



# Single Coat Extreme Wear Tri-Component Oil Polyurethane

## Instructions Technical Data

KEEP OUT OF REACH OF CHILDREN. AVOID EYE CONTACT. SEEK IMMEDIATE MEDICAL ATTENTION IF INGESTED OR EXPOSED TO EYES. AVOID PROLONGED EXPOSURE TO SKIN. WEAR SAFETY GOGGLES AND GLOVES WHEN WORKING WITH POLYURETHANE SEALER. REFER TO MATERIAL SAFETY DATA SHEET (MSDS) FOR ADDITIONAL HEALTH AND SAFETY INFORMATION. FOR MSDS (MATERIAL SAFETY DATA SHEET), VISIT [SHOP.5STARFINISHES.CA](http://SHOP.5STARFINISHES.CA)

### GENERAL

Smith's Hi-Wear 90S is a satin finish, Aliphatic, 3 component clear or 4 component pigmented chemical resistant urethane for use in high traffic environments needing a chemical and abrasion resistant UV Stable satin finish topcoat for interiors and exteriors. Applied in one coat over our microcement on interior surfaces, including showers and countertops, this product provides unparalleled strength and stain resistance. Both chemicals, paint stripper and foods such as mustard, ketchup and red wines all tested excellent with this sealer. For exteriors it is recommended to apply two layers of Smith poly seal prior to application of the High wear 90s, resulting in a thicker more durable finish. This product is naturally slip resistant due to the addition of aluminum oxide that provides extreme durability and a slight sandpaper texture to your walls or floor. This product cannot accept other coats without being aggressively abraded and is recommended as a single coat application.

- Hangar Floors
- Commercial Showers
- Hotel and Commercial Floors
- Residential Floors
- Interior exterior stairs, garages, driveways etc
- Food & Beverage Floors
- Forklift traffic areas
- Manufacturing areas
- Aisleways
- Loading Docks
- Pharmaceutical Floors
- Vehicle Service areas

### Highlights

- Developed for heavy traffic and abusive environments

- Greatly improves the service life of the coating system
- Resists development of traffic patterns and finish dulling
- Excellent rolling load resistance to forklift traffic
- Improves light reflectivity
- Easy to clean
- High chemical resistance to most alcohols, caustics, fuels, oils and solvents
- FDA Title 21 subparagraph (b) CFR 174.5 – indirect food contact
  - Non-Tainting – Odor will not favor susceptible food ingredients in occupied work areas during application
- Overnight return to service

## COVERAGE

Theoretical yield is 150 to 200 sq/ft per L depending on texture and porosity of the surface to be sealed and method of application. For exact coverage rates, a measured quantity to proper application over a known area will provide a square foot coverage rate for a specific job. The coarser finishes will use more sealer than fine finishes with closed pores and a more polished surface but always remember to never apply more than the recommended yield of 150-200. You should spend a long time rolling and spreading the sealer as it can be worked into large areas with very little product.

One coat is required only.

## SUITABLE APPLICABLE SURFACES

Apply sealer to Microcement or any of our other plasters where a permanent waterproof hard wearing surface is required. This product is film forming, and will change the look and appearance of the plaster, so please test prior to using on a backsplash etc. Due to the High wear 90s being oil based, it deeply penetrated into the plaster and leaves it much darker than the original color. The product is meant for extreme wear surfaces where the durability supersedes esthetics. The finish is still beautiful, but the color is enhanced considerably and should be tested prior to application.

With two layers of Polyseal, the Microcement will be very well sealed; although, any penetration of the High wear will darken these areas creating a unique and still beautiful mottling of color.

**PREPARATORY WORK:** Always remove all of your tape prior to applying this sealer, as it will seal the tape to the plaster and be very difficult to remove. It is best to have a perfectly clean environment, scrape and or sand any loose particles of plaster off the surface and vacuum and sweep a couple times. Any debris on your floor or wall, will seal into your final finish. If there is dust and debris in the air this also will become attached to your final finish.

When sealing floors, no site protection is required generally, and when sealing walls, it is best to protect any horizontal surfaces including floors and countertops etc.

