



Pentra-Sil® (HD) Hardener, Densifier

Convergent Concrete
Technologies, LLC.

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

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 or visit our website: www.convergentconcrete.com/product/pentrasil-hd.html

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 alkali 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.

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 ft² per gallon (1 liter per 12 to 19m²) 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 alkali—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 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) 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)

WARRANTY

LIMITED WARRANTY NOTICE Every reasonable effort is made to apply exacting standards both in the manufacture of our products and in the information that we issue concerning these products and their use. We warrant our products to be of good quality and will replace or, at our election, refund the purchase price of any products proved defective. Satisfactory results depend not only upon quality products, but also upon many factors beyond our control. Therefore, except for such replacement or refund, Convergent Concrete MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, RESPECTING ITS PRODUCTS, and Convergent Concrete shall have no other liability with respect thereto. Any claim regarding product defect must be received in writing within one (1) year from the date of shipment. No claim will be considered without such written notice or after the specified time interval. User shall determine the suitability of the products for the intended use and assume all risks and liability in connection therewith. Any authorized change in the printed recommendations concerning the use of our products must bear the signature of the Convergent Concrete Research Director. This information and all further technical advice are based on Convergent's present knowledge and experience. However, Convergent assumes no liability for providing such information and advice including the extent to which such information

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Refer to www.convergentconcrete.com for latest Technical Data Sheet and MSDS.

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