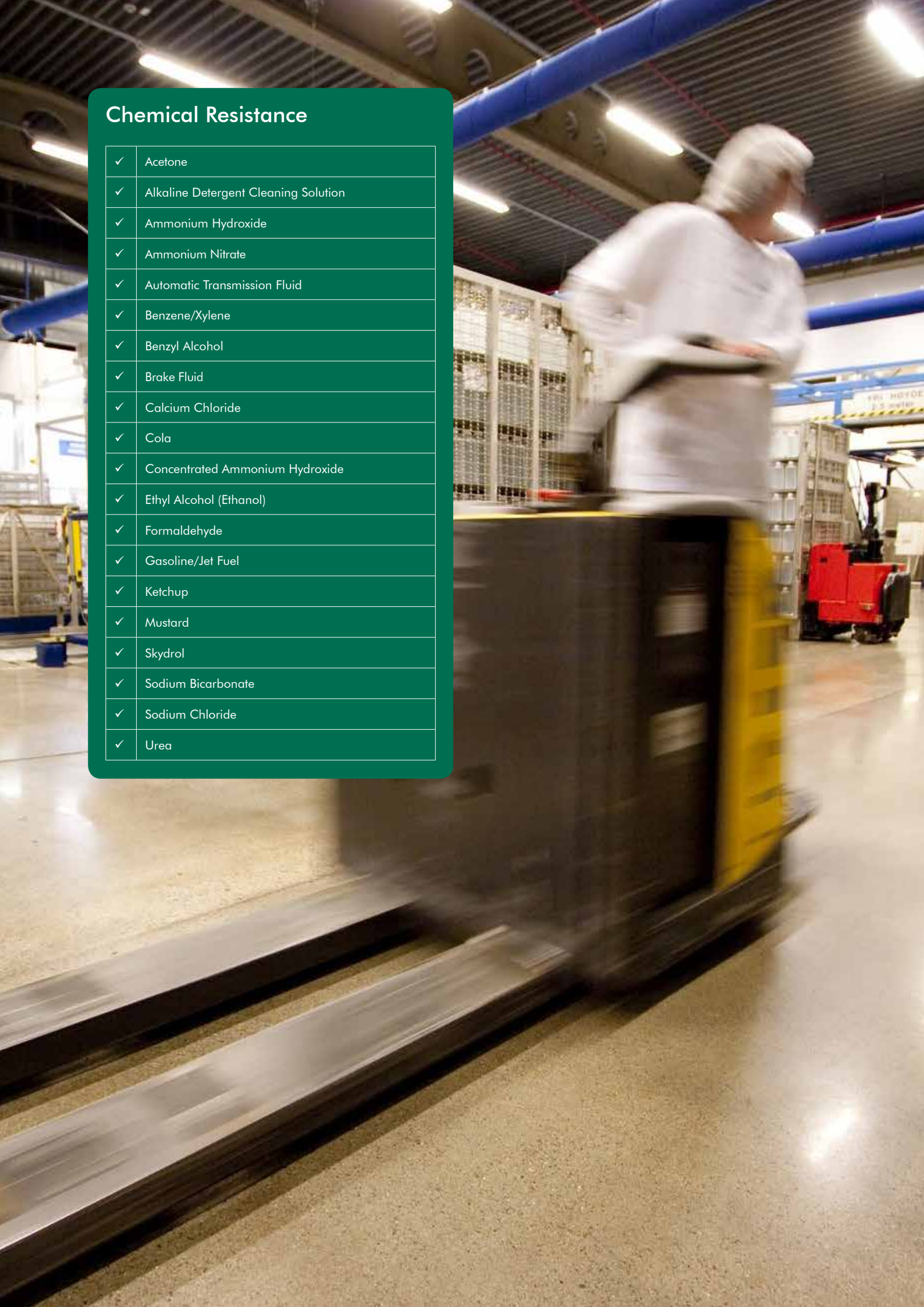
The synergistic activity of the silicate & siliconate blend provides both a strengthened & sealed concrete surface.

## How Does it Work?

The silicate compounds present in reactive sealers chemically react with soft calcium hydroxide (also known as portlandite) in the surface to produce a much harder calcium silicate hydrate (CSH) – the primary strength-providing portion of concrete paste. The siliconate also reacts with the concrete to form a hydrophobic polymer within the pores and on the concrete surface resulting in a strong, liquid repellent surface.

