C² HARD

C² Hard provides an advanced alternative to conventional sodium or potassium silicate surface hardeners. This penetrating silicate treatment reacts with the concrete to produce insoluble calcium silicate hydrate within the concrete pores. C² Hard is appropriate for freshly troweled "green" concrete, or existing floors of any age and renders concrete floors dustproof. Unlike conventional hardeners, which deposit high concentrations of sodium or potassium salts, C² Hard will not trigger or contribute to surface ASR (Alkali Silicate Reaction).

ADVANTAGES

- Easy, one step application. No scrubbing. No flushing. No caustic wastewater.
- Penetrates and reacts quickly to produce better initial hardness.
- Renders floors of any age dustproof.
- Tested and conforms to California Collaborative for High Performance School Indoor Air Quality standards. Use can contribute to LEED® for Schools points (EQ Credit 4).
- Performance of treated floors improves with traffic and maintenance.
- Improves performance, appearance and light reflectance of new or old concrete.
- Reduces application time and costs of burnishing and diamond polishing operations.
- Will not contribute to surface crazing. Combats surface ASR.
- Will not absorb water or contribute to floor sweating.
- Gloss and hardness do not reduce slip resistance.
- Breathable and UV stable. Will not yellow, discolor, peel or flake.
- Non-flammable. Non-toxic. Low odor.
- Cures quickly. Most floors can be opened to traffic within one hour of treatment.
- Treated surfaces are easy to maintain and require no waxing.

TYPICAL TECHNICAL DATA

FORM	Clear, colorless,odorless liquid
SPECIFIC GRAVITY	1.05
pH	11.0
WT/GAL	8.6 lbs
ACTIVE CONTENT	6%
TOTAL SOLIDS	6%
VOC CONTENT	0 g/L
FLASH POINT	not applicable
FREEZE POINT	32° F (0° C)
SHELF LIFE	2 years in tightly sealed, unopened container

REGULATORY COMPLIANCE

VOC Compliance

C² Hard is compliant with the US Environmental Protection Agency's AIM VOC regulations.

Contact us at sales@cretecolors.com for compliance with individual country regulations.

SAFETY INFORMATION

Always read full label and SDS for precautionary instructions before use. Use appropriate safety equipment and job site controls during application and handling.

24-Hour Emergency Information:

INFOTRAC at +1-352-323-3500

PREPARATION

Protect people, vehicles, property, plants and all surfaces not designated to receive C² Hard from the product, splash and wind drift. Use polyethylene or other proven protective material.

New Concrete: C² Hard may be applied to freshly placed concrete after final finishing and installation of the control joints. Remove soft cut saw debris before application.

Existing Concrete: Though C² Hard may be applied to existing, cured concrete of any age, C² Super Hard may be a better choice. Contact Crete Colors directly for recommendations.

Surfaces must be clean and structurally sound. Remove all foreign materials including bond breakers, curing agents, surface grease and oil, and construction debris using the appropriate Crete Colors surface prep cleaner.

Do not apply to surfaces which are frozen, dirty or have standing water. Surfaces must be clean, dry and absorbent. Test surface absorbency with a light water spray; surfaces designated for treatment should wet uniformly. If the surface does not wet uniformly, use the appropriate Crete Colors surface preparation cleaner or mechanical process to remove remaining surface contaminants.

Follow the appropriate cleaner with thorough water rinsing. If a d-limonene based cleaner/stripper is used, clean treated surfaces with C² Degrease and rinse thoroughly.

Acid-stained concrete must be thoroughly neutralized and rinsed prior to application. Application may begin as soon as prepared surfaces are dry and free of ponded water.

Surface & Air Temperatures
Temperatures for application should be 4–38°C (40–100°F)

Equipment
Apply with low pressure sprayer or microfiber pad. Fit sprayers with a 0.5 gpm (gallon per minute) spray tip.

Storage & Handling
Store in a cool, dry place. Always seal container after dispensing. Do not alter or mix with other chemicals. Published shelf life assumes upright storage of factory-sealed containers in a dry place. Maintain temperatures of 4–38°C (40–100°F). If product freezes, allow to thaw and mix well. Do not double stack pallets. Dispose of in accordance with local regulations. Do not reuse containers.

