



ECO DENSI SHIELD - LITHIUM

100% Lithium Concrete and Paver Densifier / Hardener

DESCRIPTION

Eco Densi Shield - Lithium is a unique environmentally friendly dispersion of nano-sized lithium silicate particles. These small particles penetrate the concrete and react with the soluble calcium compounds to increase the wear resistance and surface strength of concrete floors that have been mechanically ground, smoothed, and polished.

Eco Densi Shield - Lithium works effectively to harden, seal, and densify concrete floors.

As concrete hydrates, water reacts with cement to form calcium hydroxide and silica, which react to form calcium silicate hydrate (C-S-H). C-S-H is the material that bonds the cement with the aggregate in concrete.

The hydration process produces more calcium hydroxide than is used up in this chemical reaction resulting in excess calcium hydroxide. In the hydration process, calcium hydroxide dissolved in water moves to the surface region of a slab and reacts with atmospheric carbon dioxide, producing calcium carbonate also called "free lime." Over the long term, excess free lime is troublesome because it is a primary cause of micro-pitting.

Liquid hardeners/densifiers provide a remedy by introducing additional silicates which react with the excess calcium hydroxide to form more C-S-H. Additional C-S-H means denser, harder concrete.

USES

Eco Densi Shield - Lithium can be used on all cement-based products including concrete, pavers and tiles.

ADVANTAGES

- Provides greater abrasion resistance to polished concrete floors
- Eliminates damage from micro-pitting
- Leaves no staining even when pooling and no need to remove excess product
- Significantly reduces efflorescence and slab edge dampness
- Reduces migration of chemicals and other foreign matter through the slab
- Highly reactive requiring less product to complete a job
- 100% insoluble so it will never wash away

- Time effective requiring only 30 seconds for full reaction, no need to leave wet for long periods
- Odourless, VOC free and friendly to the environment
- Ready to use from container and easy to apply

COVERAGE

One application will cover approximately 5 – 20 square metres per litre.

SURFACE INSPECTION

Surface must be clean, dry and free from grease, oil, dust, paint, curing agents or any foreign material that might prevent proper penetration.

SURFACE PREPARATION

Old Concrete:

Concrete should be made free from contaminants by diamond grinding or shot blasting to ensure penetration and reaction. If using acid etches, ensure it is applied, neutralised and rinsed per manufacturer's instructions and that the substrate is dry.

APPLICATION

Steel Trowelled and Burnished Concrete:

Apply **Eco Densi Shield - Lithium** as soon as practical after completion of steel trowelling and burnishing.

Eco Densi Shield - Lithium can be applied by low pressure airless spray or pump pack. It can be applied with a bucket and spread onto the surface with a soft bristled broom.

Apply **Eco Densi Shield - Lithium** onto the surface in a light even coat and so that it remains wet for 1 - 2 minutes after application.

Honed Concrete:

Apply **Eco Densi Shield - Lithium** after grouting with **Eco Grout** and before resin bond diamond tool polishing.

Eco Densi Shield - Lithium can be applied by low pressure airless spray or pump pack. It can be applied with a bucket and spread onto the surface with a soft bristled broom.

Apply **Eco Densi Shield - Lithium** onto the surface in a light even coat and so that it remains wet for 1 - 2 minutes after application.

LIMITATIONS

- Do not apply in conditions above 30°C
- Do not apply on frozen substrate or when temperature is near freezing
- Do not apply if rain might occur during the next 30 minutes
- Always read SDS before use of any product

HEALTH AND SAFETY

For detailed information, refer to the current Safety Data Sheet available at www.ecoshield.com.au

For emergencies, please contact 24 hour mobile 0413 075 994.

First Aid Instructions

Discomfort in stomach and intestinal tract may occur. Immediately give milk or water. DO NOT induce vomiting. First aid is generally not required. Call a doctor if necessary.

If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present. Continue rinsing. May cause irritation and redness. If symptoms persist, a sensible precaution is to seek medical attention.

If on skin: wash with plenty of soap and water. If irritation persists, seek medical advice.

Poisons Information Centre 131 126.

MANUFACTURER'S COMMENT

Use with any other manufacturer's product could result in detrimental effects on the product's performance for which Ecoshield Performance Coatings holds no responsibility, and Ecoshield Performance Coatings cannot be held responsible for failure to follow application instructions.

Ecoshield Performance Coatings is continually updating materials and methods. Ensure you have the latest information.

TYPICAL PROPERTIES

Appearance	Transparent liquid
Main components	SiO ₂ , Alkaline metal silicate
Solid content, % by weight	15%
Specific gravity	1.05 – 1.10
Spread rate	5 – 20m ² per litre
Flashpoint	Does not burn
Dry Time at 25°C	15 minutes
Storage Period	2 years at 5-35°C
Packaging	5, 15 and 200L plastic containers