## Chemical Resistance

✓	Acetone
✓	Alkaline Detergent Cleaning Solution
✓	Ammonium Hydroxide
✓	Ammonium Nitrate
✓	Automatic Transmission Fluid
✓	Benzene/Xylene
✓	Benzyl Alcohol
✓	Brake Fluid
✓	Calcium Chloride
✓	Cola
✓	Concentrated Ammonium Hydroxide
✓	Ethyl Alcohol (Ethanol)
✓	Formaldehyde
✓	Gasoline/Jet Fuel
✓	Ketchup
✓	Mustard
✓	Skydrol
✓	Sodium Bicarbonate
✓	Sodium Chloride
✓	Urea



## Technical Profile

<b>VOC CONTENT</b>	
111 g/l	
<b>SPECIFIC GRAVITY</b>	
1.03	
<b>PH</b>	
9.5 - 10.5	
<b>SOLIDS / ACTIVE CONTENT</b>	
21 - 23%	
<b>FREEZE POINT</b>	
0°C	
<b>SPEED OF CURE</b>	<b>21°C</b>
Light Traffic	1-2 hrs
Full Traffic	24 hrs

## UltraGuard



A water-based polymeric protectant that improves the appearance and durability of concrete floors.

Contains a migratory stain-resistant additive, activated with high-speed burnishing and is especially effective the concrete has already been densified with Euco Diamond Hard or Eucosil.

- Provides excellent stain resistance to a wide range of common liquids
- Treated concrete is more dense, durable and easier to maintain
- Protects coloured or stained concrete from UV degradation and staining

## Eucosil



A reactive water-based sodium silicate sealer solution used to densify and dustproof concrete.

Introduces additional sodium silica that reacts with the excess calcium hydroxide to form more CSH, making treated concrete denser and easier to maintain.

- Seals, densifies and dustproofs in one application
- Treated concrete resists penetration of water and many chemical substances
- Water based formulation with no odour and low VOC content

## Technical Profile

<b>VOC CONTENT</b>	
≤5 g/l	
<b>SPEED OF CURE</b>	<b>21°C</b>
Light Traffic	4 to 6 hrs
Full Traffic	24 hrs

## Did You Know?

What makes silanes, siloxanes, and siliconates different from other coatings is the fact that they actually penetrate into the concrete to create a protective barrier. Other sealers such as acrylic, epoxy, and polyurethanes are topical in nature. Which means they sit on the surface and form a protective film or coating.

## Technical Profile

TENSILE STRENGTH (14 DAYS)	
8.9 MPa	
ELONGATION AT BREAK (14 DAYS)	
249%	
SHORE D HARDNESS	
33	
SHORE A HARDNESS	
84	
SHAVE WINDOW	
1 to 24 hrs	
TACK FREE TIME	
3-4 mins	
SPEED OF CURE	21°C
Light Traffic	1 hr
Full Traffic	2 hrs

## Euco QWIKjoint UVR



A fast-setting, semi-rigid polyurea, primarily used for filling construction and control joints in industrial and commercial concrete floors.

Euco QWIKjoint UVR represents a new generation of polyurea technology with features and benefits unlike any other on the market.



Quick return to service; suitable for full traffic load in 2 hours

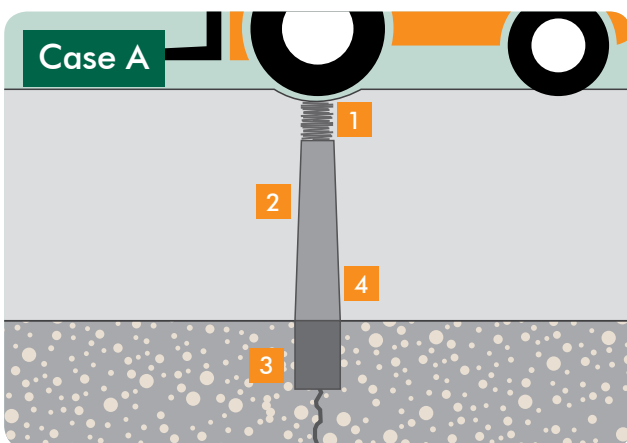


Can be applied in sub-zero temperatures (down to -29°C)

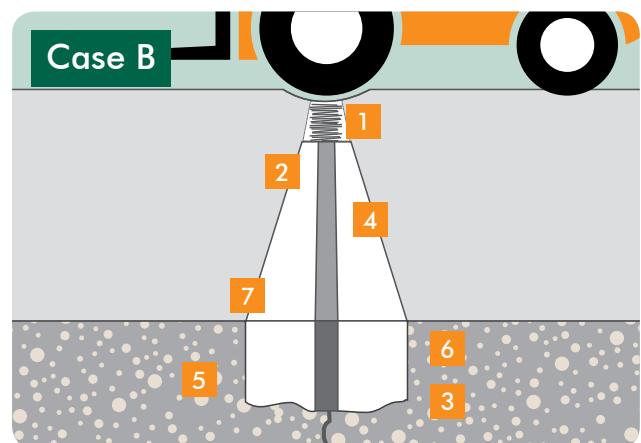


Provides more durable fill than any other polyurethane joint sealant on the market

