

Flowcrete
for the world at your feet



FOOD & BEVERAGE PROCESSING

- Specialist resin and HACCP International certified antimicrobial treated floor coating systems designed to cater for Food & Beverage environments.

www.flowcreteasia.com



COLOUR CHART STANDARD COLOURS

Flowshield CR



Sand Chilli Red Steel Blue Mid Blue Light Green Dark Green



Sage Grey Mist Grey Steel Grey Charcoal

Flowcoat HTS



Light Green Dark Green Mid Blue Steel Blue Chilli Red Light Grey Steel Grey Charcoal

Flowfresh SRQ



Light Grey Mid Grey Dark Grey Brown Yellow Red Light Blue Green

Flowfresh MF



Warm Buff Clay Coral Red Shamrock Green Ash Grey Pewter Grey

Flowfresh SR / RT



Warm Buff Clay Coral Red Shamrock Green Ash Grey Pewter Grey

**The applied colours may differ slightly from the examples shown above. Contact our customer services for a true colour sample or a special colour match.



Welcome to Flowcrete

Food and beverage manufacturing facilities include a diverse range of wet and dry processing environments as well as non-processing areas such as laboratories, changing rooms, corridors and warehouse areas. Each of these are subject to a host of challenges, including wet conditions, extreme temperature swings and heavy traffic as well as attack from chemicals and corrosive ingredients.

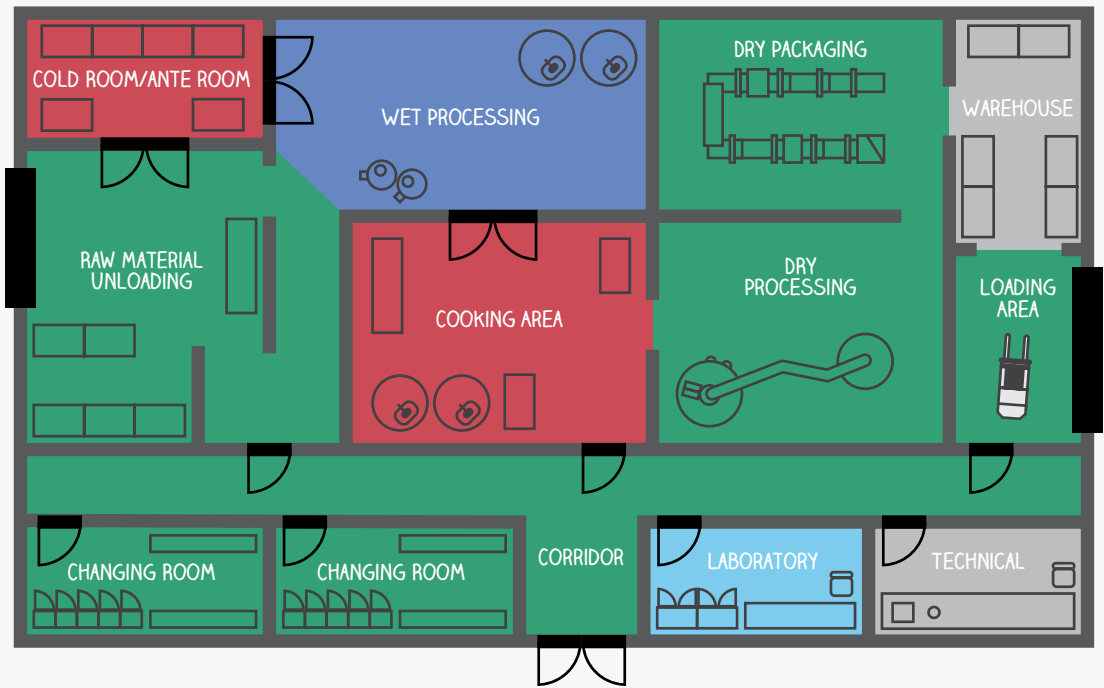
As such, each area of the food and beverage processing facility requires protective floor coating systems that meet strict hygiene and safety protocols in line with local regulations and HACCP principles as well as the individual performance characteristics needed to withstand their unique service conditions.

Flowcrete offers a complete package of speciality floor coating systems designed to cater for all areas within a food and beverage processing environment.

