PRODUCT DATA SHEET

Smith's SURFACE GUARD

Fast-Curing, Ready-To-Use Guard

- Premium, High-Performance Film Forming Waterborne Cross-Linking Acrylic coupled with Polyurethane Polymer

DESCRIPTION: Smith's Surface Guard is a technologically advanced premium quality water-based guard for burnished/polish installations to include traditional polishing as well as Smith's Burnish with Color Floor™ System and sealing Terrazzo flooring.

The hardness of the acrylic combined with the resilience of the polyurethane results in water impermeable protective film with exceptional abrasion/wear resistance.

HIGHLIGHTS:

- Ready-to-Use
- Alkali-Resistant
- Good Blush Resistance
- Fast Air Drying - Burnish after 12 hour cure
- Tenacious Bond to a Variety of Surfaces
- Low Odor & Low VOC's
  – Meets requirements for all OTC & AQMD regions
- Infinite inter-coat adhesion
- Non-Chalking & U.V. Stable - Non-Yellowing
- Resists to Hot Tire Pickup (Residential Traffic only)

RECOMMENDED USE: Applied as a film forming guard for Smith's Burnish with Color Floor system and traditional polished concrete as well as a protective sealer over Terrazzo

SHELF LIFE:
Original, Unopened Container 1 year
**Use within 30 days of opening*

STORAGE:
Indoors between 40°F (4.5°C) to 90°F (32.2°C)

SUBSTRATE SURFACE TEMPERATURE:
50°F (10°C) to 100°F (37.8°C) with 20% to 90% Ambient Humidity
**Substrate temperatures between 50°F to 65°F will significantly slow the cure rate.*

AVAILABLE KIT SIZES:

1 Gallon Jug	SCS-SSG-128
5 Gallon Pail	SCS-SSG-640

** Additional sizes available Made-to-Order*

COLORS & SHEEN: Clear, Gloss finish only

ORDERING INFORMATION:
Prices may be obtained from Smith Paint Products representative or local Smith's Decorative Concrete Products Dealer

CURE TIMES (72°F / 50% Relative Humidity):
**Cure time is effected by temperature and humidity.*

Pot-Life	N/A
Tack Free	15 to 30 minutes
Recoat	As soon as 15 to 30 min.
High Speed Burnish	12 hours
Foot Traffic	60 to 90 minutes
Heavy Traffic	36 hours
Full Cure	24 hours

CURED COATING PROPERTIES (DRY FILM):

Property	Test Method	Results
Abrasion Resistance *mg/loss* *Taber Abraser	ASTM D4060	65.2 mg
Adhesion to Concrete	ASTM D4541	Concrete Fails
Flash Point		>212°F (100°C)
Gloss	60 degree	70 (±5)
Viscosity – Mixed	ASTM 2196	25 cP
Volatile Organic Compounds (VOC'S)	ASTM D3960	99 g/L
Volume Solids (Mixed)	ASTM D2196	25%

APPROXIMATE COVERAGE (DRY FILM):
Coverage will vary depending on the application thickness, floor profile and absorbency of the substrate.

Application	Approximate Yield *per unit per square foot per coat*	
	1 gal jug	5 gal pail
Burnished Concrete (200 Grit & Densified) & polished Terrazzo (using microfiber mop)	600-1,000 sq.ft.	3,000-5,000 sq.ft.

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SurfaceGuard-PDS-010622

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TYPICAL CHEMICAL & STAIN RESISTANCE

Covered Spot Test - 3 mil film at 7 day cure:

***E** - Excellent; **G** - Good (slight sign of exposure, coating recovers);*
***NR** - Not Recommended (Permanent Damage)*

