

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

124

## E.L.S. PERMANENT PATCH FREEZER FORMULATION

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

### PRODUCT DESCRIPTION:

ELS PERMANENT PATCH FREEZER FORMULATION is a three component 100% solids epoxy mortar designed for applications where temperatures are below freezing or a rapid patch is necessary.

### RECOMMENDED FOR:

Recommended for cold storage areas, freezers, walkways and support bases for tanks and seamless floors.

### NOT RECOMMENDED FOR:

Immersion applications for active solvents.

### SOLIDS BY WEIGHT:

100%

### VOLATILE ORGANIC CONTENT:

zero pounds per gallon

### COLORS AVAILABLE:

Light gray, red, dark gray, and natural

### RECOMMENDED THICKNESS:

1/8" to 1/4"

### COVERAGE PER UNIT:

20.58 sq. ft. @ 1/4" and 41.17 sq. ft. @ 1/8"

### PACKAGING

1/4 unit

unit

\*UNIT= 6.25# part A, 37 ounces by weight for part B, 50# aggregate.

(Bulks are not available because of the short pot life, all weights are approximate)

### MIX RATIO:

\*UNIT= .67-.68 gallons part A to .25 gallons part B plus 50# aggregate. (weight and volumes approximate)

### SHELF LIFE:

2 years in unopened containers

### ABRASION RESISTANCE:

excellent

### VISCOSITY:

Part A= 250-320 cps, Part B= 2,500-3,500 cps

### DOT CLASSIFICATIONS:

Part A&C "not regulated"

Part B "CORROSIVE LIQUID N.O.S., 8, UN1760,PGIII"

### FLEXURAL STRENGTH:

10,350 psi @ ASTM D790

### COMPRESSIVE STRENGTH:

7,560 psi @ ASTM D695

### TENSILE STRENGTH:

6,030 psi @ ASTM D638

### ULTIMATE ELONGATION:

7.30%

### IMPACT RESISTANCE:

Excellent

### HEAT DEFLECTION TEMP.:

113 degrees F @ ASTM D648

### WEATHERING:

Good (chalks)

### CUBIC FEET

.11 (approx)

.43 (approx)

### CURE SCHEDULE: (70°)

pot life – (.45 cu. ft. mix) .....10-15 minutes

recoat or topcoat..... 3-4 hours

light foot traffic.....6-8 hours

full cure (heavy traffic)... .....2-7 days

\*foot traffic serviceable.....24 hours @ 30°F

### APPLICATION TEMPERATURE:

30-80 degrees F

### CHEMICAL RESISTANCE:

REAGENT	RATING
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xylene	C
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1,1,1 trichlorethane	C
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MEK	A
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methanol	A
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ethyl alcohol	C
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skydrol	B
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10% sodium hydroxide	D
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50% sodium hydroxide	C
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10% sulfuric acid	C
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70% sulfuric acid	A
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10% HCl (aq)	C
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5% acetic acid	B
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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:

None required

### TOPCOAT:

None required. For increased performance and reduced porosity, topcoat with ELS94 and ELS95 (temperature permitting)

### LIMITATIONS:

\*Color stability may be affected by environmental conditions (high humidity or chemical exposure)

\*This product is not UV color stable and may discolor if exposed to lighting such as sodium vapor lights.

\*Colors may vary from batch to batch due to variations in the silica filler.

\*Mortar colors are not from our standard color chart.

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

\*All new concrete must be cured for at least 30 days prior to application.

\*See reverse side for application instructions.

\*Test data based on neat resin.

\*Physical properties are typical values and not specifications.

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

\*This product has a short pot life, mix only an amount of material that can be used in the prescribed pot life period.

\*When temperatures are low, extended time may be required for the material to cure before allowing industrial traffic.

# MIXING AND APPLICATION INSTRUCTIONS (124)

- 1) **PRODUCT STORAGE:** Store product in an area so as to bring the material to normal room temperature before using. Continuous storage should be above 55°F to prevent product crystallization.
- 2) **SURFACE PREPARATION:** All dirt, oil, dust, foreign contaminants and laitance must be removed to assure a trouble free bond to the substrate. We recommend that an aggressive shot blast be performed prior to the application of this product. A less adequate method would be acid etching, but the etch should properly profile the substrate. All edges and around columns or beams should be mechanically scarified. All termination points should not be feather edged, but should be saw cut with the termination ending at the saw cut. All large cracks should be V cut and filled with an appropriate crack filler. All expansion joints should be filled with an appropriate joint filler. When overlaying an expansion joint, a single saw cut through the epoxy overlay will prevent random fracturing. A test should be made to determine that the concrete is dry; this can be done by placing a 4'X4' 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) **PRIMER:** No primer is necessary. This material is self priming. However, any suitable primer can be used.
- 4) **PRODUCT MIXING:** It is important that the liquids be mixed together first. Mix the liquids in an oversized container thoroughly and until streak free. After the liquids are thoroughly mixed, add in the aggregate. Mix in the aggregate with slow speed mixing equipment such as a jiffy mixer or rotating bucket/stationary mixing blade assembly. It is equally important that enough time is spent mixing in the aggregate to insure that the aggregate is thoroughly wetted out. No induction time is necessary. Mix only an amount of material that can be used in the prescribed pot life period. Improper mixing may result in product failure.
- 5) **PRODUCT APPLICATION:** Apply the mixed material at 1/8 to 1/4 inch thickness. Apply the material with a hand trowel or other suitable application equipment. Do not over-trowel the material as this may cause isolated blisters to form. Direct air currents across or above the mortar during the curing process may result in isolated blisters. Maintain temperatures within the recommended ranges during the application and curing process.
- 6) **RECOAT OR TOPCOATING:** No recoating or topcoating is necessary. However, if you opt to topcoat the applied mortar, allow it to cure before topcoating. Many epoxies and urethanes can be used (temperature permitting). Contact your sales representatives for suitable topcoat selections.
- 7) **CLEANUP:** Use xylol
- 8) **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.
- 9) **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.***