



ChemMasters

SPECIALTY CONSTRUCTION PRODUCTS

CHEMISIL PLUS

CHEMICALLY REACTIVE LIQUID HARDENER FOR
CONCRETE SURFACES



PRODUCT DATA

DESCRIPTION

Chemisil Plus is a chemically reactive solution of inorganic siliceous materials and proprietary components. It changes the chemical composition of treated surfaces filling the pores and capillaries of the concrete matrix with a hard dense gel.

USES

- Interior or exterior, horizontal or vertical concrete or masonry surfaces
- Freshly poured or older, cured concrete
- Industrial, commercial or warehouse floor slabs
- Food preparation, storage and distribution centers
- Convention centers, sports facilities
- Freezers, cold rooms, walk-in chillers
- Schools, hospitals, retail outlets

ADVANTAGES

- Increases surface density and durability
- Reduces surface absorption of liquids yet allows moisture vapor transmission
- Resists black tire marks, oil and grease
- V.O.C. compliant, water based
- Neutralizes surface alkali eliminating efflorescence
- Will not peel, scratch or delaminate; develops satin sheen, naturally slip resistant
- Dries quickly for minimal downtime
- Normal life expectancy of twenty years
- Minimizes maintenance costs and labor

TECHNICAL DATA

- Meets Federal Environmental Protection Agency Regulation 40 CFR Part 59, *National Volatile Organic Compound Emission Standards for Architectural Coatings*
V.O.C. Content: 0 gm/L
- Meets U.S.D.A. requirements for federally inspected meat and poultry processing plants

Application Temperature	40-100° F.	4-38° C.
Freeze Thaw Scaling (ASTM C 672)		0.0%
Water Vapor Transmission Rate (ASTM E 96)		
Grains/Hour/Ft ²		5.35
Permeance		7.46 perms
Skid Resistance		Good
Yellowing		None
Water Absorption (ASTM C 642)		
% Reduction		81
Chemical Resistance, Immersion		
Oil, Grease, Solvent		Excellent
Salt, 10%		Excellent
Animal Fats and Fluids		Excellent
Organic Acids, 10%		Excellent
Alkalies, 10%		Excellent
Fermenting foods		Excellent

ESTIMATING GUIDE

Surface texture, porosity and general condition of the concrete affect coverage rates

First coat	200 Ft. ² /gal.	5 M ² /L
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PACKAGING

Chemisil Plus is available in 5 U.S. gallon/18.9 L pails, shipped 36 per pallet shrink wrapped and 55 U.S. gallon/208 L drums.

APPLICATION

MIXING: Use Chemisil Plus directly from the container. Do **not** dilute with water or solvents.

CURING NEW CONCRETE: Surfaces scheduled to receive Chemisil Plus may be cured using any of the four following options:

1. CHEMISIL: a sodium silicate compound, applied immediately after final finishing operations and when the surface has hardened sufficiently that application will not mar the surface. Application rate is 200 Ft.² per gallon/ 5 M²/L. *Most Economical*
2. EZ STRIP CURE: a water based, curing compound, easily removed with water and detergent following normal curing cycle. Application rate is 200 Ft.² per gallon/ 5 M²/L. *Highest Curing Efficiency*
3. CHEMISIL PLUS: Initial curing coat applied at rate of 200 Ft.² per gallon/ 5 M²/L. *Eliminates need for additional products on site.*



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4. WATER: Water curing is permissible following the guidelines in ACI 308, *Standard Practice for Curing Concrete*.

SURFACE PREPARATION CURED CONCRETE: Mask any glass, aluminum or polished metal surfaces in the application area. Should Chemisil Plus come in contact with these materials, rinse immediately with warm water to prevent pitting or discoloration.

Contraction or control joints that have not been filled should be masked to prevent possible adhesion problems. Any floor paints, markings or safety stripes scheduled for surfaces to be treated with Chemisil Plus should be applied and allowed to cure prior to application.

All surfaces to be treated with Chemisil Plus must be dry, clean and free of all dust, dirt, debris, oil, grease, sealers or curing compounds.

CURING APPLICATION: No special surface preparation is required when using Chemisil Plus as curing agent. Apply Chemisil Plus to freshly poured concrete immediately following final finishing operations and when surface has stiffened sufficiently to support applicator. Spray Chemisil Plus onto surface at an even rate to form a continuous film.

