



ChemMasters®

StarSeal® PS Clear

Potassium Silicate
Hardener, Densifier &
Dustproofer

SPECIALTY CONSTRUCTION PRODUCTS

P R O D U C T D A T A

DESCRIPTION

ChemMasters StarSeal PS Clear is a high solids, chemically reactive, water-based, potassium silicate hardener, densifier and dustproofer for many types of concrete including smooth, trowel and decorative finishes. 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 and dustproof surface. Simply apply, re-distribute and re-apply until the concrete no longer absorbs the material and is fully densified.

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 and Part Number

5 gal/18.9L	FV4240.05
55 gal/208L	FV4240.55

Estimating Guide

Coverage dependent on surface texture and porosity

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

- CSI Reference: 03 35 00, 03 35 43, 09 61 00

Test Data	
V.O.C.	< 10 g/L
Solids	18%
Application Temperature °F (°C)	40 to 100
ASTM C672 Freeze Thaw Scaling	0.0%
ASTM D5178 Balance Beam Mar Test	>50% harder
ASTM D2486 Abrasive Scrub	1200 cycles
Modified Tabor Abrasion 600 Revolutions	
Treated	0.37%
Untreated Control	0.68%
ASTM G53/G154 5000 hour QUV	No change
ASTM D4541 Bonding	>50 psi
ASTM C642 Absorptivity	75% Reduction
ASTM D2047 Coefficient of Friction	0.54 avg.
ASTM E84 Surface Burning	
Class A Flame Spread Index	0
Smoke Developed Index	0

DIRECTIONS

Mixing: Do not dilute. **StarSeal PS Clear** is packaged ready to use. Gently agitate prior to application.



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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 **StarSeal PS Clear** as a curing aid. Apply **StarSeal PS Clear** to freshly poured concrete immediately following final finish operations when the surface has stiffened sufficiently to support applicator.

Surface Preparation: **StarSeal PS Clear** 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 ASTM C309 specifications and are easily removed for subsequent application of **StarSeal PS Clear** penetrating treatment.

Mask off any glass, aluminum or polished metal surfaces in the application area. Should **StarSeal PS Clear** 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 **StarSeal PS Clear** should be applied and allowed to cure prior to application. All surfaces to be treated with **StarSeal PS Clear** must be dry, clean and free of all dust, dirt, debris, oil, grease, sealers or curing compounds.

Make repairs to existing floors prior to application of **StarSeal PS Clear**. Use **StarSeal Fusion** to repair small air holes, aggregate pop-outs, voids, micro cracks, small spider cracks and similar surface imperfections

Application: Although "scrubbing" is not required, maximum penetration of all silicate densifier/hardeners is achieved by methods of application which break the surface tension and promote absorption. Mechanical floor cleaners equipped with brushes are the preferred method of application for large projects. Alternately, stiff natural bristle push brooms may be used.

Pour **StarSeal PS Clear** directly from the container onto the surface to be treated maintaining an application rate of 200 ft² per gallon. "Scrub" the **StarSeal PS Clear** 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 **StarSeal PS Clear** 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, **StarSeal PS Clear** may leave a white residue on the substrate surface. This residue may be tenaciously bonded, and difficult to remove.

StarSeal PS Clear 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 **StarSeal PS Clear** 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

- 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 **StarSeal PS Clear**. 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.

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 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.