

# E.L.S. PRODUCTS CORP. TECHNICAL DATA

## E.L.S. HIGH PERFORMANCE SLIP RESISTANT (VOC COMPLIANT) URETHANE ~ 322

1-800-528-4861 ~ [www.elsproducts.com](http://www.elsproducts.com)

### PRODUCT DESCRIPTION:

E.L.S. High Performance Slip Resistant VOC Compliant Urethane consists of a two component polyester/aliphatic polyurethane coating and heat-treated corundum form crystalline tabular alumina. When combined, they produce a slip resistant coating that is extremely wear resistant. In addition, this product exhibits excellent chemical resistance, flexibility, weathering, and UV stability. Product meets VOC regulations for NY, PA, NJ, and other states as an industrial maintenance coating.

### RECOMMENDED FOR:

Recommended for auto service centers, warehouses, computer rooms, laboratories, aircraft hangers, cafeterias, exterior tanks, indoor or outdoor service and chemical exposure areas.

### SOLIDS BY WEIGHT:

Mixed= 76% (colors); 68% (clear) (+,-2%)

### SOLIDS BY VOLUME:

Mixed= 71% (colors); 62% (clear) (+,-2%)

### VOLATILE ORGANIC CONTENT:

VOC contents is less than 2.8 pounds per gallon (mixed liquids)

Mixed with aggregate VOC is less than 2.5 pounds per gallon.

### STANDARD COLORS:

White, off white, light gray, medium gray, tile red, beige, and clear

Clear may not be suitable for use over colored basecoats.

### RECOMMENDED FILM THICKNESS:

3-5 mils per coat wet thickness (yields 2-3 mils dry)

### COVERAGE PER GALLON:

400 to 500 square feet @ 3-5 mils wet thickness

### PACKAGING INFORMATION

3 gallon and 15 gallon kits 3 gal kit= 2 gallons part A (weights varies by color) and 1 gallon part B (8.5#) (weights and volumes approximate) Aggregate available and pre-packaged for use with each kit.

### MIX RATIO:

2 parts A to 1 part B by volume for liquids (approximate) with 1.60# aggregate for every gallon of liquid.

### SHELF LIFE:

1 year in unopened containers

### FINISH CHARACTERISTICS:

Gloss (>40 at 60 degrees @ Erichsen glossmeter)

### IMPACT RESISTANCE:

Gardner Impact, direct & reverse = 160 in. lb. (passed)

### ABRASION RESISTANCE:

Taber abrasor CS-17 calibrase wheel with 1000 gram total load and 500 cycles = 20.0 mg loss (liquids only). With the aggregate added the loss was only 10 mg.

### ADHESION:

350 psi @ elcometer (concrete failure, no delamination)

### VISCOSITY:

Mixed = 300-700 cps (typical)

### DOT CLASSIFICATIONS:

Part A "FLAMMABLE LIQUID N.O.S., 3, UN1993, PGIII"

Part B "FLAMMABLE LIQUID N.O.S., 3, UN1993, PGIII"

Aggregate "not regulated"

### HARDNESS:

Shore D = 62

### CURE SCHEDULE: (70°F)

pot life – 1 1/2 gallons volume ..... 2-4 hours  
tack free (dry to touch)..... 3-5 hours  
recoat or topcoat..... 5-9 hours  
light foot traffic..... 14-24 hours  
full cure (heavy traffic)..... 3-5 days

### APPLICATION TEMPERATURE:

45-90 degrees F

### CHEMICAL RESISTANCE:

REAGENT	RATING
acetic acid 5%	B
xylene	D
mek	A
methyl alcohol	B
gasoline	D
10% sodium hydroxide	E
50% sodium hydroxide	D
10% sulfuric	D
10% hydrochloric acid	C
20% nitric acid	B
ethylene glycol	D

Rating key: A - not recommended, B - 2 hour term splash spill, C - 8 hour term splash spill, D - 72 hour immersion, E - long term immersion. NOTE: extensive chemical resistance information is available through your sales representative.

### PRIMER:

E.L.S. 2 Part Epoxy Primer

### TOPCOAT:

None recommended

### LIMITATIONS:

\*Colors or clarity for clear may be affected by high humidity, low temperatures, or chemical exposure.

\*For best results use a high quality 3/8" nap roller.

\*Slab on grade requires moisture barrier

\*Substrate temperature must be 5°F above dew point

\*All new concrete must be cured for at least 30 days

\*Light or bright colors (white, safety yellow, etc.) may require multiple coats or a suitable color coordinated primer to achieve a satisfactory hide.

\*Colors may vary from batch to batch, therefore, use only product from the same batch for an entire job.

