

# Pentra®-Sil (NL) HD+C

Hardener, Densifier  
and Cure

Convergent Group S.A.

Specialty Chemical Concrete  
Treatments Commercial

Products Group  
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**nanoLithium**  
Patented Technologies by Advan  
Nano-Lithium® (NL)  
Concrete Treatment  
[www.nano-lithium.com](http://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 Europe.

This patent pending, 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 eliminating the cost associated with cleaning hard-to-remove curing compounds.

## KEY BENEFITS

- Easy auto-scrub final cleanup
- Contributes to LEED EQ credit 4.2
- Cures, Hardens and Densifies in a single application immediately 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 reducing costly labor steps in application and cleaning
- Does not need sunlight to dissipate and will begin to breakdown within 14-28 days
- 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 that enhances the natural appearance of concrete
- Will not contribute to surface crazing or surface ASR
- Reduces alkalinity and efflorescence

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(+32 60 390 752) to verify the most current versions, visit our website: [www.convergent-group.com](http://www.convergent-group.com) or scan the code.

**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.

Mixing (DO NOT DILUTE) Stir thoroughly prior to use. Drill mixing with dispersion blade is 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 9,8 - 14,7 m<sup>2</sup>/L. 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 1 week. After 28 days use an autoscrubber, black pads, and water 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**

Applied at a rate of 9,8 - 14,7 m<sup>2</sup>/L.

**Coverage:** Broomed surface: 9,8 m<sup>2</sup>/L. Troweled surface: 14,7 m<sup>2</sup>/L.

**Drying Time:** Depends on weather conditions and coverage, but will generally dry in 1-3 hours at 21°C. 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 alkali. 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:	<92g/L
Flash Point:	N/A
Freeze Point:	0°C
Shelf Life:	6 months in unopened factory sealed container

**PACKAGING**

20 L Basket  
200 L Drum  
600 L Tote  
1000 L Tote

**LIMITATIONS**

Do not apply when ambient or concrete surface temperatures are below 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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