

# DIAMOND POLYMERS

## DP220 – TECHNICAL DATA SELF LEVELING EPOXY RESURFACER

### PRODUCT DESCRIPTION:

DP220 is a two component plus aggregate colored 100% solids epoxy recoatable, high gloss, abrasion resistant flooring system that can withstand impact and thermal shock.

### RECOMMENDED FOR:

Recommended for a high build resurfacing for traffic areas where a seamless floor is desired.

### SOLIDS BY WEIGHT:

99-100% (+/- 1%) (liquids mixed without aggregate)

### SOLIDS BY VOLUME:

99% (+/- 1%) (liquids mixed without aggregate)

### VOLATILE ORGANIC CONTENT:

negligible

### STANDARD COLORS:

Light gray, medium gray, off white, beige, and tile red

### RECOMMENDED FILM THICKNESS:

1/16" applied with a special serrated squeegee

### COVERAGE PER KIT:

A 1 1/2 gallon kit will yield 65-85 square feet

### PACKAGING INFORMATION

1 1/2 gallon kit (1 gallon part A and 1/2 gallon part B plus 20# aggregate) 15 gallon kits available also.

### MIX RATIO:

9.65# (1 gallon) part A to 4.5# (1/2 gallon) part B and 20# mixed aggregate (volumes approximate)

### SHELF LIFE:

1 year in unopened containers

### FINISH CHARACTERISTICS:

Gloss (>70 at 60 degrees @ Erichsen glossmeter)

### FLEXURAL STRENGTH:

7,700 psi @ ASTM D790

### COMPRESSIVE STRENGTH:

10,100 psi @ ASTM D695

### TENSILE STRENGTH:

6,800 psi @ ASTM D638

### ADHESION:

400 psi @ elcometer (concrete failure, no delamination)

### ULTIMATE ELONGATION:

3.9%

### HARDNESS:

Shore D = 80

### GARDNER VARIABLE IMPACTOR:

100 inch pounds direct – passed

### ABRASION RESISTANCE:

Taber abraser CS-17 calibrase wheel with 1000 gram total load and 500 cycles= 41 mg loss

### VISCOSITY:

Mixed = 3000-4000 cps with aggregate (typical)

### DOT CLASSIFICATIONS:

Part A "not regulated"

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

### HEAT DEFLECTION TEMP:

106 degrees F, ASTM D648

### CURE SCHEDULE: (70°F)

pot life – (1 1/2 gallon volume) .....2-3 hours  
tack free (dry to touch) .....6-10 hours  
recoat or topcoat.....16-24 hours  
light foot traffic.....24 hours  
full cure (heavy traffic).....2-7 days

### APPLICATION TEMPERATURE:

60-95 degrees F with relative humidity below 90%. When the R.H. exceeds 70%, let the material induct for 15 minutes before applying (remix before using)

### CHEMICAL RESISTANCE:

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

Recommend DP143/144 or DP015

### TOPCOAT:

For improved chemical resistance or UV stability DP321 or DP324 can be used as a topcoat. (roughen surface before applying a topcoat to insure proper adhesion)

### LIMITATIONS:

- \*Color stability or gloss may be affected by high humidity, low temperature, chemical exposure or lighting such as sodium vapor lights.
- \*Colors may vary from batch to batch. Therefore, use only product from the same batch for an entire job.
- \*Very light and bright colors may not have sufficient hide or a uniform coloring and a suitable color coordinated topcoat is recommended.
- \*Apply a suitable primer before using this product.
- \*This product is not UV color stable. For improved UV stability or uniform coloring, a suitable urethane should be used.
- \*Data based on neat resin without aggregate.
- \*Mixtures of chemicals and applications with exposures to chemicals at elevated temperatures should be thoroughly evaluated before applying.
- \*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.
- \*Physical properties are typical values and not specifications.
- \*See reverse side for limitations of our liability and warranty.

- 1) **PRODUCT STORAGE:** Store product in an area as to bring the material to normal room temperature before using. Continuous storage should be between 60 and 90 degrees F. Low temperatures or great temperature fluctuations may cause product 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. 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:** This product has a mix ratio of 9.65# part A to 4.5# part B and 20# mixed aggregate. 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 liquid parts are combined, add in the provided aggregate and mix well with slow speed mixing equipment such as a jiffy mixer until the material is thoroughly mixed and streak free. After mixing, transfer the mixed material to another pail (the transfer pail) and again remix. The material in the transfer pail is now ready to be applied on the primed substrate. Remix occasionally to prevent settling of aggregate. Improper mixing may result in product failure.
- 4) **PRIMING:** A suitable primer should be used before applying this product. See the front side of this technical data for primer information. If a primer is not used, more porous substrates may cause outgassing and possible surface defects.
- 5) **PRODUCT APPLICATION:** The mixed material can be applied by a serrated squeegee at the recommended thickness, then back roll (very lightly) with a conventional roller tool. Maintain temperatures and relative humidity within the recommended ranges during the application and curing process.
- 6) **RECOAT OR TOPCOATING:** When you recoat or topcoat this product, you must first be sure that the coating has tacked off and then the surface should be deglossed to insure a trouble free bond prior to application of recoats or topcoats. Always remember that colder temperatures will require more cure time for the product before recoating or topcoating can commence. Before recoating or topcoating, check the coating to insure no epoxy blushes were developed (a whitish, greasy film, or deglossing). If a blush is present, it can be removed with a standard type detergent cleaner prior to topcoating or recoating. Many epoxy and urethane coatings are suitable for use as topcoats. Although this product can be used without a topcoat, when color or texture uniformity is important, a topcoat should be used.
- 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.***