

DIAMOND POLYMERS

DP100HV – TECHNICAL DATA HIGH PERFORMANCE EPOXY

PRODUCT DESCRIPTION:

DP100HV is a two component 97% solids epoxy colored coating designed for applications where a high build chemical resistant floor is needed. The excellent mar and abrasion resistance limits topcoating this product, although intercoat adhesion for multiple coats of this product are suitable.

RECOMMENDED FOR:

Recommended for a high build topcoat on concrete or masonry.

SOLIDS BY WEIGHT:

97% (+/- 1%)

SOLIDS BY VOLUME:

96% (+/-1%)

VOLATILE ORGANIC CONTENT:

Less than 0.5#/gallon

STANDARD COLORS:

White, off white, light gray, medium gray, tile red, and beige

RECOMMENDED FILM THICKNESS:

15-30 mils

COVERAGE PER GALLON:

53-106 square feet per gallon @ 15-30 mils

PACKAGING INFORMATION

3 gallon kit (27.5 pounds net approximately)

15 gallon kits (137.5 pounds net approximately)

MIX RATIO:

9.55 pounds (1 gallon) part A to 4.2 pounds (.50 gallons) part B (volumes approx.) (standard colors)

SHELF LIFE:

1 year in unopened containers

FINISH CHARACTERISTICS:

Gloss (80-105 at 60 degrees @ Erichsen glossmeter)

ABRASION RESISTANCE:

Taber adrasor CS-17 calibrase wheel with 1000 gram total load and 500 cycles = 19 mg loss

ADHESION:

420 psi @ elcometer (concrete failure, no delamination)

VISCOSITY:

Mixed= 1500-2200 cps (typical, most colors)

DOT CLASSIFICATIONS:

Part A "not regulated"

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

FLEXURAL STRENGTH:

11,700 psi @ ASTM D790

COMPRESSIVE STRENGTH:

13,600 psi @ ASTM D695

TENSILE STRENGTH:

7,900 psi @ ASTM D638

GARDNER VARIABLE IMPACTOR:

40 inch pounds direct – passed

ULTIMATE ELONGATION:

1.7%

HARDNESS:

Shore D= 90

CURE SCHEDULE: (70°)

pot life – 1 1/2 gallon volume23-33 minutes

tack free (dry to touch)..... 5-7 hours

recoat or topcoat..... 8-14 hours

light foot traffic.....14-18 hours

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

APPLICATION TEMPERATURE:

50-90 degrees F with relative humidity below 85% for best results.

CHEMICAL RESISTANCE:

REAGENT	RATING
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xylene	C
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1,1,1 trichlorethane	B
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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	E
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50% sodium hydroxide	E
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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:

Recommend DP015, DP143/144

TOPCOAT:

None normally needed

LIMITATIONS:

*Color stability or gloss may be affected by environmental conditions such as high humidity 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 will discolor when exposed to UV light or some other forms of lighting such as sodium vapor lights.

However, this product should not be topcoated without a thorough field test to evaluate coating compatibility and adhesion characteristics.

*When applying coatings that are light in color or bright, additional coats of this product or an appropriately colored primer may be necessary.

*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.

*Improper mixing may result in product failure.

*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 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 great 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. 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 9.55# part A to 4.2# part B for standard colors. Standard packages are in premeasured 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.
- 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 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. 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) **RECOATING:** If you opt to recoat this product, you must first be sure that the coating has tacked off before recoating. However, all previous coats should be deglossed to insure a trouble free bond prior to application of recoats. Always remember that colder temperatures will require more cure time for the product before recoating can commence. Before recoating, 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 recoating. A standard type detergent cleaner can be used to remove any blush. If you plan to topcoat this product with another epoxy or urethane, always check compatibility and adhesion characteristics prior to topcoating. Multiple coats of this product are compatible.
- 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.***