



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.

Concrete Repair & Maintenance from Euclid Chemical

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, represented by Flowcrete Polska in Eastern Europe, 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.

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



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 to 6 hrs

Full Traffic

24 hrs

Euco Diamond Hard



EUCLID CHEMICAL

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

Euco Diamond Hard provides an attractive, slip resistant sheen to concrete that never peels, fades or wears away.



Reduces porosity and increases durability of the concrete surface

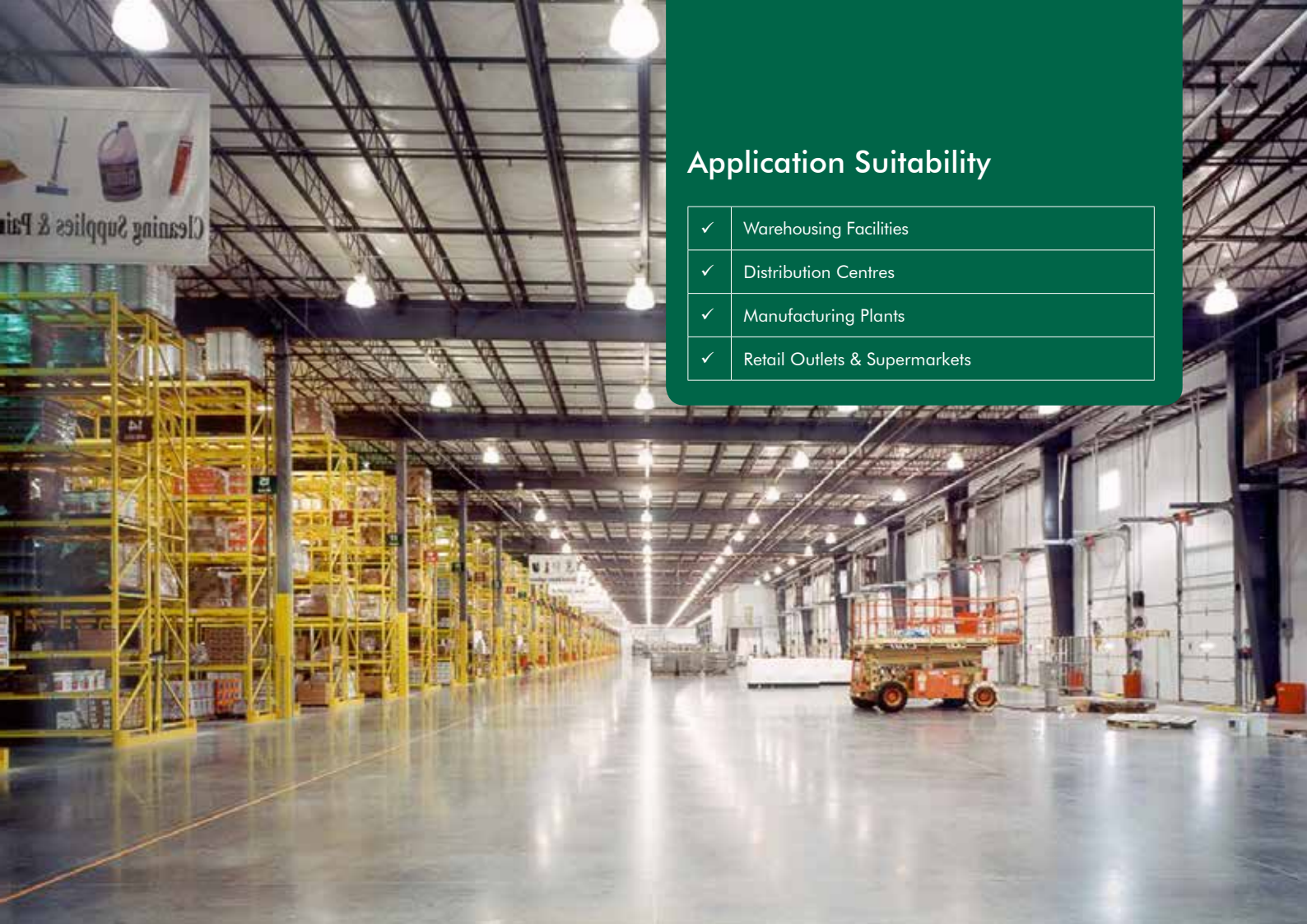


Minimises tyre marks and enables them to be more easily cleaned and removed



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 in **EUCO Diamond Hard** provides both a strengthened and 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



UltraGuard



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

UltraGuard contains a powerful, migratory stain-resistant additive that is activated with high-speed burnishing. It can be used alone but is especially effective when applied to concrete that 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

Technical Profile

VOC CONTENT

111 g/L

SPECIFIC GRAVITY

1.03

PH

9.5 - 10.5

SOLIDS / ACTIVE CONTENT

21 - 23%

FREEZE POINT

0°C

SPEED OF CURE:

21°C

Light Traffic

1 to 2 hrs

Full Traffic

24 hrs

Technical Profile

VOC CONTENT

≤5 g/L

SPEED OF CURE:

21°C

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.

