

E.L.S. PRODUCTS CORP. TECHNICAL DATA

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E.L.S. PERMA COTE H.B.F. (Hi-Flexibility)

1-800-528-4861 ~ www.elsproducts.com

PRODUCT DESCRIPTION:

ELS PERMA COTE H.B.F. is a two component 100% solids epoxy designed for sealing traffic surfaces exposed to vehicular or foot traffic. The toughness and elongation eliminate the need to repair hairline cracks. This product is formulated for use in a broadcast system as the basecoat prior to installing epoxy mortars or other suitable topcoats.

RECOMMENDED FOR:

Recommended for priming with broadcasting as a crack bridging sealer before application of epoxy mortar or topcoats.

SOLIDS BY WEIGHT:

100% (+/- 1%)

SOLIDS BY VOLUME:

100% (+/- 1%)

VOLATILE ORGANIC CONTENT:

zero pounds per gallon

COLORS AVAILABLE:

Clear (gardner 3-4)

RECOMMENDED THICKNESS:

10-50 mils

COVERAGE PER GALLON:

32-160 square feet per gallon @ 10-50 mils

PACKAGING INFORMATION:

2 gallon kit (volume approximate)

10 gallon kits (volume approximate)

MIX RATIO:

9.2 pounds (1 gallon) part A to 8.2 pounds (1.0 gallon) part B (volumes approx.)

SHELF LIFE:

1 year in unopened containers

ABRASION RESISTANCE:

Taber abraser CS-10 callibrase wheel with 1000 gram total load and 500 cycles= 6 mg loss.

VISCOSITY:

Mixed= 1,000-1,700 cps (typical)

DOT CLASSIFICATIONS:

Part A "not regulated"

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

FLEXURAL STRENGTH:

2,600 psi @ ASTM D790

COMPRESSIVE STRENGTH:

4,100 psi @ ASTM D695

TENSILE STRENGTH:

2,450 psi @ ASTM D638

ULTIMATE ELONGATION:

60%

GARDNER VARIABLE IMPACTOR:

160 inch pounds direct- passed

ADHESION:

450 psi @ elcometer (concrete failure, no delamination)

HARDNESS:

Shore D= 58

CURE SCHEDULE: (70°)

pot life (2 gallon volume).....15-25 minutes

tack free (dry to touch) 5-8 hours

recoat or topcoat..... 8-12 hours

light foot traffic.....12-24 hours

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

APPLICATION TEMPERATURE:

60-90 degrees F with relative humidity below 85%

CHEMICAL RESISTANCE:

REAGENT	RATING
xylene	A
methanol	A
skydrol	A
10% sodium hydroxide	D
50% sodium hydroxide	D
10% sulfuric acid	C
10% HCl (aq)	C
5% acetic acid	A

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:

After broadcasting aggregate into the ELS PERMA COTE H.B.F., many suitable toppings can be used. This would include products like epoxy mortars, two component urethanes or novolac coatings. Check with your sales representative for application details.

LIMITATIONS:

*Clarity of color or gloss may be affected by environmental conditions such as high humidity, low temperatures, or chemical exposure.

*Clarity of color may vary from batch to batch. Therefore, use only product from the same batch for an entire job when not intended solely as a primer.

*It is recommended that a broadcast application be performed with a subsequent topcoat system. This product is not intended as a decorative coating, but merely as a primer for bridging cracks in a broadcast system before topcoating.

*This product is not suitable in all chemical environments. When chemical exposure is imminent, a test should be performed to test suitability.

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

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

*Applications with relative humidity above 85% or early water contamination may cause white discolorations to develop.

*Improper mixing may result in product failure.

*See reverse side for application instructions.

*Physical properties are typical values and not specifications.

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

MIXING AND APPLICATION INSTRUCTIONS (139)

- 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. Low temperatures or temperature fluctuations may cause crystallization.
- 2) **SURFACE PREPARATION:** The most suitable surface preparation would be a fine brush blast (shot blast) to remove all laitance and provide a suitable profile. All dirt, foreign contaminants, oil, 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'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.
- 3) **PRODUCT MIXING:** This product has a mix ratio of 9.2# part A to 8.2# part B or one part A to one part B by volume. Standard packages are in pre-measured kits and should be mixed as supplied in the kit. We highly recommend that the kits not be broken down unless suitable weighing equipment is available. 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.
- 4) **PRIMING:** Primers may be beneficial in some applications, dependent on performance characteristics and substrate condition, but none are required for product application.
- 5) **PRODUCT APPLICATION:** The mixed material can be applied by brush or roller. However, the material can also be applied by a suitable serrated squeegee and then back rolled as long as the appropriate thickness recommendations are maintained. Because this material has a short pot life, it is beneficial in some applications to remove the material from the mixing pail by pouring the material onto the substrate and spreading it along the floor. Spreading out the material will allow the applicator more time to work with the material before it begins to cure. Aggregate should be broadcast into the applied material before applying suitable topcoats. Maintain temperatures and relative humidity within the recommended ranges during the application and curing process. If concrete conditions or over aggressive mixing causes air entrapment, then an air release roller tool should be used prior to the coating tacking off to remove the air entrapped in the coating.
- 6) **RECOAT OR TOPCOATING:** We recommend a suitable topcoat be applied only after broadcasting suitable aggregate into the basecoat. If you recoat or topcoat this product, you must first be sure that the coating has tacked off before recoating. All previous coats that were not applied as a broadcast, should be deglossed to insure a trouble free bond prior to application of recoats or topcoats. It is advisable to test topcoats for suitability prior to application when not in a broadcast system. Colder temperatures will require more cure time for the product before recoating or topcoating can commence. Before recoating or topcoating, check for epoxy blushes (a whitish, greasy film, or deglossing.) If a blush is present, it can be removed by any standard detergent, cleaner prior to topcoating or recoating. Many epoxy coatings and urethanes as well as multiple coats of this product are compatible for use.
- 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. 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.***