

## ULTRA-LOCK

The Ultimate in Curing Concrete, Restricting Water Migration and Increasing Concrete Density

### GENERAL DESCRIPTION

Ultra-Lock is a water-based penetrating concrete treatment. Ultra-Lock concrete treatment is the permanent answer for the flooring industry. Ultra-Lock penetrates the concrete surface which chemically reacts with the free lime in the concrete and creates CSH (calcium silicate hydrate). When used as a cure, Ultra-lock works by filling the pores in the concrete which restricts moisture from escaping the concrete while the concrete is curing. Using Ultra-Lock also hardens, densifies and dust-proofs the concrete surface.

Ultra-Lock is the perfect product for concrete that is to be painted or coated since it enhances the bonding quality of the surface. Ultra-Lock will prevent peeling, cracking, and loss of bond caused by capillary moisture or internal chemical reactions (ph fluctuations).

### Typical Problems Ultra-Lock Solves

Moisture/Vapor Pressure  
Carbonation  
Dusting  
PH Fluctuations  
Curing Concrete

Ultra-Lock once installed properly will reduce moisture readings from as high as 8 lb per 1000 sq. feet per 24 hours to the recommended maximum installation level for carpet, wood and resilient flooring of 3 lbs per 1000 square feet per 24 hours. Ultra-Lock has the additional benefit of hindering bacteria and fungi (mildew) growth.

### CARBONATION AND DUSTING

Up until now, dusting or carbonated concrete required expensive grinding and removal of the affected area. With Ultra-Lock those days are over. With the application of Ultra-Lock the concrete surface is now hard, strong and dust free.

### PH FLUCTUATIONS

Ultra-Lock neutralizes contaminants and alkalinity and controls pH levels in the concrete indefinitely.

Ultra-Lock is not a colloidal silicate. Colloids tend to naturally leave a dusty concrete surface. This dust has to be thoroughly removed otherwise adhesion of flooring materials could be compromised. This is avoided by using Ultra-Lock.

### BONDING

On poor concrete Ultra-Lock increases bond strength by up to 300%.

### TYPICAL USES

Warehouse floors, hospitals, commercial buildings, parkades.

### COVERAGE

Vapor Pressure – approximately 300 sq.ft./gal (7.4 sq.m/l)

Dusting and Carbonated Concrete - approximately 125-150 sq.ft./gal (3-3.6 sq.m/l)

Cure - approximately 400-500 sq.ft/gal (9.8-12.3 sq.m/l)

### TECHNICAL DATA

- Restricts water migration through concrete.
- Decreases permeability of concrete.
- Curing Aid: 92% greater moisture retention during the critical 24 hour cure period
- Reduces efflorescence
- 15 year warranty
- Leaves no surface membrane
- Dust-proofs
- Moisture Retarder
- Dramatically hardens carbonated concrete.
- Increases the life of the treated surface
- Compatible with all glues and adhesives
- Leaves an ideal surface for flooring and coatings

### CAUTIONS

- Check for evidence of curing compounds and surface porosity by pouring a little water on the concrete and watch for penetration. If there is no sign of penetration within 90 seconds, then the concrete should be mechanically prepared by sanding, grinding etc.
- Make sure all paint, plaster, and dust is removed to allow full efficient penetration.
- For spills, dilute and flush with water.
- Do not apply to frozen surfaces.

### APPLICABLE STANDARDS

ASTM C418 - Abrasion 67% Decrease  
ASTM C642 - Porosity 72% Reduction  
ASTM C803 - Penetration Resistance  
ASTM B117 - Chloride Ion Permeability  
57% decrease  
ASTM C666 - Freeze Thaw Resistance  
ASTM C23 - Artificial Weathering

### SURFACE PREPARATION

- Old dirty concrete should be cleaned thoroughly removing all old glue and adhesives, oils, and any other contaminants. After cleaning, rinse surface thoroughly with water.
- Allow 12 hours for the surface to dry before application of Ultra-Lock.
- If concrete is clean, thoroughly sweep area of dust and debris.
- Apply Ultra-Lock before repairing cracks in the sub-floor or applying patching or floor-leveling compounds.
- Ultra-Lock will not prevent water from coming up through cracks in the concrete floor.
- Follow manufacturer's directions for waterproofing concrete crack sealers and cementitious patching and leveling compounds.