## Joint Repair Methods



1. Joint edges have spalled under heavy traffic
2. Joints are re-cut to produce smooth edges
3. The prepared joint is filled with Flowflex or Euco QWIKjoint UVR
4. Excess joint filler is shaved flush with the floor

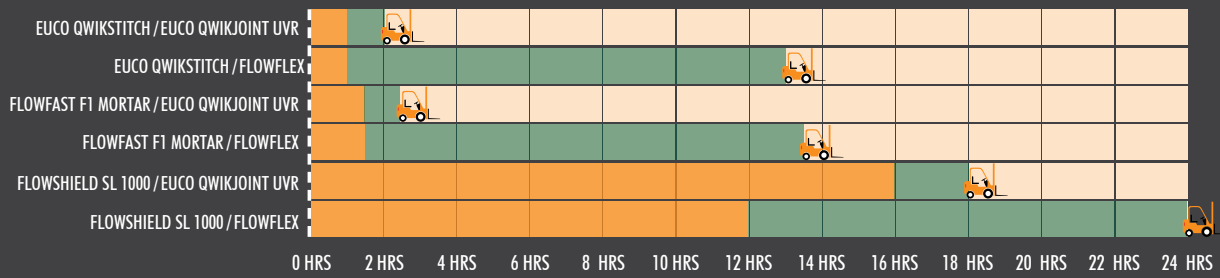


1. Joint edges have spalled severely under heavy traffic
2. Damaged concrete is removed and edges are squared
3. A roughened repair base ensures a strong bond between the repair mortar and concrete
4. The damaged concrete is replaced with Euco QWIKstitch, Flowfast F1 Mortar or Protop 1000 repair mortars
5. The original joint is honoured by re-cutting the repair mortar
6. The joint is filled with Flowflex or Euco QWIKjoint UVR
7. The repair is finished smooth with the floor

**Note:** Smoothen joint edges prior to the application of Flowflex, however when applying Euco QWIKjoint square joint edges are recommended.



## Return to Service Comparison Chart



### Technical Profile

#### COMPRESSIVE STRENGTH (72 HRS)

31.7 MPa

#### TENSILE STRENGTH (7 DAYS)

31.0 MPa

#### WATER ABSORPTION

1.1%

#### SHORE D HARDNESS

70-80

#### VOC CONTENT

<3.3 lb / gal

#### FLASH POINT

43°C

#### SPEED OF CURE

21°C

Light Traffic

10 mins

Full Traffic

1 hr

## Euco QWIKStitch



A two-component hybrid urethane repair liquid used to mend cracks, repair spalling floor joints & patch damaged / uneven concrete surfaces.

Euco QWIKStitch is an ultra-low viscosity material formulated to penetrate deep into cracks and quickly fill pop-outs in concrete.



Offers fast cure times, with access to follow on trades in 10 minutes



Low viscosity material offers deep penetration into horizontal cracks



Convenient cartridges eliminate full unit mixing

## Technical Profile

YIELD	
Neat: 0.105 m <sup>3</sup>	Extended: 0.147 m <sup>3</sup>
MIN. THICKNESS	
6 mm	
MAX THICKNESS	
Neat: 25.4 mm	Extended: 152 mm
WORKING TIME	
45 minutes	
SET	
Initial: 75 mins	Final: 2 hrs
TEMPERATURE LIMITATIONS	
4°C	
STRENGTH GAIN	MPA
4 hrs	21
1 day	38
7 days	59
Final	69

## VersaSpeed LS



A single component, low-shrinkage, high early strength and fast setting, trowelable cementitious repair / form & pour mortar.

Can be open to foot traffic in as little as two hours from initial set and can be coated with an epoxy in as little as four hours.



