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 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?

<table>
<thead>
<tr>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactive Sealers</td>
</tr>
<tr>
<td>Liquid Densifiers</td>
</tr>
<tr>
<td>Joint Fillers</td>
</tr>
<tr>
<td>Polymeric Protectant</td>
</tr>
<tr>
<td>Rapid Set Patch Repair</td>
</tr>
<tr>
<td>Concrete Stains</td>
</tr>
</tbody>
</table>
Euco Diamond Hard

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

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### Technical Profile

**VOC CONTENT**

\[ \leq 5 \text{ g/L} \]

**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 |

For a full Technical Profile, contact your local Technical Department.
The Science Behind Euco Diamond Hard

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 silicate 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.

Application Suitability

- Warehousing Facilities
- Distribution Centres
- Manufacturing Plants
- Retail Outlets & Supermarkets
## 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
Eucosil

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.

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

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

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

**Technical Profile**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>TENSILE STRENGTH (14 DAYS)</td>
<td>8.9 MPa</td>
</tr>
<tr>
<td>ELONGATION AT BREAK (14 DAYS)</td>
<td>249%</td>
</tr>
<tr>
<td>SHORE D HARDNESS</td>
<td>33</td>
</tr>
<tr>
<td>SHORE A HARDNESS</td>
<td>84</td>
</tr>
<tr>
<td>SHAVE WINDOW</td>
<td>1 to 24 hrs</td>
</tr>
<tr>
<td>TACK FREE TIME</td>
<td>3 to 4 mins</td>
</tr>
<tr>
<td>SPEED OF CURE:</td>
<td>21°C</td>
</tr>
<tr>
<td>Light Traffic</td>
<td>1 hr</td>
</tr>
<tr>
<td>Full Traffic</td>
<td>2 hrs</td>
</tr>
</tbody>
</table>

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

**Joint Repair Methods**

**Case A**
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.

**Case B**
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
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**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMPRESSIVE STRENGTH (72 HRS)</strong></td>
<td>31.7 MPa</td>
</tr>
<tr>
<td><strong>TENSILE STRENGTH (7 DAYS)</strong></td>
<td>31.0 MPa</td>
</tr>
<tr>
<td><strong>WATER ABSORPTION</strong></td>
<td>1.1%</td>
</tr>
<tr>
<td><strong>SHORE D HARDNESS</strong></td>
<td>70 to 80</td>
</tr>
<tr>
<td><strong>VOC CONTENT</strong></td>
<td>&lt;3.3 lb / gal</td>
</tr>
<tr>
<td><strong>FLASH POINT</strong></td>
<td>43°C</td>
</tr>
<tr>
<td><strong>SPEED OF CURE:</strong></td>
<td>21°C</td>
</tr>
<tr>
<td>Light Traffic</td>
<td>10 mins</td>
</tr>
<tr>
<td>Full Traffic</td>
<td>1 hr</td>
</tr>
</tbody>
</table>
VersaSpeed LS

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

VersaSpeed LS 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, making it ideal for projects that need to be returned to the client quickly.

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.

Technical Profile

<table>
<thead>
<tr>
<th>YIELD</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Neat: 0.105 m³</td>
<td>Extended: 0.147 m³</td>
</tr>
<tr>
<td>MIN. THICKNESS</td>
<td></td>
</tr>
<tr>
<td>6 mm</td>
<td></td>
</tr>
<tr>
<td>MAX THICKNESS</td>
<td></td>
</tr>
<tr>
<td>Neat: 25.4 mm</td>
<td>Extended: 152 mm</td>
</tr>
<tr>
<td>WORKING TIME:</td>
<td></td>
</tr>
<tr>
<td>45 minutes</td>
<td></td>
</tr>
<tr>
<td>SET</td>
<td></td>
</tr>
<tr>
<td>Initial: 1 hr 15 mins</td>
<td>Final: 2 hrs</td>
</tr>
<tr>
<td>TEMPERATURE LIMITATIONS:</td>
<td></td>
</tr>
<tr>
<td>4°C</td>
<td></td>
</tr>
<tr>
<td>STRENGTH GAIN: MPA</td>
<td></td>
</tr>
<tr>
<td>4 hrs: 21</td>
<td></td>
</tr>
<tr>
<td>1 day: 38</td>
<td></td>
</tr>
<tr>
<td>7 days: 59</td>
<td></td>
</tr>
<tr>
<td>Final: 69</td>
<td></td>
</tr>
</tbody>
</table>

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Complementary Products from Flowcrete

<table>
<thead>
<tr>
<th>DESCRIPTION:</th>
<th>USES:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peran STC</td>
<td>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.</td>
</tr>
<tr>
<td>Flowflex</td>
<td>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.</td>
</tr>
<tr>
<td>ProTop 1000</td>
<td>ProTop 1000 is used as primer, binder (for repairs and main layer applications) but not as a top lacquer.</td>
</tr>
<tr>
<td>Flowfill</td>
<td>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.</td>
</tr>
</tbody>
</table>
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.

Europe & Middle East
- Baltic States: +48 883 303 880, latvia@flowcrete.com
- Bulgaria: +359 898 61 58 31, bulgaria@flowcrete.com
- Denmark: +46 435 40 01 10, denmark@flowcrete.com
- France: +33 1 60 61 74 42, france@flowcrete.com
- Germany: +49 4187 51 29 470, germany@flowcrete.com
- Italy: +39 339 4853258, italy@flowcrete.com
- Norway: +47 6486 0830, norway@flowcrete.com
- Poland: +48 22 879 8907, poland@flowcrete.com
- Romania: +40 766 596 991, romania@flowcrete.com
- Russia: +7 916 931 35 13, russia@flowcrete.com
- Spain: +34 937 07 0872, spain@flowcrete.com
- Sweden: +46 435 40 01 10, sweden@flowcrete.com
- UAE: +971 4 886 4728, uae@flowcrete.com
- UK: +44 1270 753 000, uk@flowcrete.com

Africa
- East Africa: +254 20 682 1011, eastafrica@flowcrete.com
- South Africa: +27 31 461 3411, southafrica@flowcrete.com

Asia Pacific
- Australia: +61 7 3205 7115, australia@flowcrete.com
- Bangladesh: +88 02 985 7222, bangladesh@flowcrete.com
- China: +86 10 8472 1912, china@flowcrete.com
- Hong Kong: +852 2795 0478, hongkong@flowcrete.com
- Indonesia: +62 21 252 3201, indonesia@flowcrete.com
- Malaysia: +60 3 6277 9575, malaysia@flowcrete.com
- Pakistan: +92 33 731 59272, pakistan@flowcrete.com
- Philippines: +63 2 834 6506, philippines@flowcrete.com
- Singapore: +65 6848 7166, singapore@flowcrete.com
- Taiwan: +886 916 954 291, taiwan@flowcrete.com
- Thailand: +66 2539 3424, thailand@flowcrete.com
- Vietnam: +84 8 6287 0846, vietnam@flowcrete.com

India
- India: +91 44 4202 9831, india@flowcrete.com

Americas
- Brazil: +55 11 3230 1107, brasil@flowcrete.com
- Canada: +1 604 628-1782, canada@flowcrete.com
- Chile: +56 2 2938 1962, chile@flowcrete.com
- Colombia: +57 1 381 9254, colombia@flowcrete.com
- Mexico: +01 800 099 0468, mexico@flowcrete.com
- USA: +1 936 539 6700, usa@flowcrete.com

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