



High Performance Antimicrobial Flooring Solutions for:

- ✓ Food & Beverage
- ✓ Bottling Facilities
- ✓ Meat & Seafood
- ✓ Pharmaceutical
- ✓ Healthcare
- ✓ Food Preparation











Flowfresh Systems

Key Resin Company delivers industry experience and quality seamless resin flooring systems for application in both industrial and commercial environments.

Flowfresh provides much more than a surface to walk on, offering a number of performance advantages. Clients choose Flowfresh products for their anti-microbial, chemical resistant, slip resistant, temperature resistant, and vapor permeable properties.

Key Resin Company manufactures Flowfresh products in Batavia, Ohio and proudly serves expanding business opportunities across the continent including the USA, Canada, Latin America and the Caribbean. We've provided flooring solutions for clients including Coca Cola, L'Oreal, Cargil, Nestle, NASA, GE and Southwest Airlines. Key Resin Company continues to develop a significant presence in the polymer flooring market with innovative, sustainable solutions for a more positive impact on the construction industry.

HACCP International Certified Hygienic Flooring



Flowfresh is a line of HACCP International certified, antimicrobial treated cementitious urethane flooring designed predominantly for use in hygiene industries.

Containing a silver-ion based antimicrobial additive, Polygiene®, Flowfresh systems complement floor cleaning and hygiene practices between wash cycles by protecting the surface from degradation caused by microbial growth.

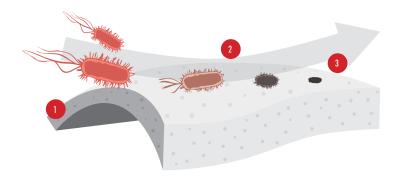
Silver is a natural element known for its ability to purify and protect from bacterial infections – and provides an environmentally friendly alternative to chemically manufactured antimicrobials.

This technology remains active for the lifetime of the floor - even when damaged or worn - unlike traditional coatings or surface treatments.

Polygiene®: How Does It Work?

Polygiene® is a natural silver-ion antimicrobial that is homogeneously distributed throughout the Flowfresh cementitious urethane material.

Polygiene® is not a substitute for cleaning, but should be regarded as a complement to regular hygiene and sanitization practices.



- The silver ions are homogeneously distributed throughout the floor.
- The silver ions migrate to the surface.
- They protect the surface from degradation caused by microbial growth.

Flowfresh Application Suitability



Food & Beverage



Meat, Poultry & Seafood



Bottling Plants & Brewhouses



Food Preparation



Healthcare Environments



Pharmaceutical & Laboratories

Resistance Chart

BACTERIAL RESISTANCE		CHEMICAL RESISTANCE*					
SARS-CoV	✓	Salmonella Typhi	✓	Hydrochloric Acid 10%	✓	Methanol	✓
MRSA	✓	Enterococcus Faecalis	✓	Sulphuric Acid 10%	✓	Sugar Syrups	✓
E-coli	✓	Staphylococcus Aureus	/	Citric Acid 10%	✓	Caustic Soda	✓
Listeria	✓	Streptococcus Pyogenes	✓	Acetic Acid 5%	✓	Petrol	✓
C.difficile	✓	Pseudomonas Aeruginosa	~	Lactic Acid 10%	✓	Oil Ingredients	✓
Proteus Vulgaris	✓	Campila Bacta	✓	Phosphoric Acid 5%	✓	Detergents	✓

^{*}A chemical resistance chart is available on request.



Flowfresh HF & RT (1/4" - 3/8")

Rake or trowel-applied, heavy-duty and HACCP International certified antimicrobial treated cementitious urethane mortar.

Flowfresh HF & RT provide a durable, anti-slip finish, which is resistant to thermal shock, steam cleaning and moisture vapor transmission.



Polygiene®:

Contains a silver ion antimicrobial additive to protect the surface.



Chemical Resistant:

Protects against food by-products, fats, hot oils, blood, sugar and acids.



Slip Resistant:

Positively textured profile to minimize slip risks in wet or damp areas.



Temperature Resistant:

Resistant to temperatures of up to 250°F and suitable for steam cleaning.



Safety Yellow

Unaffected by MVT:

Allows moisture to move through the material at a safe rate.

