



# Pentra-Sil® (HD) Hardener, Densifier

Convergent Concrete  
Technologies, LLC.

Specialty Chemical Concrete  
Treatments Commercial

Products Group

115 North 1380 West  
Orem, Utah 84057

United States of America

Office: 801-375-2280

Fax: 801-375-2971

[www.convergentconcrete.com](http://www.convergentconcrete.com)



Patented Technologies by Advan

Nano-Lithium® (NL)  
Concrete Treatment  
[www.nano-lithium.com](http://www.nano-lithium.com)

## PRODUCT DESCRIPTION

**Pentra-Sil® (HD) is a premium lithium polysilicate performance densifier for concrete surfaces.** This high solids formula provides maximum hardening to improve abrasion resistance and reduce dusting. This easy-to-use water-based solution requires no rinsing and is VOC compliant in all areas of the world. When sprayed on new or existing concrete, it penetrates up to ¼ inch (7mm) where it reacts with free calcium to form insoluble calcium silica hydrate, which makes concrete more water, stain, and abrasion resistant for easier maintenance and longer life. It is also suitable for concrete polishing procedures and helps prolong the life of polished finishes.

## KEY BENEFITS:

- Easy application, no rinsing required
- Penetrates, no film to lift or peel off
- Reduces efflorescence and surface sweating
- Does not contribute to surface ASR or promote crazing
- VOC Compliant, can contribute to LEED points (IEQ credit 4.2 non-emitting materials)
- Prolongs finish of polished surfaces
- Resists stains and dusting, making concrete and facilities easier to maintain

## USES

### NEW AND EXISTING CONCRETE

Manufacturing, Warehousing, Storage, Distribution centers, Food processing plants, Textile mills, Wastewater treatment plants, Pharmaceutical, Electronic facilities, Cold Storage/Freezers, Beverage bottling, Chemical processing, Parking garages, Aircraft hangars, Automotive dealerships, Shipping terminals, Vehicle maintenance areas, Office buildings, Health care facilities, Cafeterias/restaurants, Correctional institutions, Retail & shopping centers, Schools, Stadiums, Veterinary clinics, Common Areas, Aisles/corridors, Clean rooms, Kitchens, Laboratories, Loading docks, Lobbies, Mechanical rooms, Mezzanines, Restrooms & showers.

**CUSTOMER SERVICE:**

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

**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.**

**Precautions:** Apply only when temperatures will be above 36°F (2°C) for at least 4 hours following application. Clean surface to remove any dirt, laitance, curing compounds or coatings that may prevent **Pentra-Sil® (HD)** from penetrating the surface. Do not use citrus or acidic cleaners. If acid dyes or cleaners have been used, neutralize the surface using an alkaline cleaner (TSP, Tide laundry detergent, etc.). Do not use high pressure sprayers. In hot, windy conditions, it may be necessary to spray water on hot concrete to cool the surface prior to application so **Pentra-Sil® (HD)** does not flash-dry on the surface. If **Pentra-Sil® (HD)** comes into contact with glass, fabric, metal, or painted surfaces, immediately wipe contaminated surfaces with a damp cloth, then wipe dry with a second clean cloth. Using an HVLP sprayer, or a pump-up sprayer for smaller jobs, spray **Pentra-Sil® (HD)** evenly on the surface. Spread out any pools with a soft bristle broom or a flat microfiber pad. Keep surface wet for at least 20 minutes, adding more material where needed. Surface is ready for use when dry, but the complete reaction may take up to two weeks to develop depending on site temperature and conditions.

**In cool, humid, or enclosed conditions, Pentra-Sil® (HD)** may stay wet for a long time. After 1 hour of dwell time, use an auto-scrubber to rinse the surface and pick up excess material.

**If concrete is dyed, acid stained, or integrally colored,** after 20-30 minutes of dwell time, use scrubbing equipment to rinse the surface and pick up excess material. After bringing the surface to the desired surface profile by grinding or buffing, **Pentra-Finish® (HG)** may be applied to enhance gloss, stain, and wear protection.

**Interior:** On newly placed interior machine-troweled concrete, **Pentra-Sil® (HD)** may be applied immediately after the finishing, or immediately after joints have been cut and cleaned, or anytime thereafter, at the project manager's discretion. If at time-of-placement, curing materials/bond breakers may be applied over the top of **Pentra-Sil® (HD)** once it is no longer wet on the surface/dry to the touch.

**Exterior:** On exterior concrete that has not been machine-troweled, wait until the surface is hard enough to bear foot traffic without damage before applying **Pentra-Sil® (HD)**. If conditions are such that the project manager deems it necessary to apply curing materials before the surface is hard enough to bear foot traffic, it may be necessary to apply **Pentra-Sil® (HD)** at a later time after removing the curing material.

**ESTIMATED COVERAGE**

Steel Troweled Finish-- 500-750 ft<sup>2</sup> per gallon (1 liter per 12 to 19m<sup>2</sup>) Coverage rate will vary with concrete finish and porosity—broom finished concrete will require more material.

## CLEAN UP

Use soap and water to clean tools and equipment. Although **Pentra-Sil® (HD)** is non-toxic and environmentally safe, it is alkaline—use up or dry out extra material and dispose of according to local regulations. Don't pour into sewer systems or 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)** will dry out and irritate the skin. Clean skin with soap and water promptly. **CAUTION:** Surfaces wet with **Pentra-Sil® (HD)** may be slippery. Additional precautions, safety information and first aid treatments are contained in the Material Safety Data Sheet.

## PROPERTIES

Active Ingredients:	100% of total solids
Specific Gravity:	1.11
Wt/GAL:	8.79 lbs.
pH:	11
VOC Content:	<50g/L
Flash Point:	N/A
Freeze Point:	32°F (0°C)
Shelf Life:	2 Years in unopened factory sealed container

## PACKAGING

5 Gal Plastic Pail	46.5 lbs. 21 kgs
55 Gal Drum	512 lbs. 232 kgs
275 Gal tote (IBC)	2558 lbs. 1,160 kgs

## LIMITATIONS

**Pentra-Sil® (HD)** will not bridge or fill cracks and will not salvage honeycombed or structurally unsound surfaces. Not suitable for asphalt, non-cement surfaces or painted surfaces. (Paint and coatings may be applied over the top of **Pentra-Sil® (HD)**—follow paint or coating manufacturer's instructions)

**TECHNICAL SERVICE**

Customer Care  
Toll Free 866-375-2280 or  
801-375-2280

**EMAIL**

technicalservice@convergent  
concrete.com

**WEB**

www.convergentconcrete.com

**For chemical/medical  
emergencies only,**

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

**WARRANTY**

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**UNIQUE STRENGTHS, UNMATCHED PERFORMANCE™**

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