Chemisil™ Plus Li

Chemically Reactive Lithium-Silicate
Liquid Hardener
For Interior Concrete Surfaces

ChemMasters®
Quality • Innovation • Service

P R O D U C T D A T A

DESCRIPTION

ChemMasters' Chemisil Plus Li is a chemically reactive lithium silicate. It changes the chemical composition of surfaces filling the pores and capillaries of the concrete matrix with a hard dense gel. **Chemisil Plus Li** has lower viscosity than other siliceous hardeners, allowing it to penetrate deeper into concrete. **Chemisil Plus Li** does not require scrubbing to facilitate penetration this reduces labor costs. Unlike sodium or potassium silicates, **Chemisil Plus Li** is easily removed, it does not leave unsightly white salt deposits.

USES

- Interior horizontal concrete surfaces
- Freshly poured or existing 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
- Lower viscosity for deeper penetration
- Reduces labor costs by eliminating the need to be scrubbed into the surface
- Any residue can be easily swept or rinsed from the surface
- Reduces surface absorption of liquids yet allows moisture vapor transmission
- Resists black tire marks
- Will not peel, scratch, or delaminate
- Develops satin sheen with wear
- Naturally slip resistant
- Dries quickly for minimal downtime
- Normal life expectancy of twenty years
- Minimizes maintenance costs and labor

TECHNICAL DATA

Packaging / Part Number		
5 gal /18.9 liter	36/pallet	F4235.05

- **ChemMasters' Chemisil Plus Li** meets Federal Environmental Protection Agency Regulation 40 CFR Part 59, National Volatile Organic Compound (V.O.C.) Emission Standards for Architectural Coatings.

Estimating Guide varies by surface condition
500 to 800 ft^2 per gallon

Test Data	
ASTM C672 Freeze Thaw Scaling	0.0%
ASTM E96 Water Vapor Transmission Rate	5 to 7 grains/per hour/ft^2
Water Absorption ASTM C642, 50 days	<2 % reduction
ASTM E303 SCOF Wet or Dry (pass > 0.5)	0.6 to 0.8
ASTM C779 Abrasion Resistance Increase Wear Resistance vs. Control	200 to 400%
Yellowing	none
V.O.C.	0g/L

Chemical Resistance, Immersion	
Salt, 10%	Excellent
Animal Fats and Fluids	Fair
Organic Acids, 10%	Fair
Alkalis, 10%	Excellent
Fermenting foods	Excellent

Dry Time @ 70°F (21°C) 50% R.H.	
Dry	Hours
Light foot traffic	immediately
Heavy traffic	6 to 8

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DIRECTIONS
Mixing: Chemisil Plus Li is ready to us. Do not dilute.

Curing Application: No silicate treatment will cure concrete to ASTM C309 specifications. Consider use of **EZ Strip CureDR** for concrete to meet ASTM curing specifications. However, silicates have been used to aid in the curing process for surfaces scheduled to receive subsequent penetrating treatments and/or specialty coatings.

No surface preparation is required when using **Chemisil Plus Li** as a curing aid. Apply to freshly poured concrete immediately following final finish operations when the surface has stiffened sufficiently to support applicator. Spray **Chemisil Plus Li** onto surface at an even rate of 200 ft2 / gal (5 m2 /L). Do not allow to puddle. If puddles develop use a squeegee to redistribute from low to high spots

Surface Preparation for Cured Concrete: Mask any glass, aluminum, or polished metal surfaces in the application area. When **Chemisil Plus Li** comes in contact with any of these surfaces 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. **Chemisil Plus Li** should be applied to floors after safety stripes are fully cured.

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

Cured Concrete Application: **Chemisil Plus Li** does not require mechanical scrubbing in order to absorb into the concrete surface. However, scrubbing action does break the surface tension and promotes deeper penetration into the concrete pores. Mechanical scrubbers equipped with brushes are the preferred method of application. If unable to use mechanical scrubber application with stiff bristle push brooms may be used. .

Pour **Chemisil Plus Li** directly from the container onto the surface to be treated maintaining an application rate of 500 to 800 ft^2per gallon.

If the optional 'scrub in' method is employed use a squeegee or vacuum to remove any excess material. When doing large projects use a squeegee to distribute **Chemisil Plus Li.**

Very porous or soft dusting surfaces may require a second application to obtain optimum results. **Chemisil Plus Li** may leave a white residue on the surface that is easily removed with a broom or water rinse.

Vertical Surfaces: Use sprayers or roller to apply **Chemisil Plus Li**. Using a stiff brush to scrub into the surface will increase depth of penetration.

Chemisil Plus Li dries in 2 to 4 hours @ 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 and heavy traffic in 6 to 8 hours.

Polishing: Overtime, a satin sheen develops with traffic and minor abrasion. If an immediate sheen or higher gloss is desired use a commercially available floor finish and follow the manufacturers recommendations.

Clean Up: Clean tools and equipment with warm water and detergent. Residue or excess material is nontoxic and does not require special disposal procedures.
Storage: **Protect from freezing**. Store tightly sealed containers temperatures between 40°F and 80°F (4 and 27° C). Shelf life is two years from date of manufacture.

LIMITATIONS:

- Do not apply to frozen or frosted surfaces.
- Protect glass, aluminum, and polished metal from contact with **Chemisil Plus Li**. Remove immediately by washing with detergent and warm water
- Do not use on glazed surfaces such as tile or brick
- Continued exposure to oil and grease may cause permanent staining
- **Use Chemisil Plus OR when resistance to acids or oil stains is needed. Refer to the Chemisil Plus OR Product Data Sheet for specifics on installation and chemical resistance.**

Precautions:

Warning. Causes skin irritation. Causes serious eye irritation. **Precautionary Statements:** Wash hands and skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. If skin irritation occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention. Take off contaminated clothing and wash it before reuse.

Keep out of reach of children

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