Standard Colors:



Technical Profile

COVERAGE RATES:	(HF: 66 LB	UNIT R	T: 55 LE	3 UNIT)

HF: 24 sq ft/unit at 1/4" or 17 sq ft/unit at 3/8" RT: 21 sq ft/unit at 1/4" or 14 sq ft/unit at 3/8"

COMPRESSIVE STRENGTH:

ASTM C 579 8,000 psi

TENSILE STRENGTH:

ASTM C 307 1,450 psi

COEFFICIENT OF THERMAL EXPANSION:

ASTM C 531 1.1 x 10⁻⁵in/in/°F

FLEXURAL STRENGTH:

ASTM C 580 2,900 psi

ABRASION RESISTANCE:

ASTM D 4060 CS 17 Wheel, 1000 cycles

HF: 0.05g loss RT: 0.07g loss

ADHESION:

ASTM D 4541

400 psi (100% concrete failure)

COEFFICIENT OF FRICTION:

ASTM D 2047

Full Traffic

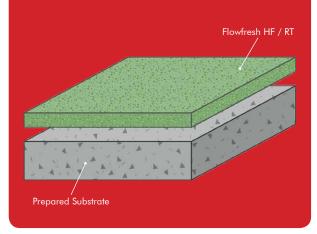
Full Chemical Cure

Exceeds ADA recommendations

TEMPERATURE RESISTANCE:

Continuous Exposure:	220°F			
Intermittent Spills:	250°F			
VOC:	HF: 5 g/l RT: 6 g/l			
SPEED OF CURE:	50°F	70°F	90°F	
Light Traffic	12-14 hrs	6-8 hrs	3-5 hrs	

24-36 hrs



Flowfresh SR & SRQ (1/4" - 5/16")

Slurry-broadcast and HACCP International certified antimicrobial treated cementitious urethane floor systems.

Flowfresh SR & SRQ (quartz) provide a positively textured, hardwearing and vibrantly colored floor finish, which is resistant to thermal shock and moisture vapor transmission.



Polygiene®:

Contains a silver ion antimicrobial additive to protect the surface.



Slip Resistant:

Positively textured profile to minimize slip risks in wet or damp areas.



Temperature Resistant:

Resistant to temperatures of up to 250°F and suitable for steam cleaning.



Unaffected by MVT:

Allows moisture to move through the material at a safe rate.

Flowfresh SR Standard Colors:





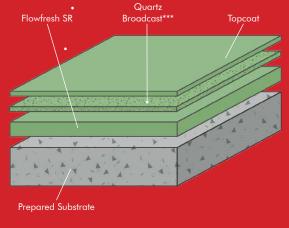
Safety Yellow

Flowfresh SRQ Standard Colors:



Technical Profile

COVERAGE RATES: (47 L	B UNIT)			
24 sq ft/unit at 3/16" (yield 18 sq ft/unit at 1/4" (yieldi	ding 1/4" f ng 5/16" f	inish	ed flo ed flo	oor) oor)
COMPRESSIVE STRENGT	H:			
ASTM C 579	8,128 ps	si		
TENSILE STRENGTH:				
ASTM C 307	1,450 ps	si		
COEFFICIENT OF THERM	AL EXPAN	SION	:	
ASTM C 531	1.5 x 10	-5in/iı	n/°F	
FLEXURAL STRENGTH:				
ASTM C 580	2,900 ps	si		
ABRASION RESISTANCE:				
ASTM D 4060 CS 17 Wheel, 1000 cycles	0.05g lo	ss		
ADHESION:				
ASTM D 4541	400 psi (100% co	oncre	te fa	ilure)
COEFFICIENT OF FRICTION:				
ASTM D 2047	Exceeds recomm		tions	
TEMPERATURE RESISTAI	NCE:*			
	SR*		SRC	Q**
Continuous Exposure:	200°F		180)°F
Intermittent Spills:	250°F		210)°F
VOC:	7 g/l			
SPEED OF CURE:	50°F	70	°F	90°F
Light Traffic	12-14 hrs	6-8	hrs	3-5 hrs
Full Traffic	24-36 hrs	12-1	6 hrs	8-10 hrs
Full Chemical Cure	5-7 days	3-5	days	1-2 days



when using Flowfresh FC as the topcoat. when using Flowcoat CR as the topcoat. ***Light colored quartz may require an additional broadcast. Consult your sales representative

Flowfresh MF (3/16" - 1/4")

A self-leveling, HACCP International certified, smooth, matte antimicrobial treated cementitious urethane floor system.

Flowfresh MF provides a vibrantly colored, easy clean floor finish, which is suited to use in medium duty dry-service zones including packaging areas.



Polygiene®:

Contains a silver ion antimicrobial additive to protect the surface.



Easily Cleaned:

Minimal surface joints ensure the floor is easy to clean and sanitize.



