



ChemMasters®

Chemisil™ Plus

Chemically Reactive
Liquid Hardener & Densifier
for Concrete Surfaces

SPECIALTY CONSTRUCTION PRODUCTS

P R O D U C T D A T A

DESCRIPTION

Chemisil Plus is a chemically reactive, water-based solution of Sodium Silicate with added Potassium Methyl Siliconate. It chemically reacts within the concrete matrix to form additional calcium-silicate-hydrate (C-S-H), filling pores and capillaries to create a dense, hardened surface. The siliconate component responds to polishing or wear by developing a satin sheen, resists black tire marks and adds hydrophobic characteristics.

USES

- Cured interior horizontal concrete surfaces
- 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
- V.O.C. compliant, water based
- Neutralizes surface alkali to minimize 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

Packaging Product Number

5 gal (18.9L)	36 per pallet	F4220.05
55 gal (208L)	4 per pallet	F4220.55

TECHNICAL DATA

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

Test Data

V.O.C.	< 10 g/L
Application Temperature °F (°C)	40 to 100
ASTM C672 Freeze Thaw Scaling	0.0%
ASTM E96 Water Vapor Transmission Rate Grains/Hour ft ²	5.35
Permeance	7.46 perms
Skid Resistance	Good
Yellowing	None
ASTM C642 Water Absorption % Reduction	81
ASTM C779 Increased Abrasion Resistance vs Control	200-400%
Wear Reduction	>50%
Chemical Resistance, Immersion Salt, 10% Animal Fats and Fluids Organic Acids, 10% Alkalies, 10% Fermenting foods	Excellent Excellent Excellent Excellent Excellent

Estimating Guide

Coverage dependent on surface texture and porosity

Typical coverage rate	200 ft ² /gal (5 m ² /L)
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DIRECTIONS

Mixing: Do not dilute. **Chemisil Plus** is packaged ready to use. Gently agitate prior to application.

Surface Preparation: **Chemisil Plus** is intended for use on fully cured concrete. Silicate hardeners/densifiers are not concrete cures and do not meet the requirements of ASTM C309. **ChemMasters' EZ Strip Cure DR** and **EZ Strip Cure** are products that will cure concrete to



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ASTM C309 specifications and are easily removed for subsequent application of **Chemisil Plus**. penetrating treatment.

Mask off 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 with joint fillers. 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.

Application: Mechanical floor cleaners equipped with brushes are the preferred method of application. Alternately, stiff natural 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 ft² per gallon. "Scrub" the **Chemisil Plus** into the surface for 15 to 20 minutes, working all areas evenly. Use caution as working surfaces are slippery. After 20 minutes, lightly mist the section being worked with clean, potable water and continue scrubbing action for another 15 to 20 minutes.

At the end of the scrubbing period, use a squeegee or vacuum to remove any excess material. When doing large projects, squeegee the excess 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 the second coat before substrate surface dries.

It is important to rinse all treated surfaces thoroughly upon completion. If allowed to dry, **Chemisil Plus** may leave a white residue on the substrate surface. This residue may be tenaciously bonded, and difficult to remove.

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 to 8 hours.

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

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 tools immediately after use with warm, soapy water. Residue or excess material is nontoxic and does not require special disposal procedures.

STORAGE

Store tightly sealed containers in a cool, dry area away from direct sunlight. Do not allow to freeze. Shelf life is two years 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
- Continued exposure to oil and grease may cause permanent staining

Precautions:

Danger: Harmful if swallowed. Causes severe skin burns and eye damage. Causes serious eye damage.

Precautionary Statements: Do not breathe dust/fume/gas/mist/vapours/spray. Wash hands and skin thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.

**All label precautions and the Safety Data Sheet must be fully understood before using this product.
Keep out of the reach of children.**

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 PRODUCT & SAFETY DATA SHEETS 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