

Flowcrete
for the world at your feet



EUCLID CHEMICAL



LIQUID DENSIFIER & SEALER FOR CONCRETE

- ▶ Strengthen weak concrete with EUCO Diamond Hard by Euclid Chemical – a unique blend of silicate and silicate polymers designed to penetrate, densify and seal concrete surfaces.

www.flowcreteaustralia.com.au

Concrete Liquid Densifier & Sealer from Euclid Chemical

Concrete, although one of the most durable man-made building materials, is inherently porous, with a large number of air pockets. This means the material can break down over time unless a penetrating reactive sealer is applied to the surface, transforming it into a usable and resistant floor finish.

Silicate-based sealers, including lithium silicates, sodium silicates and fluorosilicates, have been used to improve the durability of concrete for decades, reducing porosity and increasing density to result in a surface that resists penetration of liquids, including oil and many chemicals.

The Euclid Chemical Company, represented by Flowcrete Australia across Australia, offers a liquid densifier and sealer which penetrates, chemically reacts and bonds within the surface that is designed to protect and beautify concrete floors in both industrial and commercial environments.



Silicate and silicate blend densifies and seals in one step



Reduces porosity and increases density of the concrete surface



Provides a low sheen lustre that enhances the appearance of the concrete surface



Resists penetration of liquids, including oil and many chemicals



Can contribute to LEED points



Minimises tyre marks and enables them to be easily removed — will not blush, peel, flake or wear away

Application Suitability



Distribution Centres



Manufacturing Plants



Warehouses



Retail & Supermarkets



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



A liquid densifier and sealer which penetrates, 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



Contributes to the LEED certification of your next building project

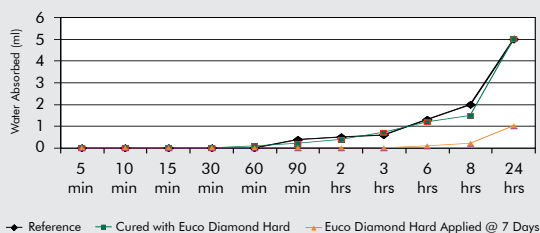


Silicate materials have been used to improve the durability of concrete

Test Method Explanation

Liquid Repellency

RILEM tubes provide a simple method for measuring the amount of water absorbed by a concrete surface within a specified time period. RILEM Test Method 11.4 is used to assess the degree of protection provided by a surface sealer or treatment.



Coefficient of Friction

4000 psi concrete, steel trowel finish, Euco Diamond Hard applied after 7 days at 200 ft² / gallon.

Coefficient of Friction Results:
Dry 0.81, Wet 0.72

A minimum coefficient of friction value of 0.5 has become the commonly accepted threshold for classifying a surface as slip resistant.



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The Science Behind Euco Diamond Hard



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



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



The synergistic activity of the silicate & siliconate blend in EUCO Diamond Hard seals and strengthens the concrete.

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

Acids	Effect
10% Lactic	M
10% Citric	M
Glacial Acetic	M
10% Acetic	M
10% Formic	M
10% Oxalic	M
10% Tannic O	O
10% Chromic	M
10% Hydrochloric	M
Concentrated Hydrochloric	S
10% Nitric	S
Concentrated Phosphoric	M
10% Sulfuric	M
Concentrated Sulfuric	S

Hydraulic Fluids/Oils/Fuels	Effect
Skydrol	O
Automatic Transmission Fluid	O
Brake Fluid	O
Gasoline/Jet Fuel	O
JP-4 Kerosene	O
10W30 Motor Oil	O
Aircraft Motor Oil	O
Heating Oil	M

Bases	Effect
5% Ammonium Hydroxide	O
Concentrated Ammonium Hydroxide	O
50% Potassium Hydroxide	M
50% Sodium Hydroxide	M
Concentrated Calcium Hydroxide	O
10% Potassium Hydroxide	M
10% Sodium Hydroxide	M