Chemical Resistant:

Protects against food by-products, fats, hot oils, blood, sugar and acids.



MVT Resistant:

Resistant to 12 lbs of moisture vapor (12 lbs / 1,000 sq ft / 24 hrs).



Low Odor:

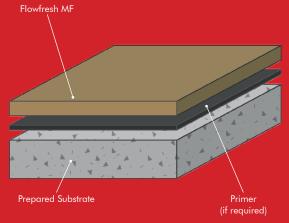
Low odor installation, non-toxic, and phthalate-free formulation.

Standard Colors:



Technical Profile

COVERAGE RATES: (40 L	B UNIT)			
22 sq ft/unit at 3/16" 17 sq ft/unit at 1/4"				
COMPRESSIVE STRENGT	H:			
ASTM C 579	>7,250	psi		
TENSILE STRENGTH:				
ASTM C 307	1,740 ps	si		
COEFFICIENT OF THERM	AL EXPAN	SION:		
ASTM C 531	2.2 x 10	-5in/in/°F		
FLEXURAL STRENGTH:				
ASTM C 580 2,900 psi				
ABRASION RESISTANCE:				
ASTM D 4060 CS 17 Wheel, 1000 cycles 0.07g loss				
ADHESION:				
ASTM D 4541	400 psi (100% concrete failure)			
COEFFICIENT OF FRICTION	N:			
ASTM D 2047 Exceeds ADA recommendations				
TEMPERATURE RESISTAI	NCE:			
Continuous Exposure:	180°F			
Intermittent Spills:	200°F			
VOC:	7 g/l			
SPEED OF CURE:	50°F	70°F	90°F	
Light Traffic	12-14 hrs	6-8 hrs	3-5 hrs	
Full Traffic	24-36 hrs	12-16 hrs	8-10 hrs	
Full Chemical Cure	5-7 days	3-5 days	1-2 days	



Flowfresh SL (1/8" - 3/16")

A slurry-broadcast, cost effective and HACCP International certified antimicrobial treated cementitious urethane floor system.

Flowfresh SL provides an excellent alternative to traditional epoxy floor screeds with enhanced durability and anti-slip properties.



Polygiene®:

Contains a silver ion antimicrobial additive to protect the surface.



Decorative:

Available in a wide-range of decorative patterns and finishes.



Lifecycle Cost Efficiencies:

Offers significant lifecycle cost savings compared to tile or acid brick.



MVT Resistant:

Resistant to 12 lbs of moisture vapor (12 lbs / 1,000 sq ft / 24 hrs).



Low Odor:

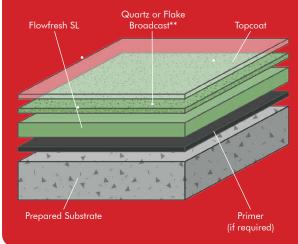
Low odor installation, non-toxic, and phthalate-free formulation.

Standard Colors:



Technical Profile

COVERAGE RATES: (61 LI			
94 sq ft/unit at 3/32" (yield 63 sq ft/unit at 1/8" (yieldi			
COMPRESSIVE STRENGTH	ł:		
ASTM C 579	>7,250	psi	
TENSILE STRENGTH:			
ASTM C 307	1,740 ps	si	
COEFFICIENT OF THERMA	AL EXPAN	SION:	
ASTM C 531	2.7 x 10	-⁵in/in/°F	
FLEXURAL STRENGTH:			
ASTM C 580	2,900 ps	si	
ABRASION RESISTANCE:			
ASTM D 4060 CS 17 Wheel, 1000 cycles 0.05g loss			
ADHESION:			
STM D 4541 400 psi (100% concrete failure)			
COEFFICIENT OF FRICTIO	N:		
ASTM D 2047 Exceeds ADA recommendations			
TEMPERATURE RESISTAN	ICE:*		
Continuous Exposure:	180°F		
Intermittent Spills:	220°F		
VOC:	9 g/l		
SPEED OF CURE:	50°F	70°F	90 °l
Light Traffic	12-14 hrs	6-8 hrs	3-5 hı
Full Traffic	24-36 hrs	12-16 hrs	8-10 h
Full Chemical Cure	5-7 days	3-5 days	1-2 da



"Temperature resistance values shown apply when using Flowfresh FC as the topcoat. **Light colored quartz may require an additional broadcast. Consult your sales representative.

Flowfresh Cove (1/8" - 3/16")

A trowel-applied, chemical resistant and HACCP International certified antimicrobial treated cementitious urethane cove mortar.

