



Pentra-Sil®
(HD+C) Hardener, Densifier and Cure
Membrane Film Forming
meets ASTM C-309

Convergent Concrete
Technologies, LLC.

Specialty Chemical
Concrete Treatments

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nanoLithium
Patented Technologies by Advan
Nano-Lithium® (NL)
Concrete Treatment
www.nano-lithium.com

PRODUCT DESCRIPTION

Pentra-Sil® (HD+C) is a water-based, clear, dissipating membraneforming curing compound, hardener and densifier. This single component application forms a tougher, abrasion resistant surface compared to traditional methods requiring post-densification (28 days later). Excellent for commercial and industrial concrete floors that need long-term protection against heavy wear and abuse, moisture, dirt and grime buildup. This earth friendly / bio based compound contains no solvents and has a VOC content <100g/L making it compliant in all regions of the United States.

This patented, all-in-one lithium formula is applied to fresh concrete slabs immediately after finishing operations are complete. The unique chemistry forms a film on the surface, restricting the amount of water that can evaporate from the concrete while at the same time allowing the lithium silicate component to penetrate and react with the free-lime and unhydrated cement particles to improve both the curing and the hardening characteristics. This product also provides substantial benefits over solventbased or older water-based curing technologies because it does not need sunlight to dissipate and will begin to breakdown within 14-28 days reducing the cost associated with cleaning hard-to-remove curing compounds.

KEY BENEFITS

- Meets actual ASTM C-309 moisture retention
- Auto-scrub final cleanup with Pentra-Clean (CR)
- Contributes to LEED EQ credit 4.2
- Cures, Hardens and Densifies in a single application after finishing
- Easy to apply, ready to use liquid can be applied by either the concrete finishing contractor or sub-contractor
- Saves money and time, reduces costly labor in application and cleaning
- Minimizes hairline cracking, dusting, spalling, and other surface defects common to improperly cured concrete
- Provides improved resistance to chemicals, oil, grease, de-icing salts, and abrasion during construction
- Provides an attractive sheen, enhances natural appearance of concrete
- Will not contribute to surface crazing or surface ASR
- Reduces alkalinity and efflorescence

CUSTOMER SERVICE:

(1-866-375-2280) to verify the most current versions, visit our website: www.convergentconcrete.com or scan the code.

**TECHNICAL DATA**

Applicable Standards / Testing
ASTM C309, Type I Class A & B
Moisture Retention: ASTM C-309: <math><0.52 \text{ kg/m}^2</math> in
72 hours (* 0.55 kg/m² max)

IMPORTANT NOTES

Meeting ASTM C-309 is important. Preventing the floor from damaging effects of spills and stains or hard-to-remove curing compounds is important too. Our new all-in-one does both, eliminating up to 4 steps vs. traditional post hardening methods.

USES

For all newly placed concrete including commercial, institutional, office, business, restaurants, prisons, retail, schools, sports venues, etc.

APPLICATION

Before application, always do a small test sample in a less-visible area to be sure there are no variables or contaminants in the substrate that may be incompatible with this product.

Drill mixing with dispersion blade is recommended required. Do not thin or dilute. The product will separate, especially when exposed to UV, so be sure to mix occasionally as you spray. It is best to use a recirculating pump to keep product from separating. Low pressure Sprayer is recommended. Use a .1gpm tip to avoid clogging or product build-up. Application equipment must be clean and free of foreign materials prior to use. Apply **Pentra-Sil® (HD+C)** immediately after all surface water has disappeared, and after saw cuts have been completed. Surface should not be marred or scuffed. Remove all dust and dirt prior to applying **Pentra-Sil® (HD+C)** Application of **Pentra-Sil® (HD+C)** too early or too late can affect the overall curing performance and final look of substrate. Apply uniformly without puddles to avoid differential curing over-application. Spray in a uniform pattern avoiding straight lines. It is recommended to use saw cuts as start/stop lines.

DO NOT OVER APPLY OR APPLY SECOND COATS

Apply the product at a rate of 400-600 sq.ft./gal. Use a low pressure sprayer to apply a uniform layer on the surface. Do not puddle. Allow 1-2 days to completely dry before traffic. The product will begin to dissipate after 14-28 days. After 28 days use an autoscrubber, black pads, and **Pentra-Clean (CR)** to remove any remaining cure material. If additional shine is desired apply a coat of **Pentra-Finish™ (HG)** followed by Burnishing with a hogs hair pad.

ESTIMATED COVERAGE

Coverage: 400-600 sq.ft./gal.

Drying Time: Depends on weather conditions and coverage. Drying times may be extended depending on application rate, temperature, humidity and project conditions. Restrict foot traffic for at least four hours. Twelve hours is preferable.

CLEAN UP

Wash equipment with soap and water. Although **Pentra-Sil® (HD+C)** is non-toxic and environmentally friendly, it is alkaline. Use the material completely or dry it out and dispose of properly per local regulations. Do not pour down sanitary sewers or into storm drains.

SAFETY/HEALTH INFORMATION

KEEP OUT OF REACH OF CHILDREN. This product is alkaline. Do not drink. If swallowed, do not induce vomiting, drink 2 glasses of water and call physician. Keep container closed tightly when not in use. Wear goggles and gloves. If splashed in eyes, rinse eyes immediately with clean water and call a physician if irritation persists. **Pentra-Sil® (HD+C)** will dry out and irritate the skin. Clean skin with soap and water promptly. **CAUTION:** Surfaces wet with **Pentra-Sil® (HD+C)** may be slippery. Additional precautions, safety information and first aid treatments are contained in the Material Safety Data Sheet.

PROPERTIES

Specific Gravity:	1.11
pH:	11
VOC Content:	<100g/L
Flash Point:	N/A
Freeze Point:	32°F (0°C)
Shelf Life:	1 Year in unopened factory sealed container

PACKAGING

5 Gal Plastic Pail
55 Gal Drum
275 Gal tote (IBC)

LIMITATIONS

Do not apply when ambient or concrete surface temperatures are below 40°F (4°C). Do not apply with a squeegee. Apply proper amount for jobsite conditions. Product will not protect a slab from damage by rain immediately after

placement. Rain may wash product from slab before it can cure properly. Product will not fill voids or surface defects. Product will not remedy poor finishing, deficient mix design, or placement defects. In adverse conditions, follow all ACI guidelines (cold or hot weather concrete placement). Surfaces treated with **Pentra-Sil® (HD+C)** may become slippery under certain conditions or until dry.

TECHNICAL SERVICE

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WEB

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**For chemical/medical
emergencies only,**

Call Infotrac 800-535-5053
Outside USA 352-323-3500

WARRANTY

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