\*Tire contact may cause staining and discoloration

\*Physical properties are typical values and not specifications.

\*The clear with the aggregate added loses some clarity and may not be suitable over colored substrates. (Test colors suitability before using.)

\*See reverse side for application instructions.

\*See reverse side for limitations of our liability and warranty.

# MIXING AND APPLICATION INSTRUCTIONS (322)

- 1) **PRODUCT STORAGE:** Store product in an area so as to bring the material to normal room temperature before using. Continuous storage should be between 60 and 90 degree F.
- 2) **SURFACE PREPARATION:** Surface preparation will vary according to the type of complete system to be applied. For a one or two coat thin build system (3-10 mils dry) we recommend either mechanical scarification or acid etching until a suitable profile is achieved. For a complete system build higher than 10 mils dry, we recommend a fine brush blast (shot blast). All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate. A test should be made to determine that the concrete is dry; this can be done by placing a 4' X 4' plastic sheet on the substrate and taping down the edges. If after 24 hours, the substrate is still dry below the plastic sheet, then the substrate is dry enough to start coating. The plastic sheet testing is also a good method to determine if any hydrostatic pressure problems exist that may later cause disbonding.
- 3) **PRODUCT MIXING:** The liquid portion of this product has a two to one mix ratio by volume- merely mix two gallons of part A with 1 gallon of part B. After the two parts are combined, mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. After the liquids are mixed, add in the provided aggregate. Avoid whipping air into the coating. Improper mixing may result in product failure.
- 4) **PRODUCT APPLICATION:** The mixed material can be applied by brush or roller. Stir the mixed material occasionally to prevent the settling out of the added aggregate. Maintain temperatures within the recommended ranges during the application and curing process. Properly prime the substrate. Too thick of an application may result in solvent entrapment and product failure or gloss inconsistencies.
- 5) **RECOAT OR TOPCOATING:** Multiple coats of this product are acceptable. If you opt to recoat this product, you must first be sure that all of the solvents have evaporated from the coating during the curing process. The information on the front side are reliable guidelines to follow. However, it is best to test the coating before recoating or topcoating. This can be done by pressing on the coating with your thumb to verify that no fingerprint impression is left. If no impression is created, then the recoat can be started. Always remember that colder temperatures will require more cure time for the product before recoating can commence. Before recoating or topcoating, check the coating to insure no contaminants exist. If a blush or contaminants are present on a previous coat, remove with a standard detergent cleaner. When recoating this product with subsequent coats of the urethane, it is advisable to apply the recoat before 24 hour passes. Also, it is advisable to degloss the previous coat to insure a trouble free bond.
- 6) **CLEANUP:** Use ketone solvents
- 7) **FLOOR CLEANING:** Caution! Some cleaners may affect the color of the floor installed. Test each cleaner in a small area, utilizing your cleaning technique. If no ill effects are noted, you can continue to clean with the product and process tested.
- 8) **RESTRICTIONS:** Restrict the use of the floor to light traffic and non-harsh chemicals until the coating is fully cured (see technical data under full cure). It is best to let the floor remain dry for the full cure cycle.

## NOTICE TO BUYER: DISCLAIMER OF WARRANTIES AND LIMITATIONS ON OUR LIABILITY

*We warrant that our products are manufactured to strict quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. Such information supplied about our products is not a representation or a warranty. It is supplied on the condition that you shall make your own tests to determine the suitability of our product for your particular purpose. Listed physical properties are typical and should not be construed as specifications. **NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, REGARDING SUCH OTHER INFORMATION, THE DATA ON WHICH IT IS BASED, OR THE RESULTS YOU WILL OBTAIN FROM ITS USE. NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, THAT OUR PRODUCT SHALL BE MERCHANTABLE OR THAT OUR PRODUCT SHALL BE FIT FOR ANY PARTICULAR PURPOSE. NO WARRANTY IS MADE THAT THE USE OF SUCH INFORMATION OR OUR PRODUCT WILL NOT INFRINGE UPON ANY PATENT.** We shall have no liability for incidental or consequential damages, direct or indirect. Our liability is limited to the net selling price of our product or the replacement of our product, at our option. Acceptance of delivery of our product means that you have accepted the terms of this warranty whether or not purchase orders or other documents state terms that vary from this warranty. No representative is authorized to make any representation or warranty or assume any other liability on our behalf with any sale of our products. Our products contain chemicals that may **CAUSE SERIOUS PHYSICAL INJURY. BEFORE USING, READ THE MATERIAL SAFETY DATA SHEET AND FOLLOW ALL PRECAUTIONS TO PREVENT BODILY HARM.***