Quick return to service; ready to coat in as little as four hours



Offers excellent freeze-thaw damage resistance



Open to rubber wheeled traffic after 5 hours at room temperature

## Complementary Products from Flowcrete



	DESCRIPTION	USES
<b>Peran STB Seal Coat</b>	A general purpose, medium viscosity, clear, structural, liquid epoxy.	Peran STB Seal Coat can be used for rigid concrete crack injection or as a casting / encapsulating compound.
<b>Flowflex</b>	A one-part, non-sagging, elastic sealant based on hybrid-polymers. Permanently elastic after total curing whilst still maintaining a high mechanical strength.	Flowflex is used to fill joints protect joint edges from spalling and to seal open joints. It can be used in both indoor and outdoor applications.
<b>Flowshield SL 1000</b>	A low odour, hygienic and self-smoothing epoxy resin floor finish.	Flowshield SL 1000 is suitable in medium to heavy-duty traffic in dry processing environments.
<b>Flowfast F1 Repair Mortar</b>	A 2 component, ready to use repair mortar, based on methyl methacrylate (MMA) resin.	Flowfast F1 Repair Mortar is used to repair damages, holes and imperfections in concrete substrates and can be used in machine bases and joint arises as well as drill and bolt holes.



For a full Technical Profile, contact your local Technical Department.

## Standard Colours

		
Aztec Gold	Mocha	Mahogany
		
Espresso	Avocado	Malachite
		
Larimar	Garnet	English Leather
		
Touchstone	Seafoam	Topaz
		
Pomegranate	Caribe Blue	Gun Metal Gray
		
Charcoal	Tuscany	Deep Amber
		
Midnight	Forest Green	

## Vibra-Stain



A unique blended solution of dyes that create vibrant, semi-transparent colour for concrete surfaces.

Vibra-Stain is a concentrate that can be diluted with either alcohol or water and is appropriate for interior use within a wide range of facilities.



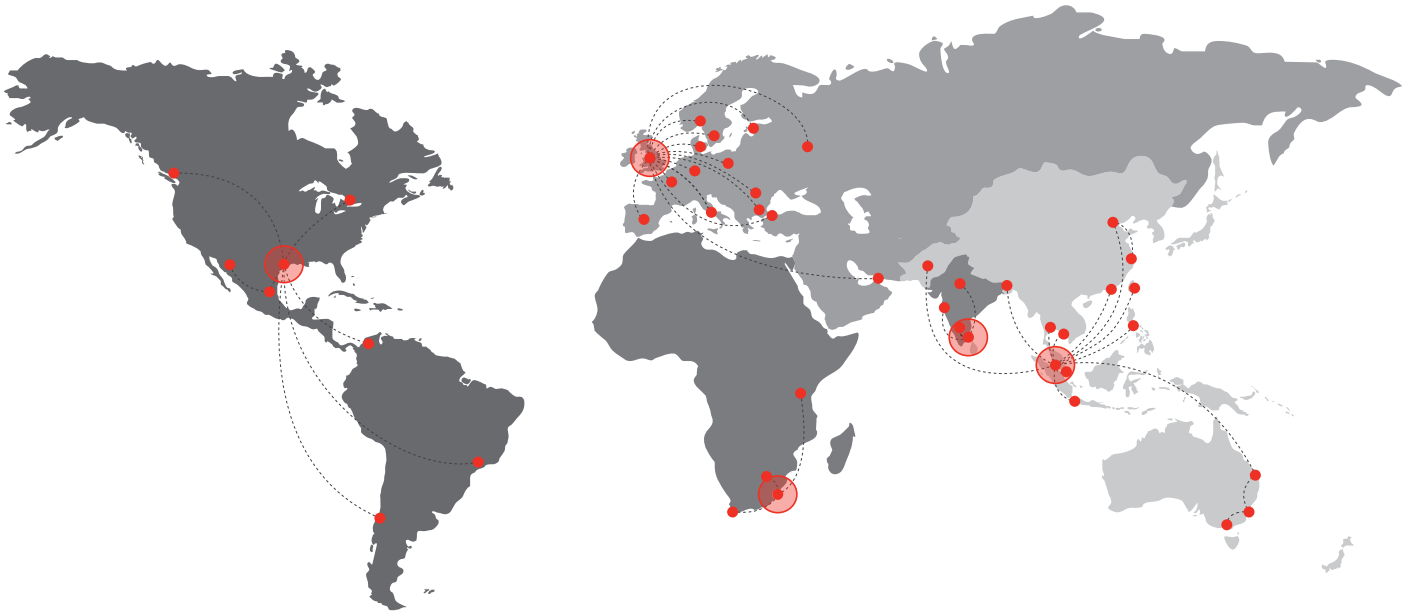
Good alternative to acid-based stains



Easy to apply; sprayed, brushed, sponged, or rolled on



Colours can be blended or diluted to create unlimited, custom colours



## Flowcrete

World leader in seamless resin flooring solutions and other specialist coatings.

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