



## **POLYURETHANE 500**

### **PRODUCT DESCRIPTION AND USE**

Polyurethane 500 is a two component, water-based aliphatic polyurethane that provides an excellent combination of high gloss, hardness, stain resistance and gloss retention under heavy foot traffic. The material cures quickly, allowing light traffic in 4-6 hours. Resistance to yellowing and loss of gloss under UV light is excellent. For exterior applications, a special UV absorber package can be added to ensure long term UV resistance. Polyurethane 500 is user and environmentally friendly. It is VOC compliant in California.

Polyurethane 500 has been developed as a high performance finish coat for various seamless flooring, coating, and architectural concrete applications where odor cannot be tolerated. It is the ideal top coat for areas that require maximum gloss retention, ease of cleaning, and resistance to heavy foot traffic. Typical areas of application would include clean rooms, hospitals, concrete counter tops and high traffic retail areas. Polyurethane 500 is also very well suited as a high performance coating for hardwood floors.

### **Chemical Composition**

Polyester and acrylic polyols crosslinked with aliphatic polyisocyanate.

### **Colors**

Clear only, available in high gloss or satin.

### **Limitations**

- Application rate must be kept above 200 sq. ft. per gallon to avoid curing bubbles that can occur in heavy applications.
- Application over textured surfaces such as trowel-knockdown polymer concrete must be done with a  $\frac{3}{4}$  inch nap roller and pulled tightly to avoid leaving excessive product in recessed areas.
- Work life is considerably shortened over 90 degrees F.
- Do not apply material if the humidity is over 85% and ventilation is poor. Improper cure will result.
- Material not suited for vehicle areas. Use Polyurethane 501 for these applications.

### **TECHNICAL DATA**

#### **Physical Properties**

Mixing Ratio, by Volume .....	4-1
Solids Content, by Weight .....	48%
VOC, grams/liter .....	50
Pot Life (77 degrees, 1 quart mass) .....	3 hours
Pot Life (90 degrees, 1 quart mass) .....	1 hour

Pot Life is reduced by increasing temperature and/or mass.

### **WARRANTY INFORMATION**

Arizona Polymer Flooring guarantees that this product is free from manufacturing defects and complies with our published specifications. In the event that the buyer proves that the goods received do not conform to these specifications or were defectively manufactured, the buyer's remedies shall be limited to either the return of the goods and repayment of the purchase price or replacement of the defective material at the option of the seller. ARIZONA POLYMER FLOORING MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. Arizona Polymer Flooring shall not be liable for damages caused by application of its products over concrete with excessive moisture vapor transmission or alkalinity. Arizona Polymer Flooring shall not be liable for any injury incurred in a slip and fall accident. Manufacturer or seller shall not be liable for prospective profits or consequential damages resulting from the use of this product.

### **HIGH PERFORMANCE CONCRETE COATING SYSTEM**

## **TECHNICAL DATA (Cont'd.)**

### Cure Times (77 degrees)

Dry to Touch .....	2 hours
Light Traffic .....	4-6 hours
Full Cure .....	7 days

### **Performance Properties**

Gloss (60°) .....	88
Tabor Abrasion - (1000 gm. load 1000 cycles, CS 17 wheel) .....	45 mg. loss

## **CHEMICAL AND STAIN RESISTANCE (ASTM D-1308 24 HOUR IMMERSION)**

Urine .....	no effect
Blood.....	no effect
Whiskey .....	no effect
Black Ink .....	no effect
Brake Fluid.....	severe softening
Gasoline.....	no effect
Skydrol.....	no effect
Xylene.....	severe softening
MEK .....	film destroyed
50% Sodium Hydroxide .....	no effect
10% Hydrochloric Acid .....	no effect
10% Sulphuric Acid .....	no effect
10% Acetic Acid.....	no effect

## **GENERAL INFORMATION**

### **Surface Preparation**

Polyurethane 500 is intended to be used over primed surfaces. Surface must be sound and free of any type of contaminant which may interfere with proper bonding. Polyurethane 500 will bond to many previously coated surfaces with cleaning being the only required surface preparation. However, fully cured polyurethane or epoxy coatings must be cleaned and abraded prior to recoating. If the applicator is unsure about intercoat adhesion, field testing should be conducted prior to application.

### **Mixing Instructions**

Mix only that amount of material that can be used in a 3 hour period at 77°F. Higher temperatures reduce work time. In hot weather, it is advisable to mix smaller batches. Premix Part A before adding part B. Mixing ratio is 4 parts A to 1 part B. **Add part B slowly while mechanically agitating part A with a slow speed drill. Mix for 2 full minutes until completely homogenized. Material cannot be properly mixed by hand. Use a small "squirrel cage" mixer for mixing small amounts.**

### **Application Recommendations**

Polyurethane 500 should be applied 200-350 sq. ft. per gallon by brush, roller or airless sprayer. Applications heavier than 200 sq. ft. per gallon will create bubbles in the cured coating. Thin with small amounts of water if necessary during application to keep a low viscosity. Material can be recoated as soon as it has become tack free, usually 2-3 hours.

### **Recoat Information**

Polyurethane 500 has excellent adhesion to itself for an indefinite period. However, the surface to be recoated must be clean and free of contaminants which may interfere with bonding.

**Handling Precautions**

Use only with adequate ventilation. Appropriate cartridge-type respirator must be used during application in confined areas. Avoid contact with skin; wear protective gloves. Read Material Safety Data Sheet before using.

**Slip and Fall Precautions**

OSHA and the American Disabilities Act (ADA) have now set enforceable standards for slip-resistance on pedestrian surfaces. The current coefficient of friction required by ADA is .6 on level surfaces and .8 on ramps. Arizona Polymer Flooring recommends the use of angular slip-resistant aggregate in all coatings or flooring systems that may be exposed to wet, oily or greasy conditions. It is the contractor and end users' responsibility to provide a flooring system that meets current safety standards. Arizona Polymer Flooring or its sales agents will not be responsible for injury incurred in a slip and fall accident.