



## **POLYUREA 5001**

### **PRODUCT DESCRIPTION AND USE**

Polyurea 5001 is a two-component, ultra high solids, aliphatic polyurea/polyaspartic hybrid. It is a pigmented material capable of obtaining excellent adhesion to dry, properly prepared concrete. Polyurea 5001 is a low viscosity, easy to handle product that gives very high gloss finishes that are both hard and abrasion resistant. The material releases soils easily and has excellent resistance to a broad range of chemicals. It is a very fast curing material and may be used at temperatures as low as 20°F, making it ideal for use in cold weather or rapid turnaround projects.

Polyurea 5001 was developed as a fast cure primer and finish coat for various protective coating and seamless flooring applications. Its use as a primer and base coat in color chip flooring allows for the application to be completed in one day, even at lower temperatures. As a fast curing high performance finish coat, typical uses would be automotive repair facilities, clean rooms, and as a top coat in various aggregate-filled epoxy flooring systems.

### **Chemical Composition**

Hydroxyl functional polyaspartic and amine crosslinked with aliphatic isocyanate.

### **Colors**

16 standard colors available, plus clear.

### **Limitations**

- Surface must be mechanically prepared and dry.
- Do not allow to puddle. For fastest cure, keep wet film thickness below 8 mils (200 sq. ft. per gallon)
- When using as a primer over concrete, must be reduced 20% with acetone.

### **TECHNICAL DATA**

#### **Physical Properties**

Mixing Ratio, by Volume .....	1-1
Solids Content, by Weight .....	95%
Solids Content, by Volume .....	91%
V.O.C. ....	50 gms/ltr.
Pot Life (77 degrees, 25% R.H.).....	30 minutes

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

### **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.

### **SPECIALIZED FLOOR COATINGS & DECORATIVE CONCRETE SYSTEMS**

**Physical Properties (Cont'd.)**

Dry Times (77°F, 25% R.H.)	
Dry to Touch.....	1 hour
Light Traffic.....	2 hours
Vehicle Traffic.....	24 hours
Full Chemical Resistance.....	72 hours
Dry Times (30°F, 25% R.H.)	
Dry to Touch.....	90 minutes
Light Traffic.....	3 hours
Vehicle Traffic.....	48 hours
Full Chemical Resistance.....	72 hours

**Performance Properties**

Gloss (60 degrees) .....	93
Hardness (Pendulum).....	178
Tabor Abrasion (1000 gm. load 1,000 cycles, CS17 wheel) .....	42 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.....	no effect
Gasoline.....	no effect
Skydrol B-4 .....	no effect
Hydraulic Fluid #83282 .....	no effect
Mineral Spirits .....	no effect
Xylene.....	no effect
MEK .....	film softened
50% Sodium Hydroxide .....	no effect
25% Hydrochloric Acid .....	no effect
25% Sulphuric Acid .....	no effect
25% Acetic Acid.....	no effect
25% Nitric Acid .....	film blistered

**GENERAL INFORMATION**

**Moisture Vapor Emissions/Alkalinity Precautions**

All interior concrete floors not poured over an effective moisture vapor retarder are subject to possible moisture vapor transmission and related high levels of alkalinity that may lead to blistering and failure of the coating system. It is the coating applicator’s responsibility to conduct calcium chloride and relative humidity probe testing to determine if excessive levels of vapor emissions or alkalinity are present before applying any coatings. These test kits are available from APF. Arizona Polymer Flooring and its sales agents will not be responsible for coating failures due to undetected moisture vapor emissions or related high levels of alkalinity.

### **Surface Preparation**

If application is done directly over concrete, the surface must be clean, dry and profiled. Do not acid etch. Preparation must be done by shotblasting or diamond grinding. Surface must have a profile that resembles 100-120 grit sandpaper. If diamond grinding, do not polish the surface. 30 grit diamonds are recommended. Vacuum the surface thoroughly after mechanical preparation. Fully cured, previously coated surfaces must be cleaned and sanded lightly with 80-100 grit sandpaper or otherwise mechanically abraded before recoating. If multiple coats of Polyurea 5001 are applied, apply additional coats as soon as possible. If more than 24 hours has elapsed or the coating cannot be indented with a fingernail, abrade surface with 80-100 grit sandpaper or screen to ensure intercoat adhesion.

### **Mixing Instructions**

**The material mixes 1 Part A to 1 Part B by volume. Mix for 1 full minute using a slow speed drill, scraping the bottom and sides of the mixing container.** Mix only that amount which can be spread in 30 minutes. If using the material as a primer over concrete, add 1 quart of acetone to every mixed gallon to lower the viscosity and ensure the best penetration. If using as a finish coat, up to 10% acetone may be added if desired.

### **Application Recommendations**

Polyurea 5001 is a very reactive material and requires special application techniques. Do not pour the material directly onto the floor. Apply using a dip and roll method out of a 5 gallon pail using a 9 inch roller or use an 18 inch roller with a roller pan. Of these two methods, the 18 inch roller is preferred because it speeds the application. Use a 3/8 inch roller nap.

Recommended coverage for the material is 300-350 sq. ft. per gallon. Heavier applications may take slightly longer to cure depending upon atmospheric humidity. Do not apply heavier than 150 sq. ft. per gallon. Puddles or heavy accumulations in joints will not cure properly.

### **Handling Precautions**

Use only with adequate ventilation/or a cartridge type respirator designed to be used for isocyanates. 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.