ACIDS	4 hour	24 hour
Acetic Acid 25% (Vinegar)	E	G
Citric Acid 10%	E	E
Lactic Acid 88%	G	G
Phosphoric Acid 85%	NR	NR
Sulfuric Acid 25% (Battery Acid)	NR	NR
Sulfuric Acid 98%	NR	NR
Hydrochloric Acid 32% (Muriatic)	NR	NR
Nitric Acid 67%	NR	NR
BASES		
Ammonium Hydroxide 10%	NR	NR
Sodium Chloride 20%	NR	NR
Sodium Hydroxide 50%	NR	NR
Sodium Hypochlorite (Bleach)	NR	NR
Trisodium Phosphate 10%	G	NR
ALCOHOLS		
Ethylene Glycol (Antifreeze)	E	G
Isopropyl Alcohol 91%	G	NR
Methanol	E	G
Hand Sanitizer (Purell®)	G	NR
SOLVENTS		
Acetone	NR	NR
d-Limonene	E	G
MEK	NR	NR
Methylene Chloride	NR	NR
Mineral Spirits	E	G
PGMEA	G	NR
HYDROCARBONS		
Brake Fluid	G	NR
Diesel Fuel	E	G
Transmission Fluid	E	G
Motor Oil	E	E
Kerosene	E	G
Gasoline	E	G
Hydraulic Fluid	E	NR
Skydrol® – LD-4	NR	NR
MISCELLANEOUS		
Coffee	E	E
Coke®	E	E
Dish Detergent (Dawn®)	E	E
Hydrogen Peroxide 3%	G	NR
Ketchup	E	E
Monster Energy® Drink	E	E
Mustard	E	G
Povidone-iodine (BETADINE®)	NR	NR
Tide® 1%	E	E
Windex® (Ammonia Based)	G	NR
Wine – Red	E	G

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LIMITATIONS:

- Do not use on non-porous surfaces, such as Ceramic or Porcelain tiles, Marble, Granite, etc. The specifier as well as the end user shall determine the suitability & assumes all responsibilities therewith to include traction requirements
- Smith's Surface Guard does not absorb Ultra Violet light and therefore offers no U.V. protection to other materials it is applied over
- Avoid exposing freshly applied Smith's Surface Guard to air movement, direct sunlight, freezing, water or direct heat sources (i.e. radiant in-floor heat)
- NOT intended for use as a wood floor sealer
- NOT for use in kitchen environments at risk of thermal shock

TEMPERATURE and HUMIDITY:

- Substrate temperature, air and materials must be maintained between 50°F (10°C) to 100°F (37.8°C) with less than 90% Ambient Humidity during application
- DO NOT INSTALL when the Dew Point is within ±5° of the air temperature
- **PRECAUTIONS USING TEMPORARY HEAT** - During application in environments using temporary heat, make sure to exhaust emissions and toxic fumes from temporary heaters to the exterior of the building to prevent health hazards and damage to work. Many temporary heating methods emit unburned petroleum into the air which act as a bond breaker once it falls onto the surface of the substrate
  - Precautions must be taken when using LP, gasoline, diesel, etc. fueled temporary heat
  - Always shut off temporary heat at least 2 to 3 hours prior to application of Smith's Surface Guard to reduce risk of airborne petroleum contamination
  - Always clean the mechanically prepared surface with *Smith's Oil Clean* or TSP using an auto-scrubber followed by a thorough clean water rinse when temporary heat has been in use
  - Fisheyes are a result of surface contamination & insufficient cleaning

INSPECT THE SUBSTRATE:

The surface preparation phase should be viewed as the most important. Proper preparation results in the product's longevity, minimizes potential failures and creates the best environment for an aesthetically pleasing work of art.

- Ensure substrate is sound/solid, free of any contaminants that may act as a bond breaker, such as oil/grease, loose paint/coatings, wax, silicone, etc.
- **CHECK FOR MOISTURE** - New concrete must dry & must have cured for at least 10 to 14 days to allow all bleed water / water of convenience to escape and for concrete to harden enough to allow for appropriate preparation for the system desired. Follow the moisture recommendations for the full system intended
- **SUBSTRATE CONTAMINATION** - Concrete is porous & can become contaminated with oils, chemical from spills, etc. which act as a bond breaker. Determine if a potential bond breaker exists & a proper course of remediation. This includes prior layers of floor finish/wax, paint, oils, sealers, etc.

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SURFACE PREPARATION VIA GRINDING:

Step 1 - Use a traditional planetary concrete grinding machine to dry grind the application area with 40 grit metal bonded diamonds. Remove excess powders from the substrate.

Step 2 - Proceed with a second dry grind over the same area with 70 grit metal bonded diamonds. Remove excess powders from the substrate.

Step 3 - Proceed with a third dry grind over the same area with 100 grit metal bonded diamonds. Remove excess powders from the substrate.

NOTE: *Diamond grit may be altered based on concrete matrix and hardness. The primary purpose of Steps 1-3 is to remove the top layer of concrete while honing the scratch pattern created by diamond grinding process. After Step 3 is completed, there should be no visible mechanical scratch pattern (circular or swirl marking) on the intended application area as the coloring process will accentuate this pattern. Should a mechanical scratch pattern exist after Step 3, increase to 100 grit metal bond diamonds repeating the process and potential further increasing the grit of the diamond grit necessary unless an appropriate finish without a mechanical scratch pattern can be achieved.*

Use of Resin bond diamonds will require a wet grind in order to mitigate the resin transfer to the intended application area. The resin residue will negatively affect the penetration, adhesion and appearance. Using solely metal bond diamonds is preferred.

