

Product Description

Lockwell WPC is a spray-applied, penetrating Portland cement concrete treatment and stabilizes the chemistry of concrete, which is constantly influenced by environmental conditions that contribute to durability issues such as carbonation and/or efflorescence.

WPC penetrates into concrete capillaries and pores, reacts with free alkali in the concrete, and forms a Calcium-Silicate-Hydrate (C-S-H) reaction in the capillaries and pores to waterproof and protect the concrete. This results in waterproofed concrete that has been tested to withstand over 250-feet of Head Pressure (75-meters). This technology enhances the resistance to contaminants that contribute to short and long-term concrete deterioration.

Features

- Converts regular mix designs to high performance mixes
- Rejuvenates concrete capillary & pore structure
- Waterproofs existing non-coated concrete
- Accepts all coatings or coverings
- Enhances resistance to chemical and environmental attack
- Permanent protection
- Access slabs in as little as 1-hour
- Increase durability
- Saves time and money
- Non-flammable
- Zero VOC content
- Safe and easy to apply

Application Area

Lockwell WPC may be applied on any Portland cement concrete element that requires superior protection. These include, but are not limited to:

- Precast Structures
- Parking Decks & Ramps
- Bridge Substructures & Superstructures
- Mechanical Rooms
- Roof Decks
- Architectural Concrete

Installation Advantages

- Allow foot traffic in 1-hour for most flatwork. Up to 3-hours for really dense concrete and/or extremely high moisture conditions.
- Ready to accept coating and/or coverings in as little as 24-hours on existing concrete
- Can purge and/or encapsulate contaminants in concrete
- g/ml VOC content
- Water-based
- Non-flammable
- Non-toxic
- Odourless

Technical / Performance Data

Color	Cloudy White (dries clear)
Odor	None
Specific Gravity	1.10
pH	+/-11.5
Flammability	0 (non-flammable)
Toxicity	None
VOC/VOS Content	0.0 g/ml
Surface Bond Quality	100% of untreated concrete
Paintability	100% of untreated concrete
Clean-up Solvent	Water
Environmental Impact	None/neutral
User Status	Friendly

Application Guideline

Surface Preparation

1. Do not apply on frozen substrate or when temperature can fall below 32°F within 24hours of application.
2. Curing membranes, wax, paint, or foreign deposits of any kind restricting access to concrete's internal pore structure must be mechanically removed for Lockwell WPC to penetrate (i.e. surface grinding, shot blasting, bush hammering, etc.
3. Test porosity by applying 1ml of clean water on the surface. Water should absorb within 1 ½ - 3 minutes. If unsure, contact Lockwell representative for guidance.
4. Sweep and/or vacuum the surface thoroughly prior to application. Note: It is very important to contact Lockwell for job specific advice regarding correct application before commencing use of this product.

Application

1. Use a low to medium pressure sprayer complete with an extension wand and 0.091 – 0.031 inch (0.48-0.79mm) fan tip spray jet. Hold wand and spray 6 inches (15cm) from the surface of the substrate at a 90° angle. IMPORTANT: Product MUST be applied using an overlapping spray pattern at 50% on the previous run.
2. For slab applications, products should hold a flooded appearance (swimming pool effect) for approximately 15 minute. There are inherent variations in concrete density; some areas will absorb faster than others.
3. For vertical and overhead applications, work from lowest to highest elevation. Very light and repeated spray passes should be made on the same area until the concrete surface no longer accepts product. Move onto next area after achieving "point of rejection". Please contact your nearest Lockwell representative for additional technical support and/or training.

Notes & Handling Precautions

- Use of a mask or screen while applying the product is recommended.
- Do not allow excess product to dry on the surface before leaving the site. Remove any excess by brooming.
- Areas of high porosity have a faster absorption rate and may dry faster immediately after spraying. It is important that the product is applied to achieve surface saturation. For slabs, it should appear as total flooding (swimming pool effect) over the entire surface with a thickness of approximately 1/16 – inch (1.5mm). Frequently check coverage rates. Surface saturation should hold that appearance for approximately 15 minutes. If absorption continues to be excessive, contact a Lockwell representative.
- If applying coatings and/or coverings, wait a minimum of 24-hours from the time of final application of Lockwell WPC for existing concrete or until new concrete is fit for service. Then lightly sand and thoroughly vacuum the surface to remove any contaminants that may be on the surface. Do not flush with water as mechanical removal allows faster access to the surface.
- Like fresh concrete itself and other alkaline materials, Lockwell WPC may etch glass, shiny aluminum, and brass if left to dry on the surface. Simply remove while wet.
- If considering application of this product over precast concrete products, contact Lockwell before use as precast concrete products vary widely in porosity and construction.
- Application rates and methods differ when applying overhead and vertically. Contact Lockwell for additional information.
- DO NOT apply on frozen substrate or when temperature is near freezing
- DO NOT apply when substrate is 90°F (32°C) or higher. If surface temperature is higher than 90°F (32°C) then pre-wetting with water is required. Be sure to remove any puddles before applying of Lockwell WPC.
- Any area that absorbs product faster than 15 minutes will need to be reapplied until the product no longer absorbs faster than 15 minutes. This is called spraying to the “point of rejection.”

- a. If an area is re-applied more than 3 times, contact the Lockwell technical department for additional information.
- b. If product has absorbed thoroughly in the majority of the area, but there is pooling in the low areas, use a broom to spread additional product into the areas already penetrated. Do not allow product to dry in pools. Remove excess with a damp mop.
- c. After liquid absorption, treated area can be opened to foot traffic.
- d. In the event of product drying on the surface, lightly and quickly sand the entire surface to remove any of the dried products. Remove dust with broom or vacuum.
- e. Process is complete.

Storage and Packaging

Lockwell WPC is packaged in 20-liter pails. Product shall ideally be stored in a location that is dry and between 35 to 100 °F (2 to 38 °C), ambient temperature. Optimal storage is at the middle of the temperature range. 5-year shelf life under proper storage conditions.

Certifications & Approvals

Test certificate of US EPA 8260B for zero VOCs.

General Information

For safe handling information on this product, please refer to the Material Safety Data Sheet (MSDS).

Additional Information – Disclaimer

The information provided herein, especially recommendations for the usage and the application of our products, is based upon our knowledge and experience. Due to different materials and equipment used, as well as varying working conditions and environments beyond our control we strictly recommend carrying out intensive trials to test the suitability of our products with regard to the required processes and applications. This data sheet is provided free of charge and we do not accept any liability with regard to the above information or with regard to any verbal recommendation, except for cases where we are liable of gross negligence or false intention.