

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

829

E.L.S. PERMA FLEX F

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

## PRODUCT DESCRIPTION:

ELS PERMA FLEX F is a two component polymer hybrid containing both urethane and epoxy resins to provide a resilient filler for expansion joints. This material has excellent flexibility and provides exceptional adhesion characteristics. The two component material (standard) is supplied with a black component and a white component so proper mixing can be easily observed.

## RECOMMENDED FOR:

Recommended for expansion joints in general industry as well as expansion joints of highways, bridges, airports, garages, and marine decks.

## NOT RECOMMENDED FOR:

Not recommended for applications for all acids and chemicals.

## SOLIDS BY WEIGHT:

100%

## VOLATILE ORGANIC CONTENT:

Zero pounds per gallon

## COLORS AVAILABLE:

Medium gray (mixed) Part A is white and Part B is black.

## RECOMMENDED THICKNESS:

1/2" to 1 1/2"

## COVERAGE PER KIT:

2 gallon kit @ 1/2" by 1.0" yields 60-70 lineal feet

## PACKAGING

## CUBIC FEET

2 gallon kit .24 (approx)

\*2 gallon kit= 8.9#/gallon (.90 gallon net) part A and 11.3#/gallon (.90 gallon net) part B. (volumes and weights approximate)

## MIX RATIO:

1 to 1 by volume

## SHELF LIFE:

6 months in unopened containers

## FLEXURAL STRENGTH:

2,782 psi (ASTM D-790)

## TENSILE STRENGTH:

3,289 psi (ASTM D-412)

## ELONGATION AT BREAK:

50.4% at 70 degrees F (ASTM D-412)

## IMPACT RESISTANCE:

Excellent

## ABRASION RESISTANCE:

25.4 mg loss with a 1000 gram total load at 1000 revolutions with a CS10 wheel.

## PRODUCT TYPE:

Epoxy urethane hybrid

## SHORE HARDNESS:

Shore A= 84, shore D= 56

## ADHESION:

420 psi (elcometer)- no delamination/concrete failure

## VISCOSITY:

Mixed= 40,000 to 60,000 cps (typical)

## DOT CLASSIFICATION:

Part A "not regulated"

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

## CURE SCHEDULE: (70°)

pot life - 2 gallon mix ..... 30-40 minutes

recoat or topcoat..... 10-12 hours

light foot traffic.....16-24 hours

full cure (heavy traffic)... .....3-5 days

## APPLICATION TEMPERATURE:

Above 50 degrees F

## CHEMICAL RESISTANCE:

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

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. Many epoxies and urethane are compatible.

## LIMITATIONS:

\*Color stability may be affected by environmental conditions such as high humidity, chemical exposure, or exposure to UV light as well as sodium vapor lighting.

\*Colors may vary from batch to batch.

\*Gray color is 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.

\*This product must be mixed very well before using. Improper or inadequate mixing can cause isolated soft spots and subsequent failure.

\*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.

# MIXING AND APPLICATION INSTRUCTIONS <sup>(829)</sup>

## E.L.S. PERMA FLEX F

- 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 50-90°F. Avoid low temperatures and large temperature fluctuations in storage as these conditions could cause possible 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 all loose concrete, previous joint compound or other foreign material be removed to leave a clean sound joint at least 2" deep. For best results, edges should be sawcut and a one inch backer rod should be placed into the joint leaving approximately 1 to 1 1/2 inches from the top of the backer rod to the top of the joint.
- 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 material be mixed well. Therefore take a few extra minutes to make sure adequate time has been taken to mix the two components together thoroughly. Improper mixing will cause an incomplete cure and soft spots in the joint. Mix one part (by volume) part A to one part (by volume) part B in an oversized mixing container. Mix well with slow speed mixing equipment until totally streak free being sure to scrape the sides and bottom of the mixing container thoroughly. Avoid high speed mixing as this could force air into the product.
- 5) **PRODUCT APPLICATION:** Apply the mixed product by pouring the mixed material into the expansion joint to be repaired. Remove any excess material with a putty knife or similar tool prior to curing. Alternatively, it may also be suitable to let the product become tack free in the joint and then using a razor scraper to cut off or shave the excess above the floor plane. Maintain temperatures within the recommended ranges during the application and curing process. When temperatures are lower, allow more time for this material to cure.
- 6) **RECOAT OR TOPCOATING:** No recoating or topcoating is necessary. However, if you opt to topcoat the applied joint compound, allow it to cure before topcoating. It is not necessary to prime over the joint compound prior to topcoating the joint compound. Many epoxies and urethanes can be used. In some instances, especially when excessive expansion joint movement is involved, topcoats may chip. However, most epoxy or topcoat products will adhere to the joint compound very well.
- 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.***