Flowfresh Cove provides a hardwearing cove base, which ensures a seamless, hygienic transition between the floor and wall.



Polygiene®:

Contains a silver ion antimicrobial additive to protect the surface.



Chemical Resistant:

Protects against food by-products, fats, hot oils, blood, sugar and acids.



Lifecycle Cost Efficiencies:

Offers significant lifecycle cost savings compared to tile or acid brick.



Easily Maintained:

Can be patch-repaired in position to minimize renovation costs.





Technical Profile

COVERAGE RATES: (32 LB UNIT)

16 sq ft/unit or 48 linear ft/unit at 4" high at 1/8" 11 sq ft/unit or 33 linear ft/unit at 4" high at 3/16"

COMPRESSIVE STRENGTH:

ASTM C 579 8,000 psi

TENSILE STRENGTH:

ASTM C 307 1,450 psi

COEFFICIENT OF THERMAL EXPANSION:

ASTM C531 1.1 x 10⁻⁵in/in/°F

FLEXURAL STRENGTH:

ASTM C 580 2,900 psi

ABRASION RESISTANCE:

ASTM D 4060 CS 17 Wheel, 1000 Cycles

0.079g loss

ADHESION:

ASTM D 4541

(100% concrete failure)

5 g/l

TEMPERATURE RESISTANCE:

220°F Continuous Exposure:

Intermittent Spills: 250°F

VOC:

Standard Colors:







Tan





Green





Dark Grey



Black

Grey



Safety Yellow

The applied colors may differ from the examples shown. General wear on Safety Yellow may be more visible. For a full color chart and samples, contact your local Key Resin Company office.





Flowfresh IF (3/8" - 1/2")

An exceptionally heavy duty, trowel applied and HACCP International certified iron filled cementitious urethane mortar.

Flowfresh IF provides a durable and finely textured floor finish, which is resistant to heavy impact, thermal shock and moisture vapor transmission.



Polygiene®:

Contains a silver ion antimicrobial additive to protect the surface.



Slip Resistant:

Positively textured profile to minimize slip risks in wet or damp areas.



Temperature Resistant:

Resistant to temperatures of up to 250°F and suitable for steam cleaning.



Chemical Resistant:

Protects against food by-products, fats, hot oils, blood, sugar and acids.

Technical Profile

COVERAGE RATES: (62 LB UNIT)					
14 sq ft/unit at 3/8" 10 sq ft/unit at 1/2"					
COMPRESSIVE STRENGTH	COMPRESSIVE STRENGTH:				
ASTM C 579	8,000 psi				
TENSILE STRENGTH:					
ASTM C 307	1,450 psi				
COEFFICIENT OF THERMAL EXPANSION:					
ASTM C531	1.1 x 10 ⁻⁵ in/in/°F				
FLEXURAL STRENGTH:					
ASTM C 580	2,900 psi				
ABRASION RESISTANCE:					
ASTM D 4060 CS 17 Wheel, 1000 Cycles	0.05g loss				
ADHESION:					
ASTM D 4541	400 psi (100% concrete failure)				
TEMPERATURE RESISTANCE:					
Continuous Exposure:	220°F				
Intermittent Spills:	250°F				
VOC:	5 g/l				

Flowfresh Ultra Flakes (3/16"-1/4")

A hybrid flooring system combining antimicrobial treated cementitious urethane with a polyurea finish.

Flowfresh Ultra Flakes provides a decorative, colorful and UV-resistant finish with an enhanced speed of cure to ensure a fast return to service.



Polygiene®:

Contains a silver ion antimicrobial additive to protect the surface.



Decorative:

Available in a wide-range of decorative patterns and finishes.



Easily Cleaned:

Minimal surface joints ensure the floor is easy to clean and sanitize.



Lifecycle Cost Efficiencies:

Offers significant lifecycle cost savings over tile or acid brick finishes.



Low Odor:

Low odor installation, non-toxic, and phthalate-free formulation.