Flowcrete Flooring Systems Summary

	THICKNESS	TYPE	DESCRIPTION
Flowfresh MF	3–4 mm	Polyurethane	A matt finish polyurethane floor system for use in dry areas.
Flowfresh SR	3–4 mm	Polyurethane	A heavy duty polyurethane floor with an anti slip finish.
Flowfresh RT	6–9 mm	Polyurethane	A slip-resistant polyurethane screed for use in wet and thermal shock areas.
Flowfresh SRQ	Dependent on specification	Polyurethane	A heavy duty polyurethane floor with decorative, anti slip, coloured quartz aggregates.
Flowcoat HTS	Dependent on specification	Hybrid Polyurethane	A heavy duty pigmented hybrid polyurethane coating system.
Flowshield CR	2–3 mm	Epoxy	A chemical resistant, self-smoothing epoxy resin.

Food & Beverage Processing Floor Plan



Flowfresh MF

Flowfresh SRQ / SR

Flowfresh RT

Flowshield CR

Flowcoat HTS



Polygiene® Antimicrobial Effectiveness



Salmonella Typhi	✓
MRSA	✓
Enterococcus Faecalis	✓
E-coli	✓
Staphylococcus Aureus	✓
Listeria	✓
Streptococcus Pyogenes	✓
C.difficile	✓
Pseudomonas Aeruginosa	✓
Proteus Vulgaris	✓
Campila Bacta	✓



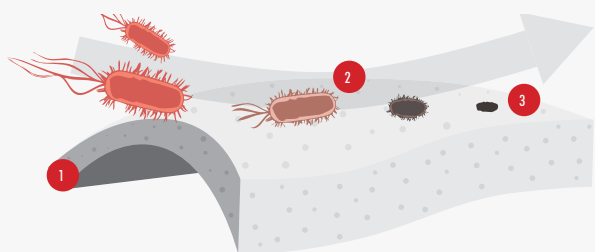
HACCP International Certified Hygienic Flooring

A food processing floor is subject to constant traffic, impact damage due to equipment handling and often subject to attack from chemicals and corrosive ingredients.

Resin flooring systems ensure a non-porous, smooth and seamless surface where there is nowhere for bacteria or mould spores to grow.

Flowcrete's HACCP International certified and ISO 22196 compliant polyurethane flooring materials offer enhanced protection with the inclusion of Polygiene®, a silver-ion antimicrobial agent, designed to protect the surface from degradation caused by microbial growth.

How Does Polygiene® Work?



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

Flowfresh MF (3–4mm)



A pigmented, antimicrobial, polyurethane floor finish applied in a smooth matt finish.

Provides a hygienic floor finish for dry or semi-wet F&B processing areas.



Contains Polygiene®, an antimicrobial additive that inhibits bacteria growth.



Certified as food-safe for use in wet and dry food handling areas.



Protects against a majority of acids used in manufacturing processes.



A hard-wearing & abrasion resistant finish to protect the substrate below.



Very good thermal shock properties and resistant to extreme temperatures.

Technical Profile

FIRE RESISTANCE

EN 13501-1	B _{fl} - s1
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SLIP RESISTANCE**

Method described in BS 7976-2 (typical values for 4-S rubber slider)	Dry > 40, Wet depends on specification (in accordance with HSE and UKSRG guidelines)
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IMPACT RESISTANCE

EN ISO 6272	15Nm
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WATER PERMEABILITY

Nil – Karsten test (impermeable)

VAPOUR PERMEABILITY

ASTM E96:90	5g/m ² /24hrs (at 4mm thick)
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TEMPERATURE RESISTANCE

From -5°C to 70°C (at 3mm)	From -15°C to 90°C (at 4mm)
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CHEMICAL RESISTANCE

Contact Technical Department
Excellent resistance to sugars and most acids (organic and inorganic)

ABRASION RESISTANCE

Taber Abrader (1 kg load using CS17 wheels)	0.1g loss per 1000 cycles
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COMPRESSIVE STRENGTH

EN 13892-2	> 50 N/mm ²
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FLEXURAL STRENGTH

EN 13892-2	> 20 N/mm ²
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TENSILE STRENGTH

