

DIAMOND POLYMERS

DP531 – TECHNICAL DATA SEAMLESS EPOXY BINDER

PRODUCT DESCRIPTION:

DP531 is a two component 100% solids epoxy seal coat that can be used either as a coating or filled with paint chips, marble chips and colored sand mixtures to provide an infinite array of color schemes or patterns.

RECOMMENDED FOR:

Recommended for warehouses, kitchens, restrooms, and other areas where either a high build clear product is needed or where a decorative filled floor is desired.

SOLIDS BY WEIGHT:

100% (+/- 1%)

SOLIDS BY VOLUME:

100% (+/- 1%)

VOLATILE ORGANIC CONTENT:

Zero pounds per gallon

COLORS AVAILABLE:

Clear – gardner color 1-2

RECOMMENDED FILM THICKNESS:

16-18 mils

COVERAGE PER GALLON:

90-100 square feet per gallon @ 16-18 mils

PACKAGING INFORMATION

2 gallon kits (17.3 pounds net)

10 gallon kits (86.5 pounds net)

MIX RATIO:

9.4 pounds (1 gallon) part A to 7.9 pounds (1 gallon) part B (volumes approx.)

SHELF LIFE:

1 year in unopened containers

FINISH CHARACTERISTICS:

Gloss (>70 at 60 degrees @ Erichsen glossmeter)

FLEXURAL STRENGTH:

9,300 psi @ ASTM D790

COMPRESSIVE STRENGTH:

10,100 psi @ ASTM D695

TENSILE STRENGTH:

5,200 psi @ ASTM D638

ULTIMATE ELONGATION:

4.2%

GARDNER VARIABLE – IMPACTOR:

50 inch pounds direct – passed

ABRASION RESISTANCE:

Taber abraser CS-17 calibrase wheel with 1000 gram total load and 500 cycles = 22 mg loss

ADHESION:

350 psi @ elcometer (concrete failure, no delamination)

HARDNESS:

Shore D= 73

VISCOSITY:

Mixed= 1000-2500 cps (typical)

DOT CLASSIFICATIONS:

Part A “not regulated”

Part B “CORROSIVE LIQUID N.O.S., 8, UN1790, PGIII”

CURE SCHEDULE:

pot life – 1 gallon volume 15-25 minutes @ 70°F
tack free (dry to touch)..... 5-7 hours @ 70°F
recoat or topcoat..... 8-12 hours @ 70°F
light foot traffic..... 14-16 hours @ 70°F
full cure (heavy traffic)..... 2-7 days @ 70°F

APPLICATION TEMPERATURE:

60-90 degrees F with relative humidity below 85% for best results

CHEMICAL RESISTANCE:

REAGENT	RATING
butanol	B
xylene	B
1,1,1 trichloroethane	B
MEK	A
methanol	A
ethyl alcohol	B
skydrol	B
10% sodium hydroxide	D
50% sodium hydroxide	D
10% sulfuric acid	C
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:

Recommend DP154 clear

TOPCOAT:

Optional: DP321/324 aliphatic urethanes or successive coats of DP531 in aggregate filled systems, with or without a clear urethane topcoat.

LIMITATIONS:

*Color stability may be affected by environmental conditions such as high humidity, temperature, exposure to certain lighting such as sodium vapor lights or chemical exposure.

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

*This product is not UV color stable and may discolor if exposed to sunlight. Although a topcoat is optional, clear aliphatic urethanes will reduce (UV light) color changes.

*This product is not intended for use over previously color coated substrates.

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

*For best results, apply with a 1/4” nap roller.

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

*Apply a suitable primer before using this product.

*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 at normal room temperature before using. Continuous storage should be between 60 and 90°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, oil, 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 9.4# part A to 7.9# part B. 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. 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. 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 brush, roller, or spray. However, the material can also be applied by a suitable squeegee and then back rolled as long as the appropriate thickness recommendations are maintained. 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. This product can be used with various colored sand in a broadcast system or other suitable aggregate can be used in conjunction with this product to achieve a variety of color and application patterns.
- 6) **RECOAT OR TOPCOATING:** If you opt to recoat or topcoat this product, you must first be sure that the coating has tacking off before recoating. 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 must be removed prior to topcoating or recoating. A standard type detergent cleaner can be used to remove any blush. Many epoxy coatings and urethanes are compatible for use as a topcoat for this product as well as multiple coats of this product.
- 7) **CLEANUP:** Use xylol.
- 8) **FLOOR CLEANING:** Caution! Some cleaners may affect the color. Test each cleaner in a small area. 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.***