

PRODUCT NAME

Nano-Gard™ 500

Concrete densifier and chemical hardener



MANUFACTURER

Gemite® Products Inc.

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FEATURES AND BENEFITS

- hardens and densifies concrete surface
- water borne
- penetrating
- chemically reactive with the substrate
- breathable
- protects against penetration of water, salts and chemicals
- increases chemical resistance of concrete

PRODUCT DESCRIPTION

Basic Use

Nano-Gard 500 is a deeply penetrating, water-soluble sealer, which chemically reacts with the calcium, free lime, and various alkalis in concrete to form non-soluble compounds that fill all voids. Permanently densifies and hardens the substrate, allowing the substrate to “breathe” No re-application needed. Mainly used for concrete floors, parking garage slabs, and driveways. Any larger dynamic cracks must be treated separately.

Composition of Materials

Nano-Gard 500 contains waterborne lithium silicate solution and wetting agents. It penetrates deeply into the capillary pores of concrete, and chemically reacts with products of hydration, filling the open pores and closing small voids.

Limitations

Nano-Gard 500 is not hydrophobic, or oil repellent. It may cause a slight darkening of the substrate in some instances. Prepare a site test sample for approval by client/architect if the possibility of darkening is of concern. The larger dynamic cracks must be treated separately. Keep from freezing and do not dilute. Do not over apply. Apply two thin coats if necessary. Please contact Gemite Technical Service for further information.

Health and Safety

Nano-Gard 500 is nonflammable. Do not take internally. *Nano-Gard 500* may irritate or burn the skin and eyes. If contact with skin occurs, wash with soap & water. Harmful if digested. Keep the product out of reach of children. FOR INDUSTRIAL USE

ONLY. It is Nonhazardous for transportation purposes. Consult MSDS for additional information.

Packaging

Nano-Gard 500 is supplied 20 L (5 USG) containers, or 209 L (55.3 USG drums).

Coverage

When used as hardener, the following are application rates:

Fresh concrete: approximate coverage is 15.9-19.6 m² /L (640-797 ft² /USG) per coat.

Existing concrete, steel finished: 10.9-11.5m²/L (440-470 ft²/USG)

Existing concrete broomed: 7.2-9.7 m²/L(290 - 390 ft²/USG)

The above figures are for estimating purposes only. The coverage rate must satisfy the substrate porosity - applicator must carry out test application to determine the actual coverage for the given substrate.

Caution: *Do Not overapply - formation of white laitence on the surface is an indication of excess amount being applied.*

TECHNICAL DATA

Weight:	1.15 kg/ L (9.57 lbs/ USG)
Penetration	3 - 6 mm (1/8 - 1/4 in)
Appearance	Liquid
Color	Clear to hazy white
Odor	Odorless
pH	11 - 12
Solubility in water	Miscible

Storage and Transportation

Shelf life of unopened containers is 2 years.

INSTALLATION

Surface must be clean and free of dust, dirt, oil & other contaminants, and must be dry to allow good penetration of *Nano-Gard 500*. All caulking, patching and joint sealing must be installed prior to application of *Nano-Gard 500*. Existing larger dynamic cracks & junctions between horizontal slab and wall, need to be treated separately. Contact Gemite Technical Service for advice how to treat these areas.

Typical Application

Mix the material and apply a coat of *Nano-Gard 500* using a mop, soft bristle broom or a squeegee, minium three days, but preferably 28 days after placement of concrete. Existing concrete should be clean. Remove all dirt, residues, curing compounds and sealers. Repair all cracks and concrete damage.

Note: Performance of *Nano-Gard 500* for hardening and dust-proofing concrete floors depends on the formation of the non-

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103064 Concrete Sealers
103055 Concrete Surface Hardeners

soluble compounds that fill all voids. This chemical reaction forms an insoluble gel, which increases the resistance to wear and penetration of liquids.

Application method fresh concrete

Apply undiluted *Nano-Gard 500* using a low pressure sprayer or by spreading evenly by mop or soft-bristle broom.

Application method existing concrete

Wet the surface with undiluted *Nano-Gard 500* by sprayer or micro-fiber applicator. Spray in a fine fog pattern. Keep moist with with *Nano-Gard 500* without forming paddles. Spread out any excess of material. After initial 20 minutes, let the surface dry. Contact Gemite Technical Service for information on suitable sprayer.

Burnishing

Nano-Gard 500 is burnished to a high sheen on steel troweled concrete floors. A high speed burnished (2000-2200 rpm) with properly maintained pads is needed. Immediately wash off over spray from glass and aluminum . Let dry for a minimum for hours; but 12 hours is preferable, especially on existing concrete before opening to traffic.

No maintenance required.

WARRANTY

A limited, twelve (12) months, Material Replacement Warranty is available. Contact Gemite Technical Service for further information.

TECHNICAL SERVICE

For advice on suitability of *Nano-Gard 500* for a specific application, specification assistance and application advice contact Technical Services: US (888) 443-6483 or Canada (905) 672-2020.

Short Specification

The penetrating hardener/sealer will be water borne lithium silicate based *Nano-Gard 500*, manufactured by Gemite Products Inc., Amherst, NY (Mississauga, Ontario). It shall be applied at a minimum rate of _____m²/ L (ft²)/ USG, as per manufacturer's current Guide Specifications and Application Instructions.

MAINTENANCE