Packaging
20L, 200L or 1000L Containers

APPLICATION

Read “Preparation” and the Safety Data Sheet before use.

ALWAYS TEST a small area of each surface to confirm suitability, coverage rate and desired results before beginning overall application. Test with the same equipment, recommended surface preparation and application procedures planned for general application. Let surface dry thoroughly before inspection.

Pre-testing will confirm suitability of surface preparation and application procedures proposed for general application, and will also determine the average coverage rates to be maintained over the entire project.

Dilution & Mixing
Do not dilute or alter. Use as supplied.

Typical Coverage Rates
Variations in concrete quality, porosity, job site conditions, temperature and relative humidity will affect coverage rates and drying times. Calculate the target coverage rate by testing a representative section of the prepared surface using the published application instructions.

Estimated Coverage Rates

The following coverage rates are offered for estimating only. See below for instructions on calculating project-specific target coverage rates.

Freshly Placed, Uncured, Steel Troweled Concrete:
- 12.5 – 20 m²/L
- 300–800 ft²/ US gal

Steel Troweled; Ground/Honed; and Polished Concrete
- 10 – 15 m²/L
- 400–700 ft²/ US gal

Calculating Project-Specific Target Coverage Rate
1. Prepare the test section in accordance with “Preparation” information above. Surfaces must be clean, dry and absorbent. Surfaces should wet uniformly.

2. Add 3.5 L of C² Hard to a clean, pump-up sprayer. Apply according to Application Instructions steps #1–3 for the appropriate floor type. Repeat as necessary to determine correct rate of application.
3. Measure the test area to establish the target coverage rate per liter.

Application Instructions

NOTE: Allowing excess material to puddle on the floor will extend dry times and create white residues which must be removed immediately. Contact Crete Colors for removal instructions.

Freshly Placed, Uncured Steel-Troweled Concrete

1. After final finishing, soft cut control joints. Clean concrete of any dirt, residue or debris.
2. Using a low pressure sprayer, apply a single coat sufficient to wet the surface without producing puddles. Use a clean microfiber pad to spread product evenly and ensure uniform wetting. Avoid spreading once drying begins. Scrubbing is not necessary. If surfaces dry immediately, apply more product. Surface should remain wet for 5–10 minutes. Adjust rate of application to eliminate puddles.
3. Allow treated surfaces to dry.
4. Immediately apply the specified curing compound or initiate the specified curing procedure.
5. When curing is complete, use an automatic floor scrubber equipped with cleaning pads or brushes appropriate for removal of accumulated construction soiling and surface residues. Avoid pads or brushes which may damage the finished floor. This will further enhance the sheen produced by LS/CS®.

Cured, Steel Troweled Concrete

1. Surface must be clean, dry and absorbent, and must wet uniformly. Test surface absorbency with a light water spray. To slow dry times in hot, dry weather conditions, lightly pre-wet the concrete with fresh water and allow any standing water to evaporate.
2. Using a low pressure sprayer, apply a single coat sufficient to wet the surface without producing puddles. Use a clean microfiber pad to spread product evenly and ensure uniform wetting. Avoid spreading once drying begins. Scrubbing is not necessary. If surfaces dry immediately, apply more product. Surface should remain wet for 5–10 minutes. Adjust rate of application to eliminate puddles.
3. Allow treated surfaces to dry.
4. Remove dried powder residue using stiff broom, power sweeper or floor scrubbing machine.
5. For immediate, enhanced shine, buff or burnish the dry concrete surface in both directions using an orbital floor machine or burnisher equipped with an appropriate polishing pad. This is a dry buffing operation.

Cured, Ground/Honed Concrete

1. Sand, level or grind the concrete surface with a floor sander, orbital floor machine or diamond grinder, as needed, to achieve desired exposure. Remove all dust and debris with a floor scrubbing machine and fresh water. Allow wet surfaces to dry. Surfaces must be clean and dry.
2. Using a low pressure sprayer, apply a single coat sufficient to wet the surface without producing puddles. Use a clean microfiber pad to spread product evenly and ensure uniform wetting. Avoid spreading once drying begins. Scrubbing is not necessary. If surfaces dry immediately, apply more product. Surface should remain wet for 5–10 minutes. Adjust rate of application to eliminate puddles.
3. Allow treated surfaces to dry.