Eucosil



EUCLID CHEMICAL

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

Eucosil introduces additional sodium silica that reacts with the excess calcium hydroxide to form more CSH and becomes an integral part of the surface, 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

Euco QWIKjoint UVR



EUCLID CHEMICAL

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

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 to 4 mins

SPEED OF CURE:

21°C

Light Traffic

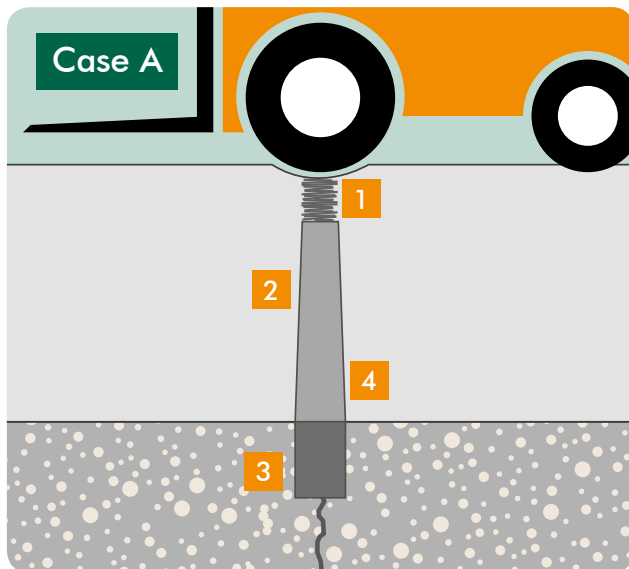
1 hr

Full Traffic

2 hrs

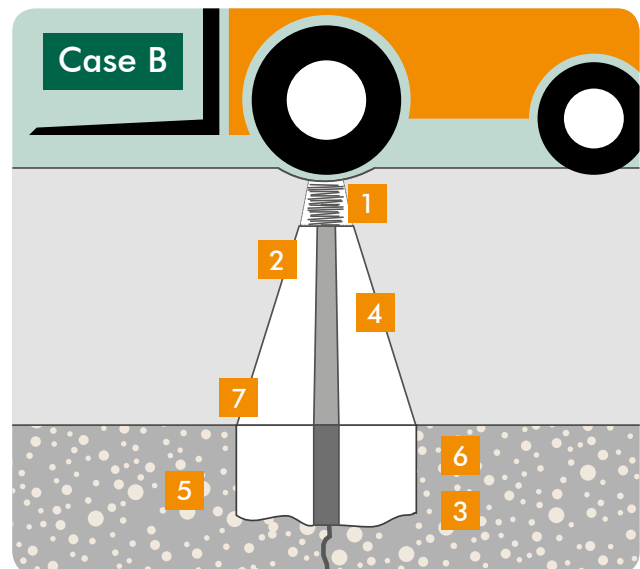
For a full Technical Profile, contact your local Technical Department.

Joint Repair Methods



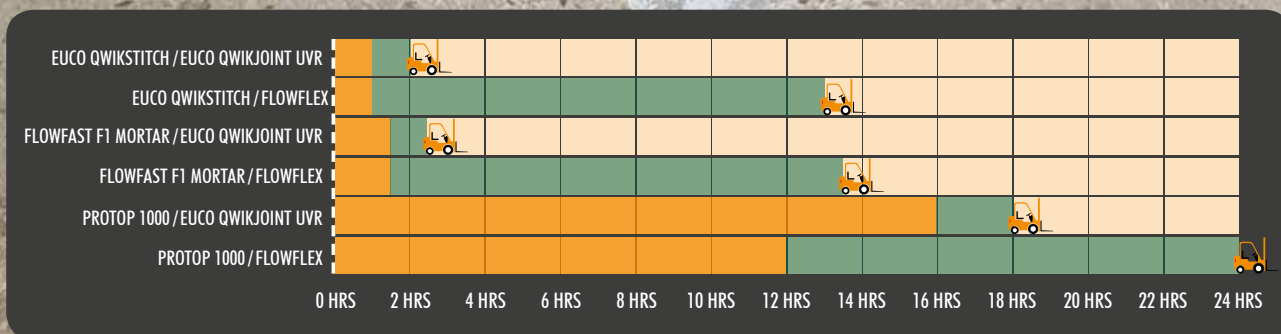
- 1 Joint edges have spalled under heavy traffic
- 2 Joints are re-cut to produce smooth edges
- 3 The prepared joint is filled with Flowflex or Euco QWIKjoint UVR
- 4 Excess joint filler is shaved flush with the floor

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



- 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

Return to Service Comparison Chart



Euco QWIKStitch



A two-component hybrid urethane repair liquid used to mend cracks, repair spalling floor joints and patch damaged or 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

