

## NP449 TECHNICAL DATA (Polyaspartic Sealer)

**PRODUCT DESCRIPTION:** NP449 is a two component 95% solids polyaspartic aliphatic polyaspartic sealer. This material can be used as the base coat and the topcoat over paint chip decorative broadcasts or colored sand broadcasts to provide an infinite array of color schemes or patterns. NP449 has excellent chemical resistance, hardness, abrasion resistance, UV stability and has an excellent clear gardner color. However, the outstanding feature of this product is its quick tack free time for foot traffic.

**RECOMMENDED FOR:** Recommended for areas where a medium build broadcasted floor is desired and installation downtime is very limited. This material can also be applied over a broadcasted or troweled system as a thin to medium build sealer.

**SOLIDS BY WEIGHT:** 95% (+/- 1%)

**SOLIDS BY VOLUME:** 94% (+/-1%)

**VOLATILE ORGANIC CONTENT:**

Less than 50 grams per liter

**COLORS AVAILABLE:** Clear – gardner color 1-2

**RECOMMENDED FILM THICKNESS:** 8-12 mils.

(when applying directly to concrete, precautions should be taken to properly prepare the substrate and the moisture content of the substrate should be tested. Do not apply to damp surfaces.)

**COVERAGE PER GALLON:** 130 – 200 sq. ft. per gallon

**PACKAGING INFORMATION:** 2.5 gallon kit (other special kit sizes are available upon request. (packaging information is approximate net volume)

**MIX RATIO:** 12.95 pounds part A to 9.3 pounds part B. The mix ratio is approximately 1.5 gallons part A to 1 gallon part B.

**SHELF LIFE:** 6 months in unopened containers

**FINISH CHARACTERISTICS:** Gloss (>70 at 60 degrees @ glossmeter)

**COMPRESSIVE STRENGTH:** 11,500 psi @ ASTM D695

**TENSILE STRENGTH:** 3,800 psi @ ASTM D638

**ULTIMATE ELONGATION:** 2.4%

**HARDNESS:** Shore D= 75

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

**ADHESION:** 340 psi @ elcometer (concrete failure, no delamination, applied to shotblasted concrete)

**VISCOSITY:** Mixed= 1,000-2,000 cps (typical)

**DOT CLASSIFICATIONS:**

Part A “not regulated”

Part B “not regulated”

**PRIMER:**

Recommend a suitable epoxy broadcasted base system and/or adhesion testing prior to use.

**TOPCOAT:**

Optional: none required

### CURE SCHEDULE (70 Degrees F), 70% relative humidity

Pot Life (150 gram mass)	< 2 hours
Actual usable working time is approximately 10-15 minutes, depending on environmental conditions and volumes	
Tack Free (Dry to Touch)	3-4 hours
Recoat or Topcoat	3-5 hours
Light Foot Traffic	3-5 hours
Full Cure (Heavy Traffic)	24-48 hours
Application Temperature: 50-90 degrees F with relative humidity below 85%	

### CHEMICAL RESISTANCE

xylene	C
1,1,1 trichloroethane	B
MEK	A
Methanol	B
ethyl alcohol	B
Skydrol	C
50% sodium hydroxide	E
10% sulfuric acid	C
10% HC1 (aq)	C
5% acetic 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.	

### LIMITATIONS:

Color stability may be affected by environmental conditions like high humidity/chemical exposure. Exposure to some types of lighting such as sodium vapor lights may cause discolorations.

Clarity of color may vary from batch to batch. Substrate temperature must be 5°F above dew point.

Too thick of an application may result in surface imperfections or bubble generation.

Always apply a test patch to determine product suitability and adhesion performance for your proposed application method and procedures.

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

Do not expose this product to water until fully cured. See reverse side for application instructions.

Physical properties are typical values and not specifications. See reverse side for limitations of our liability and warranty. Relative humidity can affect dry time and gel time – See page 2

## MIXING AND APPLICATION INSTRUCTIONS: NP449 Polyaspartic Sealer

**PRODUCT STORAGE:** Store product at normal room temperature before using. Continuous storage should be between 60 and 90 degrees F. Low temperature or temperature fluctuations may cause crystallization.

**SURFACE PREPARATION:** The most suitable surface preparation would be a 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. For applications directly over concrete, Testing should be performed to confirm a moisture vapor emission rate below 3 lb/24hr/1000 ft<sup>2</sup> per ASTM F1869

**PRODUCT MIXING:** This product has a mix ratio of 12.95# part A to 9.3# part B. Standard packages are in pre-measured kits and should be mixed as supplied in the kit. 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.

**PRIMING:** A suitable primer should be used before applying this product. See the front side of this technical data for primer information. However, whether a primer is used or not, it is advisable to apply a test patch prior to using this product to determine if the adhesion characteristics are suitable for the service environment.

**PRODUCT APPLICATION:** The mixed material can be applied by brush, serrated squeegee, or roller. Maintain temperatures and relative humidity within the recommended ranges during the application and curing process. The product can be used as a topcoat to seal in the broadcasted paint chip or broadcasted quartz base for the final coat. Use an air release roller tool when needed. Improper mixing may result in product failure. It should be pointed out that relative humidity can have a dramatic influence on the curing characteristics. The product will dry quicker and have less working time when the relative humidity is higher while a lower relative humidity will lengthen the dry time and working time. Mix only an amount that can be applied in the time allotted. Be sure that any tie-ins to previously applied material is also within the recommended time allotted for use as the previously applied material may begin to tack off in a short period of time.

**RECOAT OR TOPCOATING:** This material can be applied in multiple layers to increase build or can also be used as the final topcoat to seal in the aggregate filled base system. If you opt to recoat or topcoat this product, you must first be sure that the coating has tacked off before recoating. Always remember that colder temperatures will require more cure time for the product before recoating or topcoating can commence.

**CLEANUP:** Use xylol

**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.

**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. Dependent on actual complete system application, surface may be slippery, especially when wet or contaminated; keep surface clean and dry.

### **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. Any use or application other than recommended herein is the sole responsibility of the user. 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.***

COPYRIGHT 11/9/20 NATIONAL POLYMERS INC.