BEST PRACTICES

Surfaces to be treated must be clean, dry and absorbent. Test surface absorbency with a light water spray. If surfaces designated for treatment do not wet uniformly, use the appropriate Crete Colors surface prep cleaner or mechanical process to remove remaining surface contaminants.

If the desired surface finish requires mechanical removal of the top layer of cement paste, best results are achieved by sanding or grinding the cured concrete surface to achieve a 50–200 grit finish before applying C² Hard. The increased surface density which C² Hard provides will make further sanding, grinding or diamond polishing proceed faster. Spray applicators equipped with 0.5 gpm (gallon per minute) fan spray tip have proven effective for application of this product.

C² Hard is suitable for use with wet or dry grinding and polishing procedures. Wastewater generated by wet grinding or polishing procedures should be collected and disposed of properly. Use C² Clean as part of a comprehensive maintenance program that includes deep cleaning with C² Maintenance. Never go at it alone.

If you have problems or questions, contact your local Crete Colors distributor or email us directly at sales@cretecolors.com

4. Remove any dried powder residue using stiff broom, power sweeper or floor scrubbing machine.
5. If additional surface sheen is desired, buff or burnish the surface in both directions with an orbital floor machine or burnisher equipped with an appropriate polishing pad. This is a dry buffing operation.

NOTE: Conventional "keep wet/rinse" application methods may be used. For more information, contact PROSOCO at 1-800-255-4255.

Cured and Polished Concrete

Follow steps 1–4 listed above for Ground/Honed Concrete. Using progressively finer abrasives, continue diamond polishing in consecutive steps to achieve the desired finish. Remove all polishing dust and debris.

Protective Treatment To achieve additional shine and protection, apply C² Seal or C² Ultra Seal.

For improved resistance to water or oily stains with no change to surface appearance, apply C² Stain Safe or C² Protector.

Email us for assistance with proper product recommendation. Always obtain the Product Data for full limitations, application and safety instructions before applying any Crete Colors product.

Cleanup

Before product dries, clean tools and equipment with fresh water. Immediately wash off over spray from glass, aluminum, polished or other surfaces with fresh water.

Final Results

The floor is ready to use when dry. Surfaces exhibit reduced water absorption upon drying and maximum water resistance will develop over 7 days. Surface hardness and sheen often increase over time and with proper maintenance.

Maintenance

Remove surface dust and debris daily using a microfiber pad or dry dust mop. Dry buff with a high-speed burnisher to refresh gloss. Regular maintenance cleaning will improve surface shine. Maintain the floor with C² Clean or C² Maintenance.

Do not use acidic cleaners. Though C² Hard will improve the resistance of concrete surfaces to staining, some acid concentrates and acidic foods may etch the floor and leave a residual stain. Clean up spills quickly to minimize any potential for damage. Though

protective treatments simplify maintenance of concrete floors, all spills must be cleaned up in a timely manner.

WARRANTY

The information and recommendations made are based on our own research and the research of others, and are believed to be accurate. However, no guarantee of their accuracy is made because we cannot cover every possible application of our products, nor anticipate every variation encountered in masonry surfaces, job conditions and methods used. The purchasers shall make their own tests to determine the suitability of such products for a particular purpose.

Crete Colors International warrants this product to be free from defects. *Where permitted by law, Crete Colors makes no other warranties with respect to this product, express or implied, including without limitation the implied warranties of merchantability or fitness for particular purpose.* The purchaser shall be responsible to make his own tests to determine the suitability of this product for his particular purpose. Crete Colors International's liability shall be limited in all events to supplying sufficient product to re-treat the specific areas to which defective product has been applied. Acceptance and use of this product absolves Crete Colors from any other liability, from whatever source, including liability for incidental, consequential or resultant damages whether due to breach of warranty, negligence or strict liability.

This warranty may not be modified or extended by representatives of Crete Colors, its distributors or dealers.

CUSTOMER CARE

Factory personnel are available for product, environment and job-safety assistance with no obligation. Email us at sales@cretecolors.com for technical support.

Factory-trained representatives are established in countries around the world. Contact us or visit our web site at www.cretecolors.com, for the name of the Crete Colors representative in your area.