Do not allow material to puddle. Use squeegees to redistribute material from low to high spots. Keep surface consistently wet with Chemisil Plus for a minimum of 30 minutes and no longer than 60 minutes. Squeegee, vacuum and/or rinse surface with water to remove any unreacted material. Final sealing coat of Chemisil Plus may be applied to a dry surface after a minimum of three days.

CURED CONCRETE APPLICATION: Mechanical scrubbers, equipped with brushes, are the preferred method of application. Alternately, stiff bristle push brooms may be used. The scrubbing action breaks the surface tension and promotes deep penetration of the Chemisil Plus into the pores of the concrete or masonry.

Pour Chemisil Plus directly from the container onto the surface to be treated maintaining an application rate of 200 Ft.² per gallon/5 M² per liter. Scrub the Chemisil Plus into the surface for 15-20 minutes, working all areas evenly. Use caution, working surfaces are slippery.

After 20 minutes, lightly mist the section being worked with clean, potable water and continue scrubbing action for another 15-20 minutes.

At the end of the scrubbing period, use a squeegee or vacuum to remove any excess material. When doing large

projects, this excess may be squeegeed to the next strip to be treated to limit waste and minimize clean up time. Fresh Chemisil Plus must be added to the excess at the recommended rate.

Very porous or soft, dusting surfaces may require a second application to obtain optimum results. Always apply second coat before surface dries.

It is important to rinse all treated surfaces thoroughly upon completion. If allowed to dry, Chemisil Plus will leave a white residue on the surface which may be removed with warm water and brushes.

VERTICAL SURFACES: Use sprayers or rollers to apply the Chemisil Plus and work into surface with stiff scrub brushes for the allotted time.

Chemisil Plus dries in 2 to 4 hours at @70°F./21°C. with adequate air circulation. Lower temperatures or high humidity extend drying times. Treated areas may be opened to light foot traffic immediately, heavy traffic in 6-8 hours.

POLISHING: The characteristic satin sheen of treated surfaces develops with traffic and minor abrasion. If an immediate sheen is desired, scrub surfaces when dry with a mechanical scrubber equipped with heavy duty, coarse nylon scrubbing pads, i.e. 3M black pads or 3M black/white *badger* pads on light colored concrete.

CLEAN-UP

Clean equipment with warm, soapy water. Residue or excess material is nontoxic and does not require special disposal procedures.

STORAGE

Store closed containers at 40°-80°F./4°-27°C. Chemisil Plus is a water based product, do not allow to freeze. Shelf life is one year from date of manufacture.

LIMITATIONS

- Colored concrete must be a minimum of 60 days old prior to application
- Do not apply when surface temperature is below 40°F./4°C. or above 100°F./38°C.
- Protect glass, aluminum and polished metal from accidental contact with liquid Chemisil Plus. Wash immediately with detergent and warm water if splash or spill occurs
- Do not use on glazed surfaces such as tile or brick

This Product is Formulated and Labeled for Industrial and Commercial Use Only

FOR BEST RESULTS AND SAFEST USAGE, USER IS SPECIFICALLY DIRECTED TO CONSULT THE CURRENT MATERIAL SAFETY DATA SHEET AND PACKAGE LABEL FOR THIS PRODUCT

We warrant our products to meet our published specifications and to be free from defects in materials and workmanship to the acceptable quality levels defined in these specifications. If acceptable quality levels are not specified, the acceptable quality levels will be those normally supplied by us for the product. We make no guarantee of the results to be obtained from the use of our products. The determination as to the adaptability of any of our products to the specific needs of the Buyer is solely Buyer's prerogative and responsibility. We are glad to offer suggestions on the use of our products. Nevertheless, there are no warranties given except such expresses warranties offered in connection with the sale of a particular product. Our liability shall be limited to replacement of, or refund of an amount not to exceed the purchase price attributed to, the goods as to which such claim is made. Our selection of one of these alternatives shall be Buyer's exclusive remedy. IN NO CASE SHALL WE BE LIABLE FOR CONSEQUENTIAL OR SPECIAL DAMAGES, EVEN IF WE HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE FOREGOING WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES, GUARANTEES, CO-CONDITIONS AND REPRESENTATIONS, EITHER EXPRESSED OR IMPLIED, WHETHER ARISING UNDER ANY STATUTE, COMMON LAW, USAGE OR TRADE, COURSE OF DEALING OR OTHERWISE, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.