Salts (30% Solutions)	Effect
Ammonium Chloride	M
Ammonium Nitrate	O
Calcium Chloride	O
Calcium Hypochlorite	M
Cupric Chloride	M
Ferric Chloride	M
Ferric Nitrate	O
Magnesium Chloride	M
Potassium Chloride	M
Sodium Bicarbonate	O
Sodium Chloride	O
Sodium Chloride - Saturated Solution	M

Solvents	Effect
Acetone	O
Benzene/Xylene	O
Carbon Tetrachloride	O
Cyclohexane	O
Dichlorobenzene	M
Dichloroethane	M

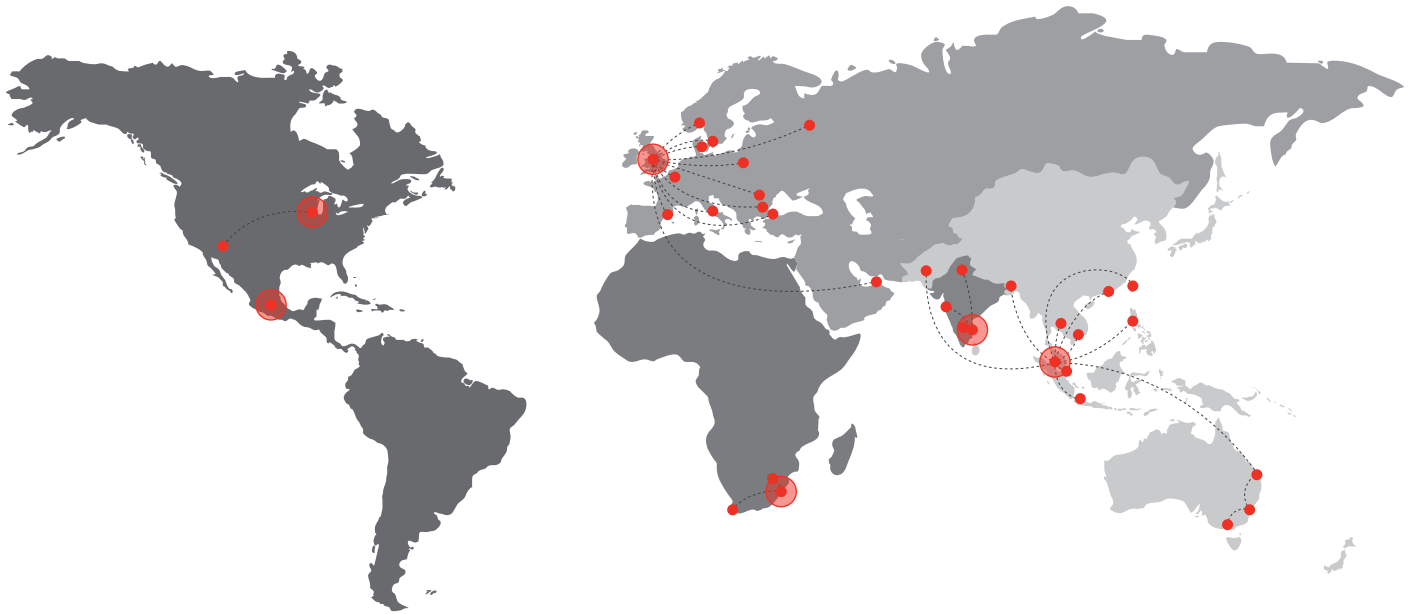
Alcohols	Effect
Benzyl Alcohol	O
Ethyl Alcohol (Ethanol)	O
Isopropyl Alcohol (Isopropanol)	O
Methyl Alcohol (Methanol)	O
Ethylene Glycol (anti-freeze)	O
MEK	O

Other Chemicals	Effect
Formaldehyde	O
10% Urea	O
Cola	O
Mustard	O
Ketchup	O

O No Effect

M Moderate Effect

S Severe Effect



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