### APPLICATION INSTRUCTIONS CARBONATED AND DUSTING CONCRETE

Apply Ultra-Lock at a rate of 125-150 sq.ft./gal (3-3.6 sq.m/l) making sure to thoroughly saturate the concrete surface. If dusting is severe we recommend Protec III Restore.

Apply Ultra-Lock by sprayer or microfiber pad. When spraying, a spray nozzle that produces a flow of 1/2 gallon per minute under 40 psi is recommended. Make sure concrete stays wet for 30 minutes by re-applying more Ultra-Lock or by re-distributing the existing product using a microfiber pad. Do not allow the product to form puddles. After 30 minutes let the surface dry, no water flushing is needed. After 1st coat has dried for 4 hours apply the 2nd coat of Ultra-Lock. Follow the same procedure as the 1st coat. Two to 3 coats are required. Once floor has dried for 24 hours, sweep floor clean.

### VAPOUR PRESSURE AND PH CONTROL

Apply Ultra-Lock at a rate of 300 sq.ft./gal (7.4 sq.m/l) making sure to thoroughly saturate the concrete surface. Moisten the surface with Ultra-Lock by sprayer or microfiber pad. When spraying, a spray nozzle that produces a flow of 1/4 gallon per minute under 40 psi is recommended. Spray in a fine fog pattern. Make sure concrete stays wet for 30 minutes by re-applying more Ultra-Lock or by re-distributing the existing product using a microfiber pad. Do not allow the product to form puddles. After 30 minutes let the surface dry, no water flushing is needed. After 1st coat has dried for 4 hours apply the 2nd coat of Ultra-Lock if required. Follow the same procedure as the 1st coat.

## APPLICATION INSTRUCTIONS

### For Curing Concrete

As a cure, apply the product with a low pressure sprayer or roller at a rate of approximately 400 sq.ft./gal (9.8 sq.m/l) on power trowel concrete. On broom finish concrete expect 300 sq.ft./gal (7.4 sq.m/l)

Be careful not to leave puddles. If puddles do form, they should be broomed or rolled out. In cooler temperatures greater care has to be taken in regard to puddling.

All saw cuts need to be coated thoroughly. If the product is not applied properly there is the possibility of staining on colored concrete where the product puddles.

After 14 days before the installation of flooring. Conduct moisture testing using an anhydrous calcium chloride test kit according to ASTM F-1869 test method, and in accordance with the floor manufacturer's recommendations for acceptable sub-floor moisture, after 72 hours and before the flooring installation begins.

If the test results are within the recommendation, proceed with the flooring installation. If the initial 72-hour moisture reading is not within the recommendations, wait an additional 72 hours and retest. A third application of sealer is rarely needed, but may be necessary in severe cases. If the retest moisture reading is within recommendations, proceed with the flooring installation. If the retest reading indicates the moisture is still too high, call Technical Support for assistance. Ultra-Lock is not recommended or warranted for below grade concrete floors if they are to be covered with flooring or paint.

## PHYSICAL CHARACTERISTICS

Physical State: Liquid

Color: Opaque

Odor: Mild

Toxicity: None

Cleanup: Water

Flash Point: None

Freezing Point: 0 C

Cure: 72 Hours

Recoatibility: After 4 hours

VOC Compliant: Yes - 0 g/litre

## WARRANTY

We warrant our products to be of good quality and will replace any products proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. The user shall determine the suitability of the product for the intended use and assume all risks and liability in connection therewith. Therefore, except for such replacement of product, Cornerstone Coatings makes no warranty or guarantee express or implied including warranties of fitness for a particular purpose or merchantability, respecting its products, and Cornerstone Coatings shall have no other liability with respect thereto. This warranty supercedes all other warranties express or implied.