BS 6319	7 N/mm ²
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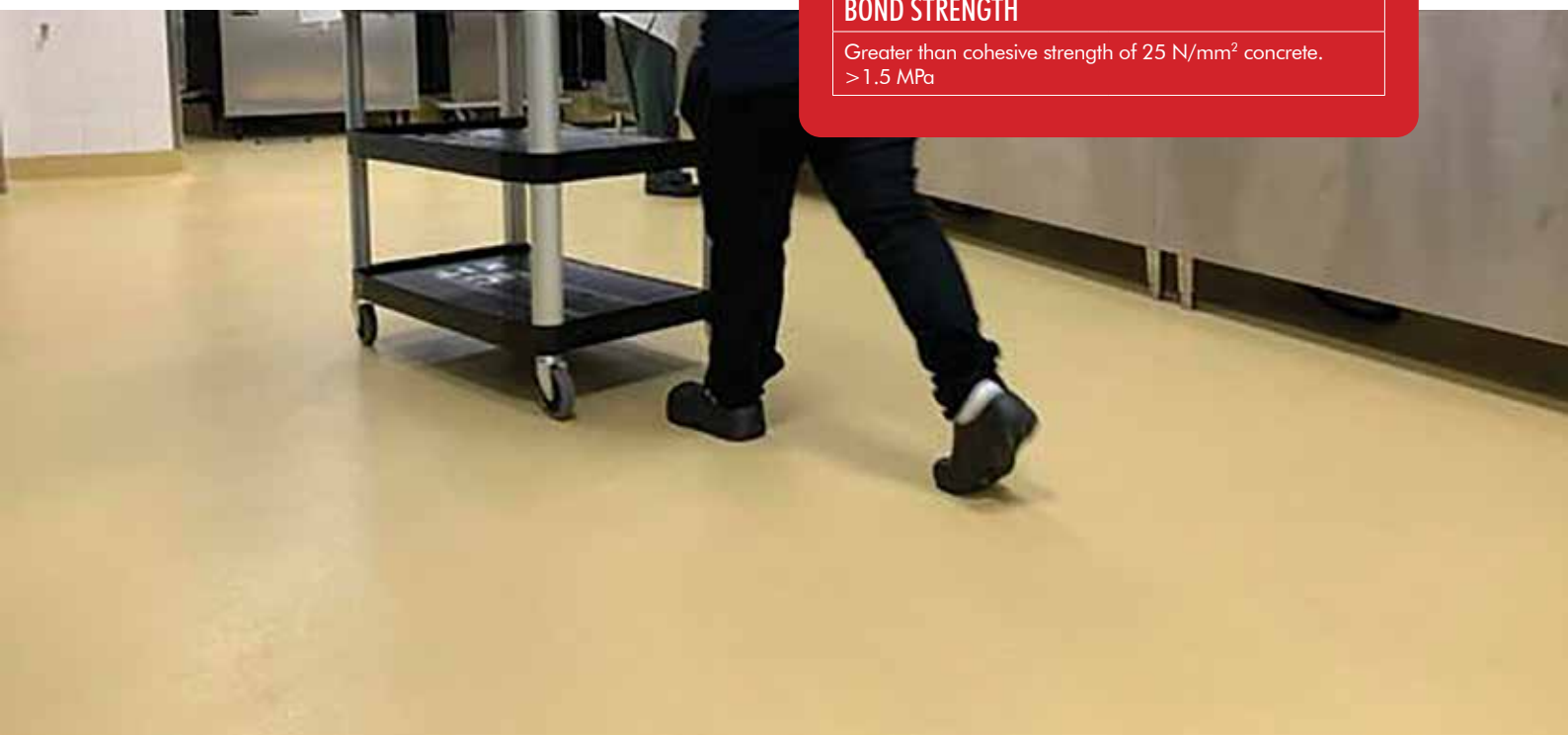
COEFFICIENT OF THERMAL EXPANSION

ASTM C531	5.70 x 10 ⁻⁵ °C ⁻¹
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BOND STRENGTH

Greater than cohesive strength of 25 N/mm² concrete.
> 1.5 MPa

For applications falling outside of this temperature range, please contact your local Flowcrete Technical Department.



Flowfresh SR

(SR: 3–4mm)



A heavy duty, chemical resistant, antimicrobial polyurethane resin floor system with a positively textured finish.

Provides a hygienic floor finish for wet processing areas in F&B facilities.



Contains an antimicrobial additive and is HACCP International Certified.



Very good thermal shock properties and resistant to extreme temperatures.



Textured finish provides a safe environment for workers.



A hard-wearing & abrasion resistant finish to protect the substrate below.