COMPRESSIVE STRENGTH (72 HRS)

31.7 MPa

TENSILE STRENGTH (7 DAYS)

31.0 MPa

WATER ABSORPTION

1.1%

SHORE D HARDNESS

70 to 80

VOC CONTENT

<3.3 lb / gal

FLASH POINT

43°C

SPEED OF CURE:

21°C

Light Traffic

10 mins

Full Traffic

1 hr



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

Complementary Products from Flowcrete



	DESCRIPTION:	USES:
Peran STC	A 100% solids, low viscosity, crystal clear epoxy resin binder and sealer that provides improved clarity and increased UV stability.	Peran STC is used as a primer, binder and topcoat in systems with decorative aggregates and can be used as a topcoat for concrete pigmented with Vibra-Stain.
Flowflex	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.
ProTop 1000	A 100% solids, low odor, multi-purpose, clear epoxy that can be pigmented with colour packs.	ProTop 1000 is used as primer, binder (for repairs and main layer applications) but not as a top lacquer.
Flowfill	A rapid setting urethane cement underlayment mortar. Applied by trowel or screed bar from 12 - 76 mm.	Flowfill is 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 concrete or polymer floor mortars.

Flowfast F1 Mortar

A two component, ready to use, repair mortar, based on methyl methacrylate (MMA) resin for cementitious substrates.

Flowfast F1 Mortar is used to repair damages, holes and imperfections in concrete substrates. Also used in machine bases, joint arises, drill and bolt holes.



Cures at low temperatures ranging from -20°C through to 30°C.



Fully hardens after 30 minutes to ensure minimal downtime.



Excellent choice for cold rooms or walk in refrigerators and freezers.

Technical Profile

SOLIDS CONTENT

100%

COMPRESSIVE STRENGTH

74.5 N/mm²

TENSILE STRENGTH

27 N/mm²

DENSITY (20°C)

2.1 kg/l

SPEED OF CURE:

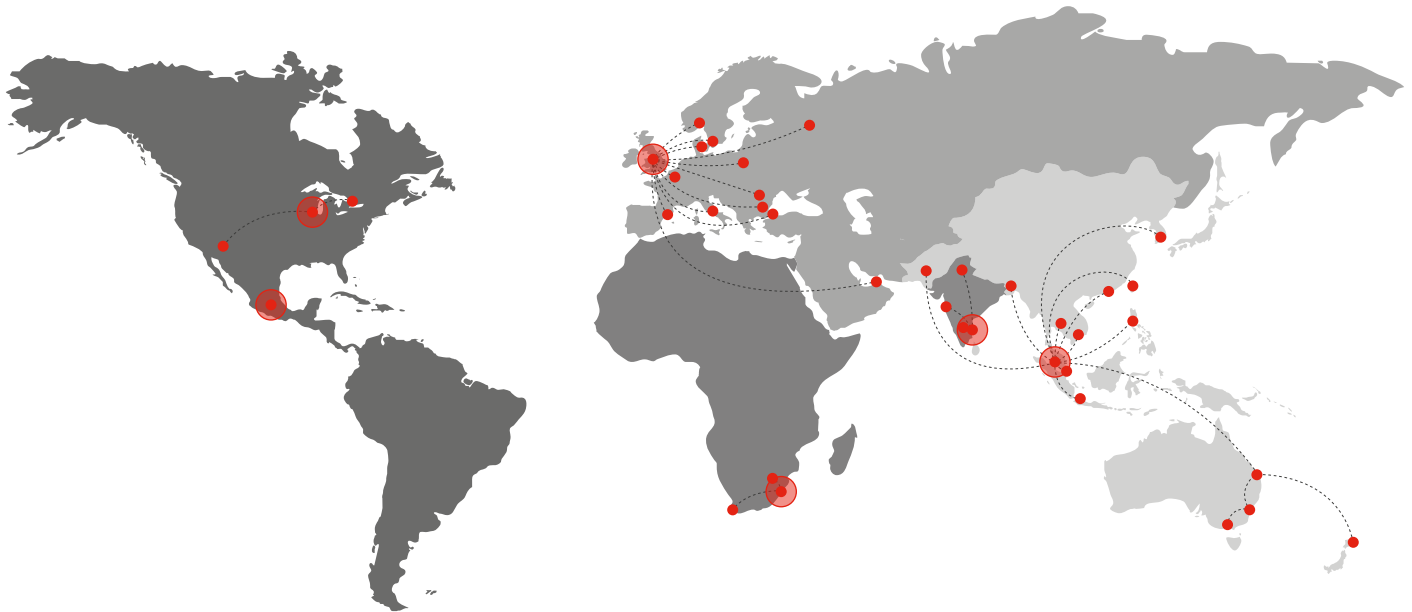
21°C

Light Traffic

30 mins

Full Traffic

90 mins



Flowcrete

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

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