Standard Colors:



Scarlet



Domino



Green Bay



Cobblestone



Midnight

Ice Blue



Desert Tan

Technical Profile

VOC:

COVERAGE RATES: (40 L	B UNIT)	
22 sq ft/unit at 3/16" 17 sq ft/unit at 1/4"		
COMPRESSIVE STRENGTI	1 :	
ASTM C 579	>7,250 psi	
TENSILE STRENGTH:		
ASTM C 307	1,450 psi	
COEFFICIENT OF THERMA	AL EXPANSION:	
ASTM C531	2.7 x 10 ⁻⁵ in/in/°F	
FLEXURAL STRENGTH:		
ASTM C 580	2,900 psi	
ABRASION RESISTANCE:		
ASTM D 4060 CS 17 Wheel, 1000 Cycles	0.05g loss	
ADHESION:		
ASTM D 4541	400 psi (100% concrete failure)	
TEMPERATURE RESISTAN	ICE:	
Continuous Exposure:	165°F	
Intermittent Spills:	200°F	



6 g/l

Flowfresh FC (1/4" - 3/8")

A pigmented, high performance, antimicrobial treated cementitious urethane floor sealer with a matte appearance. Applied as a lock coat sealer to any Flowfresh cement overlays that can be fully broadcast with aggregate.

Standard Colors:





TEMPERATURE RESISTANCE:			
Continuous Exposure:	220°F		
Intermittent Spills:	250°F		
COEFFICIENT OF THERMAL EXPANSION:			
ASTM C 531	1.1 x 10 ⁻⁵ in/in/°F		
ABRASION RESISTANC	E:		
ASTM D 4060, CS17 Wheel, 1,000 Cycles	0.05 g loss		



Flowfresh FCUV (1/4" - 3/8")

A pigmented, high performance, UV stable, semi-gloss, antimicrobial treated cementitious urethane floor sealer. Applied as a lock coat sealer to any Flowfresh cement overlays that can be fully broadcast with aggregate.

Standard Colors:

TEMPERATURE RESISTANCE:				
Continuous Exposure:	200°F			
Intermittent Spills:	250°F			
COEFFICIENT OF THERMAL EXPANSION:				
ASTM C 531	1.5 x 10 ⁻⁵ in/in/°F			
ABRASION RESISTANCE:				
ASTM D 4060, CS17 Wheel, 1,000 Cycles	0.05 g loss			

Cream	Tan	Khaki	Red
Green	Blue	Grey	Dark Grey
Black	Safety Yellow		



Flowfresh Flowfill (1/2"-2")

Flowfill Rapid setting urethane underlayment mortar. Applied by trowel or screed bar from 1/2" to 2".

Fast and efficient repair for damaged floor slabs. Also creates sloping on a floor where time doesn't allow the use of normal concrete or polymer floor mortars.



Polygiene®:

Contains a silver ion antimicrobial additive to protect the surface.



Unaffected by MVT:

Allows moisture to move through the material at a safe rate.



Temperature Resistant:

Resistant to temperatures of up to 250°F and suitable for steam cleaning.



Chemical Resistant:

Protects against food by-products, fats, hot oils, blood, sugar and acids.

Damaged/Untreated Concrete Floors



After Flowfill & Flowfresh Applications



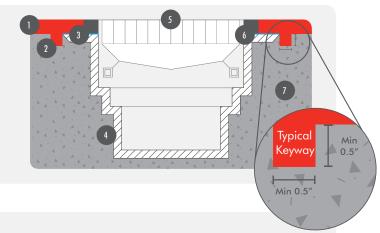
Complementary Products

	DESCRIPTION:	USES:
Flowfill	A rapid setting urethane cement underlayment mortar. Applied by trowel or screed bar from ½" to 3".	Used as a fast and efficient repair for damaged floor slabs. Also creates sloping on a floor where time doesn't allow the use of normal concrete or polymer floor mortars.
Flowprime	A 2-component, low viscosity, 100% solids, epoxy primer for cementitious substrates.	Used for priming of concrete, prior to overcoating industrial and commercial resin floor finishes.
Peran TCW	A 2-component, multi-purpose, 100% solids thixotropic epoxy resin system.	Used as a thixotropic vertical primer, grout coat, binder and sealer coat fo cove base.
Flowfresh FC	A cementitious urethane floor coating, designed to complement the Flowfresh antimicrobial flooring system.	Used to coat cementitious urethane floors to enhance slip resistance, while retaining chemical resistance and durability.
Flowfresh FCUV	High performance, UV stable, semi-gloss, cementitious urethane floor sealer.	Used as a UV stable sealer, which is applied as a finish to Flowfresh flooring systems.
Flowfresh SR Sealer	A 100% solids, solvent-free, semi-flexible, pigmented, cementitious urethane sealer for broadcast systems.	Used as a lock coat for Flowfresh SR or SL systems.
Flowcoat CR	A 100% solids, high performance, high chemical resistant epoxy coating.	Used as a topcoat for chemical resistant flooring applications.
Flowseal Ultra	A 2-component, very fast cure, gloss, UV stable, chemical resistant, polyurea coating.	Used as a fast curing UV stable sealer or receiving coat for flake and quartz broadcast systems.
Peran STC	A 100% solids, low viscosity, crystal clear epoxy resin binder and sealer that provides improved clarity and increased UV stability as compared to conventional epoxy coatings.	Used as a finish coat for color quartz aggregates or decorative flakes.
Flowflex UVR	A UV resistant, 100% solids, two component, heavy duty, semi-rigid polyurea joint sealant for industrial and commercial floors.	Used to fill construction joints to protect joint edges from spalling and to seal open joints. It creates a longe lasting floor, reducing the areas when bacteria can hide and grow.