Protects against a majority of acids used in manufacturing processes.

Technical Profile

FIRE RESISTANCE

EN 13501-1

B_{fl} - s1

SLIP RESISTANCE**

Method described in BS 7976-2 (typical values for 4-S rubber slider)

Dry > 40, Wet depends on specification (in accordance with HSE and UKSRG guidelines)

IMPACT RESISTANCE

EN ISO 6272

15Nm

WATER PERMEABILITY

Nil – Karsten test (impermeable)

VAPOUR PERMEABILITY

ASTM E96:90

5g/m²/24hrs (at 4mm thick)

TEMPERATURE RESISTANCE

From -15°C to 90°C

CHEMICAL RESISTANCE

Contact Technical Department
Excellent resistance to sugars and most acids (organic and inorganic)

ABRASION RESISTANCE

Taber Abrader
(1 kg load using CS17 wheels)

0.1g loss per 1000 cycles

COMPRESSIVE STRENGTH

EN 13892-2

>50 N/mm²

FLEXURAL STRENGTH

EN 13892-2

>20 N/mm²

TENSILE STRENGTH

BS 6319

7 N/mm²

BOND STRENGTH

Greater than cohesive strength of 25 N/mm² concrete.
>1.5 MPa

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



Flowfresh SRQ

(Thickness dependent on specification)



An antimicrobial polyurethane resin floor screed system with an attractive positively textured, coloured quartz finish.

Provides a hygienic floor finish for wet processing areas in F&B facilities.



Contains an antimicrobial additive and is HACCP International Certified.



A decorative, speckled floor finish that is available in a range of colours.



Textured finish provides a safe environment for workers.



A hard-wearing & abrasion resistant finish to protect the substrate below.



Protects against a majority of acids used in manufacturing processes.

Technical Profile

FIRE RESISTANCE

EN 13501-1

B_{fl} - s1

SLIP RESISTANCE**

Method described in BS 7976-2 (typical values for 4-S rubber slider)

Dry > 40, Wet depends on specification (in accordance with HSE and UKSRG guidelines)

IMPACT RESISTANCE

EN ISO 6272

15Nm

WATER PERMEABILITY

Nil – Karsten test (impermeable)

VAPOUR PERMEABILITY

ASTM E96:90

5g/m²/24hrs (at 4mm thick)

TEMPERATURE RESISTANCE

90°C (continues exposure), 110°C (intermittent spills)[†]

[†] Applicable for thickness ≥ 6mm

CHEMICAL RESISTANCE

Contact Technical Department

Excellent resistance to sugars and most acids (organic and inorganic)

ABRASION RESISTANCE

Taber Abrader
(1 kg load using CS17 wheels)

0.12g loss per 1000 cycles

COMPRESSIVE STRENGTH

EN 13892-2

> 50 N/mm²

FLEXURAL STRENGTH

EN 13892-2

> 20 N/mm²

TENSILE STRENGTH

BS 6319

> 10 N/mm²

TOXICITY (WHEN CURED)

Taint free to sensitive foodstuffs.

BOND STRENGTH

Greater than cohesive strength of 25 N/mm² concrete.
> 1.5 MPa

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

Flowfresh RT

(RT: 6–9mm)



A heavy duty, hygienic PU screed providing a highly durable, lightly textured finish that incorporates an antimicrobial additive.

Provides a hygienic floor finish for heavy duty wet processing areas in F&B facilities.



Contains an antimicrobial additive and is HACCP International Certified.



Resistant to extreme temperatures, from -45°C to 120°C (at 9mm).



Lightly textured finish provides a safe environment for workers.



A hard-wearing & abrasion resistant finish to protect the substrate below.



Protects against a majority of acids used in manufacturing processes.

