

DIAMOND POLYMERS

DP183C – TECHNICAL DATA

STATIC DISSIPATING HIGH BUILD (QUICK SET) EPOXY TOPCOAT

PRODUCT DESCRIPTION:

DP183C when used in conjunction with a suitable primer, provides excellent abrasion resistance, chemical resistance and static dissipative properties. The electroconductive ingredients used will not wear off and retain their conductive properties regardless of temperature, and unlike ionics, the performance is independent of humidity.

RECOMMENDED FOR:

Recommended for computer rooms, laboratories, hospitals, chemical plants, solvent storage facilities and exposure areas with regard to concrete, cement, masonry or metal.

SOLIDS BY WEIGHT:

98% (+/- 1%)

SOLIDS BY VOLUME

97% (+/- 1%)

VOLATILE ORGANIC CONTENT:

Less than 0.50 pounds per gallon (mixed)

STANDARD COLORS:

Light gray and medium gray

RECOMMENDED FILM THICKNESS:

Apply at 25 mils wet thickness. (Do not apply thicker than 30 mils or less than 20 mils)

COVERAGE PER GALLON:

64 square feet per gallon @ 25 mils

PACKAGING INFORMATION

3 gallon and 15 gallon kits (volumes approximate)

MIX RATIO:

10.9 pounds (1 gallon) part A to 5.0 pounds (0.50 gallons) part B (volumes approx) (standard colors) Other colors will vary by weight.

SHELF LIFE:

½ year in unopened containers

FLEXURAL STRENGTH:

12,400 psi @ ASTM D790

COMPRESSIVE STRENGTH:

10,600 psi @ ASTM D695

TENSILE STRENGTH:

8,100 psi @ ASTM D638

ADHESION:

350 psi @ elcometer (concrete failure, no delamination)

FINISH CHARACTERISTICS:

Gloss (>50 at 60 degrees @ Erichsen glossmeter)

HARDNESS:

Shore D= 75

GARDNER VARIABLE IMPACTOR:

50 inch pounds direct – passed

ABRASION RESISTANCE:

Taber abraser CS-17 calibrase wheel with 1000 gram total load and 500 cycles= 20 mg loss

VISCOSITY:

Mixed = 1,000-2,000 cps (typical, most colors)

DOT CLASSIFICATIONS:

Part A “not regulated”

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

APPLICATION TEMPERATURE:

50-90 degrees F with relative humidity below 85%

CURE SCHEDULE: (70°F)

pot life – (1 gallon- typical)15-20 minutes
(150g mass)20-30 minutes
tack free (dry to touch) @ 70°F.....3-5 hours
recoat or topcoat.....not recommended
light foot traffic.....8-12 hours
full cure (heavy traffic).....2-5 days

CHEMICAL RESISTANCE:

REAGENT	RATING
xylene	B
gasoline	C
50% sodium hydroxide	E
10% sulfuric acid	D
70% sulfuric acid	D
10% HCl (aq)	D
20% nitric acid	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:

Recommended DP145CP black.

TOPCOAT:

None recommended

ELECTRICAL RESISTANCE: ASTM F150-89

MEASUREMENT LOCATION	RESISTANCE (OHMS)
1. (145CP/183C)	3.24e6
2.	5.36e6
3.	2.82e6
4.	4.14e6

LIMITATIONS:

- * Color or gloss may be affected by high humidity, chemical exposure, application method or certain types of lighting such as sodium vapor or UV light.
- * 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.
- * Product color will vary from batch to batch.
- **Do not topcoat over the primer until the resistance is 10⁶ ohms or lower. In some instances, it will require 24 hours for the primer to cure before applying the 183C. (test primer before coating).
- * Use an air release roller tool and backroll before the coating tacks off, when necessary.
- * This product is not UV color stable.
- * For best leveling properties apply at or near 20-25 mils thick. Thinner application will provide less leveling and a more irregular surface.
- * Physical properties listed on this technical data sheet are typical values and not specifications.
- * See reverse side for application instructions, limitations of our liability

MIXING AND APPLICATION INSTRUCTIONS (DP183C)

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 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) PRIMER APPLICATION: Apply an appropriate conductive primer before applying the DP183C. 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 sq. meters of floor space is the general rule for large areas. After the substrate is earthed, Apply the primer.

4) PRODUCT MIXING: Mix two parts A to one part B by volume [(10.9# part A) to (5.0# part B)]. This product should be mixed with a standard type paint shaker prior to combining the two components. Weight mix ratios will be more accurate than volume mix ratios if breaking down the premeasured kits. 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. Improper mixing may result in product failure. Apply only over concrete. Do not apply over other coatings not specifically recommended. **IMPORTANT NOTICE:** Any compacted settlement in the bottom of containers must be thoroughly mixed into the liquid before using or mixing with the other components.

5) PRODUCT APPLICATION: This product is intended for use by professional installers that have used this type of product before. The mixed material can be applied by brush or roller to any suitable conductive primer. If conditions (weather, temperature, air movement, high humidity etc.) do not facilitate complete air release, use an air release roller tool prior to the coating tacking off. Maintain temperatures within the recommended ranges during the application and curing process. Allow 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) and remove if present. Apply the DP183C according to the technical data specifications. Be sure to apply the product at the specified coverage rate or recommended thickness only. This product has a short pot life and detail should be given to trimming and tie-ins to apply material wet on wet to avoid lap marks and tie-in discolorations. Make sure that when applying to over-roll the area well to make sure the primer is thoroughly wetted out to avoid primer spots showing through the coating.

6) RECOAT OR TOPCOATING: None recommended. Adequate leakage resistance should be less than 10^9 ohms measured at 100 to 1000 volts. Typical system applications with the DP145CP black primer topcoated with the DP183C are 10^5 to 10^7 ohms, dependent on the type of substrate.

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 strict quality assurance specifications and that the information supplied by us is accurate to the best of our knowledge. 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. Our products contain chemicals that may be CAUSE SERIOUS PHYSICAL INJURY. BEFORE USING any material, READ THE MATERIAL SAFETY DATA SHEET AND FOLLOW ALL PRECAUTIONS TO PREVENT BODILY HARM.*