## PRODUCT APPLICATION

**Thinning:** Material is supplied as a 3-component “ready-to-use” sealer. Do not thin

**Application Method:** Smith’s High wear 90s may be applied via brush or roller. Application rate must be kept above 150 square feet per l. Ensure you roll the sealer on very thin and work it into the plaster in all directions.

**Roller Application:** Use a 10mm non-shed microfiber roller cover. Smith’s High wear 90s can be roller applied onto Smith’s Color Floor or Smith’s Color Accents via the dip & roll method out of a paint tray. DO NOT OVER-APPLY or ALLOW EXCESS PUDDLING of High wear under any circumstances. The product will blister if applied any thicker than the recommended application rate.

After the Microcement has cured at least 12 hours, you can lightly sand or scrape the surface with a putty knife to ensure any loose debris or texture is removed prior to sealing. Sanding should be done with orbital sander, drywall mechanical sander or Festool, or pole sander etc with a grit no lower than 150. If you want to sand with a lower grit, please test prior to use. Remove all tape, vacuum and clean surface so there is no residue and proceed to apply 2 layers of Polyseal if outdoors or in a commercial shower, or simply 1 layer of High wear direct to the concrete for countertops and interior floors etc.

**STORAGE:** Indoors between 65°F (18°C) to 90°F (32°C) **INSTALLATION TEMPERATURE RANGE:** 50°F (10°C) to 90°F (32°C) with up to 80% Humidity

**SHELF LIFE:** 18 Months (original, unopened containers).

#### **POTLIFE AND TRAFFIC TIMES:**

\*Cure time is affected by temperature & humidity

Working Time 2.5 hrs

Recoat Window none

Light Foot Traffic 12-15 hrs

Heavy Foot Traffic 24 hrs

Vehicle traffic 24 hrs

Full chemical and water resistance 7 days

#### **SPECS:**

#### **CURED COATING PROPERTIES (DRY FILM):**

**Abrasion Resistance** mg/loss \*Taber Abraser ASTM D4060 16.8 mg loss

**Impact:** ASTM D2794 148 inch lbs

**Hardness** (Pencil) ASTM D2370 3H

**Adhesion to Steel** ASTM D4541 2625 psi

**VOC's** (Mixed) ASTM D3960 43 g/L

**SLIP RESISTANCE:** We recommend the use of angular slip-resistant aggregate in all coatings that may be exposed to wet, oily or greasy conditions as well as any condition where increased traction may be necessary. It is the contractor and end users' responsibility to determine the appropriate traction needs and footwear necessary for the conditions as well as setting performance parameters prior to beginning the application, testing to determine parameters have been met upon completion to achieve the end users documented safety standards. Mock-ups are highly recommended as part of the evaluation process to determine the appropriate amount of slip-coefficient necessary for the environment.

**MAINTENANCE:** The coating system must be allowed to cure for no less than one week before using any mechanical cleaning equipment on the surface and no less than 3 days before neutral cleaner. This includes auto-scrubbers, swing buffers, sweepers, etc. Only dust and wet mopping may occur the first week. Dust mopping, removal of debris and regular cleaning is crucial to maintaining the aesthetics of the coating and obtaining the maximum life span of the floor coating system. Cleaning cannot occur too often and inefficient cleaning will cause the floor to wear out prematurely and possibly stain or discolor depending on what comes in contact with the floor. Spills should be removed quickly. Avoid the use of Polypropylene or abrasive bristle (Tynex®) brushes as these brushes will cause the development of scratch patterns and lessen the sheen. To maximize your investment with proper floor care and maintenance, remove all particles that may scratch and/or dull the floor coating using the least aggressive method necessary to clean the floor. • Daily = Sweep and dust mop or water only mopping/auto-scrubbing; spot clean spills & oils • Weekly or Monthly = Scrubbed once per week or month depending on the amount & type of soils present.

**DETERGENT:** Always use the least aggressive detergent necessary to remove the residue. Neutral Detergent, or similar, may be used for general purpose cleaning. Use special Oil Cleaning detergents, or similar degreaser, for more degreasing and heavy duty weekly or monthly cleaning.

**CLEAN UP**

Acetone, MEK, Xylene, Toluene

**POT LIFE:** Roughly 2.5 hours depending on temperature.

To order materials, find more tech information and install ideas please visit [WWW.5STARFINISHES.CA](http://WWW.5STARFINISHES.CA).

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