PREPARING EXISTING POLISHED CONCRETE OR TERRAZZO:

Thoroughly strip all floor finish/wax down to bare Terrazzo surface using a floor stripper and black pad attached to a low speed floor machine. Once floor has been thoroughly stripped of floor finish, scrub the entire floor surface to be sealed with *Smith's Neutral Detergent* or similar and follow with a clean water rinse continuing until all soap suds are completely removed. Allow to dry over night or use blower fans to force dry the surface.

SURFACE PREPARATION WITH GREEN CLEAN Pro:

Step 1: Remove paint, adhesives and loose particles from the intended application surface.

Step 2: Liberally apply *Smith's Green Clean Pro* biodegradable etching solution to a 20 ft x 20 ft section of the substrate or smaller with a pump up sprayer or dip and roll method with a ½ inch nap roller cover.

Step 3: Allow the *Smith's Green Clean Pro* to remain on the substrate for 20 minutes. ***Do not allow material to dry on the substrate.*** Mist water via hose or pump up spray to keep treated area from drying.

Step 4: Agitate *Smith's Green Clean Pro* utilizing a floor buffer (small area) or an auto-scrubber (large area) equipped with brush attachments while rinsing with clean water. Extract material utilizing a wet/dry vacuum or by lowering the squeegee uptake bar on the auto-scrubber. Continue to flush and agitate the substrate until the rinse water is clear.

APPLICATION: A typical pump up sprayer provides an easy, economical method of application. Spray on in a fine, fog pattern, without spurts or dribbles, while AVOIDING PUDDLING in low areas. If puddles occur, brush or roll them out. Using a microfiber mop, apply a thin coat of Smith's Surface Guard at a rate of 600 to 1,000 sq.ft. per gallon and allow to dry for 2 hours then repeat.

If a higher gloss is desired, burnish the treated area with high speed buffer in conjunction with a white pad after the second application has cured for no less than 12 hours.

For added protection and a greater sheen on concrete, we recommend two coats of Smith's Surface Guard. Additional coats may be applied after the first coat has thoroughly dried.

COVERAGE: *See chart on page 1 of this document.

SLIP RESISTANCE: It is the contractor and end users' responsibility to determine the appropriate traction needs, to include setting performance parameters and footwear necessary for the conditions, prior to beginning the application as each situation requires different traction due to temperature, dry/wet, chemicals, etc. Testing methods / target parameters to meet upon completion to achieve the end users documented safety standards should be set forth in writing prior to proceeding with any product installation.

Mock-ups are highly recommended as part of the evaluation process to determine the appropriate amount of slip-coefficient necessary for the environment.

Smith Paint Products recommends the use of angular slip-resistant aggregate in all coatings or film forming sealers that may be exposed to wet, oily or greasy conditions as well as any condition where increased traction may be necessary.

CLEAN-UP: Clean up with water while wet. Freshly cured Smith's Surface Guard may be removed using solvent such as Acetone, Toluene or Xylene.

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MAINTENANCE: ***Allow 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 maximum 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 and oils
- Weekly or Monthly = Scrubbed once per week or month depending on the amount and type of soils present.

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

CAUTION: Do not drag or drop heavy objects across any floor, including coatings as scratching, gouging or chipping may occur to the concrete or the coating itself. This includes the tip of the forks on a forklift, nails protruding from a pallets, etc.

Avoid spinning tires on a floor surface as the heat created from the friction of a spinning tire will quickly soften the sealer causing permanent damage.

Should a gouge, chip or scratch occur, touch-up the damaged areas immediately to avoid chemical or water intrusion to the concrete which could create additional damage. A thin layer of clear nail polish to the damaged area will provide some minimal protection until the area can be properly repaired.

Rubber tires are prone to plasticizer migration, especially aviation tires and soft compound tires (i.e. Z Rated, Drag Radials, Snow tires, etc.). *Plasticizer will stain coatings, commercial flooring, paints and sealers leaving an amber, yellow-like stain that can be permanent. This can be more noticeable where aircraft or vehicles are stationary for longer period of time, more so in non-climate controlled environments such as aircraft hangar with lighter colored floors.* Some tire stains can be removed if cleaned before a set-in stain occurs using a d-Limonene based degreaser and some mild agitation using an orbital, low speed floor machine.

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