

DIAMOND POLYMERS

DP310HWS – TECHNICAL DATA (HIGH WEAR SYSTEM) MOISTURE CURED URETHANE

PRODUCT DESCRIPTION:

DP310HWS is a two component product consisting of a moisture cured polyurethane (TDI based) floor coating/sealer and heat treated corundum form crystalline tabular alumina. When combined, they produce a slip resistant coating that is extremely wear resistant. In addition, this product has excellent chemical resistance and flexibility.

RECOMMENDED FOR:

Recommended for areas where wear capabilities are of primary concern. Accordingly, the addition of the specialty aggregate can increase the wear capabilities of the product by greater than 50% when compared to the unmodified DP310. This product, which incorporates a non-clear tabular alumina, is not intended for use over colored products and may lose some of the clear characteristics associated with the unmodified DP310.

SOLIDS BY WEIGHT:

35% (+/- 2%) (liquid only)

41% (with added aggregate)

SOLIDS BY VOLUME:

31% (+/- 2%)

34% (with added aggregate)

VOLATILE ORGANIC CONTENT:

4.93 pounds per gallon (liquid only)

4.38 pounds (with added aggregate)

COLOR:

Clear (not UV color stable)

RECOMMENDED FILM THICKNESS:

4-5 mils per coat wet thickness (yields 1-2 mils dry)

COVERAGE PER GALLON:

320 to 400 square feet @ 4-5 mils wet thickness

PACKAGING INFORMATION:

Liquids available in 1 gallon, 5 gallon, and 55 gallon containers
Aggregate available and pre-packaged for use with each gallon of liquids

MIX RATIO:

One gallon of liquid to 1.60# aggregate

SHELF LIFE:

1 year in unopened containers

FINISH CHARACTERISTICS:

Gloss (>40 at 60 degrees @ Erichsen glossmeter)

IMPACT RESISTANCE:

Gardner Impact, direct & reverse=160 in lb (passed)

ABRASION RESISTANCE:

Taber abrasor CS-17 calibrase wheel with 1000 gram total load and 500 cycles= 27 mg loss (liquids only) and 12 mg loss (with added aggregate)

HARDNESS:

Shore D= 64

FLEXIBILITY:

No cracks on a 1/8" mandrel

ADHESION:

350 psi @ elcometer (concrete failure, no delamination) (applied over NP154 clear primer)

VISCOSITY:

Less than 100 cps (typical for liquid)

DOT CLASSIFICATIONS:

"FLAMMABLE LIQUID N.O.S., 3, UN1993, PGII" (liquids)

CURE SCHEDULE: (70°F)

pot life – (1 gallon volume).....3-5 hours

tack free (dry to touch).....2-4 hours

recoat or topcoat.....6-12 hours

light foot traffic.....6-10 hours

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

APPLICATION TEMPERATURE:

50-90 degrees F with relative humidity between 60% and 90%.

CHEMICAL RESISTANCE:

REAGENT	RATING
acetic acid 5%	A
xylene	C
methyl alcohol	A
gasoline	D
50% sodium hydroxide	D
10% sulfuric	B
10% hydrochloric acid	C
20% nitric acid	B
ethylene glycol	C

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:

None recommended

LIMITATIONS:

*Clarity of color or gloss may be affected by high humidity, low temperatures, chemical exposure or exposure to lighting such as sodium vapor lights.

*For best results use a high quality 3/8" nap roller.

*Slab on grade requires moisture barrier.

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

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

*Color may vary from batch to batch.

*Use a suitable primer

*If recoating after 24 hours, degloss the surface.

*Concrete must be thoroughly dry before application.

*Physical properties are typical values and not specifications.

*See reverse side for application instructions.

*See reverse side for limitations of liability & warranty.

INSTRUCTIONS^(NP310HWS)

- 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.
- 2) **SURFACE PREPARATION:** Surface preparation will vary according to the type of complete system to be applied. For a one or two coat thin build system (3-10 mils dry) we recommend either mechanical scarification or acid etching until a suitable profile is achieved. For a complete system build higher than 10 mils dry, we recommend a fine brush blast (shot blast). All dirt, oil, dust, foreign contaminants 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 liquid portion of this product is a one component moisture cure product. Before using stir well. After stirring, add in the provided aggregate. Avoid whipping air into the coating when stirring.
- 4) **PRODUCT APPLICATION:** The material can be applied by brush or roller. Mix the material occasionally to prevent the settling out of the added aggregate. Maintain temperatures within the recommended ranges during the application and curing process. Properly prime the substrate. Product is not UV stable and will discolor when exposed to sunlight. Do not apply too thick.
- 5) **RECOAT OR TOPCOATING:** Multiple coats of this product are acceptable. If you opt to recoat this product, you must first be sure that all of the solvents have evaporated from the coating during the curing process. The information on the front side are reliable guidelines to follow. However, it is best to test the coating before recoating or topcoating. This can be done by pressing on the coating with your thumb to verify that no fingerprint impression is left. If no impression is created, then the recoat can be started. Always remember that colder temperatures will require more cure time for the product before recoating can commence. Before recoating or topcoating, check the coating to insure no contaminants exist such as an epoxy blush. If necessary, clean the surface prior to recoating with a standard type cleaner. When recoating this product with subsequent coats of the urethane, it is advisable to apply the recoat before 24 hours passes. Also, it is advisable to degloss the previous coat to insure a trouble free bond, especially if more than 24 hours has elapsed since the previous coat. Because the product is not UV color stable, it is not suitable over other colored coatings.
- 6) **CLEANUP:** Use ketone solvents
- 7) **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.
- 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 sales of our products. Our products contain chemicals that may **CAUSE SERIOUS PHYSICAL INJURY. BEFORE USING, READ THE MATERIAL SAFETY DATA SHEET AND FOLLOW THE PRECAUTIONS TO PREVENT BODILY HARM.***