Typical Construction Joints

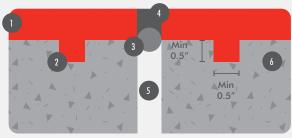
Typical Termination at Steel Floor Drain Cross Section:

- Flowfresh System
- 2 Typical Keyway
- 3 Bond Breaker Tape
- 4 Steel Drain Liner
- 5 Drain Cover
- 6 Joint Sealant
- Existing Substrate



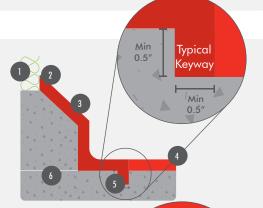
Typical Expansion Joint:

- Flowfresh System
- 2 Typical Keyway
- Backer Rod
- 4 Joint Sealant
- 5 Expansion Joint
- 6 Existing Substrate



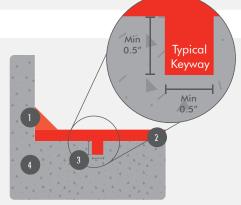
Typical Bottle Cove to Curb:

- Insulation Panel
- 5 Typical Keyway
- 2 Sealant
- 6 Existing Substrate
- 3 Flowfresh CM (curb)
- 4 Flowfresh System



Typical 2" Cant Cove:

- Flowfresh CM (curb)
- 2 Flowfresh System
- 3 Typical Keyway
- 4 Existing Substrate









Key Resin Company

Flowfresh, manufactured by Key Resin, is a leading system in the seamless resin flooring industry suitable for industrial and commercial environments. Contact a local Key Resin Company representative for details.

Baltic States	+48 883 303 880	I
Bulgaria	+359 898 61 58 31	k
Denmark	+46 435 40 01 10	C
France	+33 1 60 61 74 42	f
Germany	+49 6119 016645	S
Italy	+39 339 4853258	i
Norway	+47 64 86 08 30	r

Poland

Russia

Spain

Sweden

Turkey

UAE

Romania

Europe & Middle East

+971 4 886 4728

+44 1270 753 000

atvia@flowcrete.com oulgaria@flowcrete.com denmark@flowcrete.com france@flowcrete.com germany@flowcrete.com italy@flowcrete.com norway@flowcrete.com poland@flowcrete.com romania@flowcrete.com rus@flowcrete.com spain@flowcrete.com sweden@flowcrete.com turkey@flowcrete.com uae@flowcrete.com uk@flowcrete.com

Africa

+254 20 682 1011 East Africa South Africa +27 31 461 3411

eastafrica@flowcrete.com southafrica@flowcrete.com

India

India +91 44 4202 9831

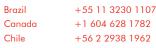
india@flowcrete.com

Asia Pacific

Australia	+61 7 3205 7115	aus
Bangladesh	+88 02 9857222	ban
China	+86 10 8472 1912	chir
Hong Kong	+852 2795 0478	hor
Indonesia	+62 21 252 3201	indo
Malaysia	+60 3 6277 9575	ma
Philippines	+63 917 514 2696	phil
Singapore	+65 6848 7166	sing
Thailand	+66 2539 3424	thai
Vietnam	+84 8 6287 0846	viet

stralia@flowcrete.com ngladesh@flowcrete.com na@flowcrete.com ngkong@flowcrete.com lonesia@flowcrete.com ılaysia@flowcrete.com ilippines@flowcrete.com gapore@flowcrete.com iland@flowcrete.com vietnam@flowcrete.com

North & South America



Colombia +57 1 381 9254 Mexico +01 800 099 0468 +1 (936) 539-6700 brazil@flowcrete.com canada@flowcrete.com chile@flowcrete.com colombia@flowcrete.com mexico@flowcrete.com sales@keyresin.com



flowcreteamericas.com