Technical Profile

FIRE RESISTANCE

EN 13501-1

B_{fl} - s1

SLIP RESISTANCE**

Method described in BS 7976-2 (typical values for 4-S rubber slider)

Dry > 40, Wet depends on specification (in accordance with HSE and UKSRG guidelines)

IMPACT RESISTANCE

EN ISO 6272

20Nm

WATER PERMEABILITY

Nil – Karsten test (impermeable)

VAPOUR PERMEABILITY

ASTM E96:90

3g/m²/24hrs (at 9mm thick)

TEMPERATURE RESISTANCE

From -25°C to 100°C (at 6mm)

From -45°C to 120°C (at 9mm)

CHEMICAL RESISTANCE

Contact Technical Department
Excellent resistance to sugars and most acids (organic and inorganic)

ABRASION RESISTANCE

Taber Abrader
(1 kg load using CS17 wheels)

0.12g loss per 1000 cycles

COMPRESSIVE STRENGTH

EN 13892-2

> 50 N/mm²

FLEXURAL STRENGTH

EN 13892-2

> 20 N/mm²

TENSILE STRENGTH

BS 6319

> 10 N/mm²

COEFFICIENT OF THERMAL EXPANSION

ASTM C531

3.74 x 10⁻⁵ °C⁻¹

BOND STRENGTH

Greater than cohesive strength of 25 N/mm² concrete.
> 1.5 MPa

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



Flowcoat HTS

(Thickness dependent on specification)

A high performance, UV light stable, pigmented hybrid PU coating system with very high abrasion resistance.

Designed for environments with heavy traffic where abrasion resistance is essential.



Provides a high strength coating for high traffic isles and warehouses.



Protects against a range of chemicals used in processing areas.



100% UV light stable and does not yellow over time.



The seamless and semi-gloss finish allows the system to be cleaned easily.



Improved slip resistance compared to smooth coating systems.

Technical Profile

FIRE RESISTANCE

EN 13501-1

B_{fl} - s1

SLIP RESISTANCE

Method described in BS 7976-2 (typical values for 4-S rubber slider)

Dry > 40, Wet depends on specification (in accordance with HSE and UKSRG guidelines)

THERMAL RESISTANCE

Tolerant up to 70°C

WATER PERMEABILITY

Nil – Karsten test (impermeable)

CHEMICAL RESISTANCE

Contact technical department

SURFACE HARDNESS

Koenig Hardness Test

180 secs.

ABRASION RESISTANCE

Taber Abrader (1 kg load using CS10 wheels)

40 mg loss per 1000 cycles

BS 8204-2

Grade AR2 Medium Duty Industrial and Commercial

TENSILE STRENGTH

BS 6319

> 15 N/mm²

BOND STRENGTH

Greater than cohesive strength of 25 N/mm² concrete.
> 1.5 MPa

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



Flowshield CR

(2–3mm)



A highly chemical resistant, self-smoothing epoxy resin floor finish suitable for dry process areas subject to chemical spillages.

Typical uses include chemical storage areas, laboratories, warehouses and printing plants.



Protects against a range of chemicals used in manufacturing processes.



Meets the requirements set out by the USDA and FDA.



The seamless and high-gloss finish allows the system to be cleaned easily.



Hard-wearing & abrasion resistant suitable for medium to heavy traffic.

Technical Profile

FIRE RESISTANCE

EN 13501-1

B_{fl} - s1

SLIP RESISTANCE

Method described in BS 7976-2 (typical values for 4-S rubber slider)

Dry > 40, Wet depends on specification (in accordance with HSE and UKSRG guidelines)

THERMAL RESISTANCE

Tolerant up to 60°C

WATER PERMEABILITY

Nil – Karsten test (impermeable)

CHEMICAL RESISTANCE

Contact technical department

ABRASION RESISTANCE

Taber Abrader (1 kg load using CS17 wheels)

90 mg loss per 1000 cycles

COMPRESSIVE STRENGTH

BS 6319

> 60 N/mm²

FLEXURAL STRENGTH

BS 6319

> 40 N/mm²

TENSILE STRENGTH

BS 6319

> 25 N/mm²

BOND STRENGTH

Greater than cohesive strength of 25 N/mm² concrete.
> 1.5 MPa

TOXICITY

Taint free to sensitive foodstuffs

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



Bacteria in Food Processing Environments

bac•ter•i•a Single-cell organisms that feed on nutrients in their surroundings to reproduce. Pathogenic bacteria are harmful to humans, and can enter the body through contaminated food.



Approximately **16%** of foodborne illness cases are attributed to a contaminated processing environment.

Foods most prone to bacterial contamination are:



Meat



Poultry



Eggs or foods made with raw eggs



Cold cooked seafood



Raw shellfish



Soft cheeses

Flowfresh Bacterial and Chemical Resistance

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

*Full chemical resistance chart available on request.







Bangladesh | China | Hong Kong | Indonesia | Malaysia | Pakistan | Philippines
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