

DIAMOND POLYMERS

DP324C – TECHNICAL DATA

STATIC DISSIPATING (VOC COMPLIANT) URETHANE

PRODUCT DESCRIPTION:

DP324C is a two component aliphatic polyurethane floor coating that exhibits excellent characteristics for abrasion, chemical resistance, flexibility, weathering, UV stability and static dissipative properties. The electroconductive powders used will not slough off or abrade and retain their conductive properties regardless of temperature, and unlike ionics, the performance is independent of humidity so it is ideal for any environment.

RECOMMENDED FOR: Recommended for computer rooms, laboratories, aircraft hangers, exterior tanks, indoor or outdoor service and chemical exposure areas with regard to concrete, cement, brick, masonry or metal. This product will help reduce static buildup not attainable from an unmodified urethane.

SOLIDS BY WEIGHT:

Mixed= 70% (+,-2%)

SOLIDS BY VOLUME:

Mixed= 63.8 (+,-2%)

VOLATILE ORGANIC CONTENT:

Less than 3.0 pounds per gallon

STANDARD COLORS:

light gray, medium gray, and tile red

REQUIRED FILM THICKNESS:

3-5 mils per coat wet thickness (yields 2-3 mils dry)

COVERAGE PER GALLON:

320 to 500 square feet @ 3-5 mils wet thickness

PACKAGING INFORMATION

3 gallon and 15 gallon kits (volumes approximate)

MIX RATIO:

2 parts A to 1 part B by volume

SHELF LIFE:

1 year in unopened containers

FINISH CHARACTERISTICS:

gloss (>60 at 60 degrees @ Erichsen glossmeter)

ABRASION RESISTANCE:

Taber abrasor CS-17 calibrase wheel with 1000 gram total load and 500 cycles = 23.0 mg loss

IMPACT RESISTANCE:

Gardner Impact, direct & reverse = 150 in. lb. (passed)

FLEXIBILITY:

No cracks on a 1/8" mandrel

VISCOSITY:

800-1100 cps (typical)

ADHESION:

380 psi @ elcometer (concrete failure, no delamination with DP144C primer)

DOT CLASSIFICATIONS:

"FLAMMABLE LIQUID N.O.S., 3, UN1993, PGIII"

HARDNESS:

Shore D = 72

APPLICATION TEMPERATURE:

45-90 degrees F.

CURE SCHEDULE: (70°F)

pot life – 1 1/2 gallons volume 2-4 hours
tack free (dry to touch)..... 5-6 hours
recoat or topcoat..... not recommended
light foot traffic..... 7-12 hours
full cure (heavy traffic)..... 3-5 days

CHEMICAL RESISTANCE:

REAGENT	RATING
xylene	E
gasoline	D
50% sodium hydroxide	D
10% sulfuric	D
10% hydrochloric acid	D
20% nitric acid	C
ethylene glycol	D

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 color coordinated DP144C

TOPCOAT:

None recommended

ELECTRICAL RESISTANCE: ASTM F150-89

MEASUREMENT LOCATION	RESISTANCE (OHMS)
1. (144C/324C)	1.32e6
2.	1.25e6
3.	2.17e6
4.	2.12e6

LIMITATIONS:

- *Colors 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
- *Physical properties are typical values and not specifications
- *Do not topcoat the primer until the resistance is 10⁶ ohms or lower. In some instances, it will require 24 hours before applying the DP324C. (it is best to test the primer before topcoating.
- *Tire contact may cause staining and discoloration
- *Colors may vary from batch to batch.
- *See reverse side for application instructions.
- *See reverse side for limitations of our liability and warranty.

MIXING AND APPLICATION INSTRUCTIONS (DP324C)

THIS PRODUCT IS NOT FOR A CONDUCTIVE COATING SYSTEM. THIS SYSTEM IS NOT INTENDED FOR AREAS EXPOSED TO EXPLOSIVE MEDIA SUCH AS AMMUNITION PLANTS. THIS MATERIAL IS PROVIDED AS A STATIC DISSIPATIVE COATING. REVIEW THE DATA ON THE FRONT SIDE OF THIS TECHNICAL DATA UNDER ELECTRICAL RESISTANCE FOR TESTING RESULTS. REVIEW YOUR ELECTRICAL RESISTANCE REQUIREMENTS BEFORE INSTALLING THIS PRODUCT. DO NOT USE WAXES UNLESS THEY ARE SPECIFICALLY FORMULATED AND RECOMMENDED FOR ANTI STATIC APPLICATIONS. ALWAYS APPLY TEST PATCHES OF YOUR SELECTION TO CHECK CONDUCTIVITY PRIOR TO APPLICATION AND TO BECOME FAMILIAR WITH THE PRODUCTS APPLICATION PROCEDURE.

- 1) PRODUCT STORAGE:** Store product in an area so as to bring the material to normal room temperature before using.
- 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.
- 3) PRODUCT MIXING:** Mix two parts A to one part B by volume. 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.
- 4) PRIMER APPLICATION:** Apply an appropriate conductive primer before applying the urethane. See front side of the technical data for primer selection. Review the technical data sheet for the primer selection used. The primer is best earthed with strips of copper about 20 centimeters long, which are anchored in the subfloor and connected to a water pipe or neutral conductor in the electric wiring system. Two earthing points normally suffice for a single room. One earth per 200 square meters of floor space is the general rule for large areas. After the substrate is earthed, Apply the primer.
- 5) PRODUCT APPLICATION:** The mixed material can be applied by brush or roller to any suitable conductive primer. Maintain temperatures within the recommended ranges during the application and curing process. Allow sufficient time for the primer to cure. see front side under LIMITATIONS for testing procedures. Before coating, check the primer to insure no epoxy blushes were developed (a whitish, greasy film or deglossing). If a blush is present, it must be removed prior to coating. Thoroughly mix part A and part B together for the DP324C using slow speed mixing equipment. Apply the DP324C according to the technical data specifications. Be sure to apply the product at the specified coverage rate or recommended thickness.
- 6) RECOAT OR TOPCOATING:** Multiple urethane topcoats cannot be applied. Always remember that colder temperatures will require more cure time before topcoating the primer. Adequate leakage resistance should be less than 10^8 ohms measured at 100 to 1000 volts. Typical system applications with the DP144C primer are 10^5 to 10^7 ohms.
- 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

WARNING: Antistatic flooring cannot provide protection against discharges from the power main. If danger of coming in contact with the mains cannot be completely ruled out, the usual safety regulations must be followed to the letter. Although this publication describes how our products may be applied to achieve antistatic flooring and the information given is based on the present state of our knowledge, all recommendations are made without liability on our part since the actual application of our products is not in our hands and special conditions prevailing at a particular job sight might negatively influence a floors antistatic properties. Buyers and users of our products should make their own assessment of the floors antistatic properties immediately after it has been installed and at regular intervals thereafter. We warrant that our product is manufactured to the specifications as stated here or in other publications. All other 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. **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. Uncured epoxy resins, polymers and their curing agents may be **ALKALINE, TOXIC or BOTH**, depending on the particular system. They may cause **ALLERGIC REACTIONS or HYPERSENSITIVITY REACTIONS. BEFORE USING any material, READ THE MATERIAL SAFETY DATA SHEET AND FOLLOW ALL PRECAUTIONS TO PREVENT BODILY HARM.****