



# SAFETY DATA SHEET

FP501ACL2:100

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## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

### MANUFACTURER'S NAME / ADDRESS

ARIZONA POLYMER FLOORING  
4565 W WATKINS ST.  
PHOENIX, AZ 85043 .

TRADE NAME: POLYURETHANE 501 PART A  
COLOR: CLEAR  
MAIN USE: SPECIALTY FLOORING RESIN

EMERGENCY TELEPHONE NUMBER: (800) 424-9300 (CHEMTREC)

## SECTION 2: HAZARDS IDENTIFICATION

### GLOBALLY HARMONIZED SYSTEM (GHS)

CLASSIFICATION: NOT CLASSIFIED AS HAZARDOUS

GHS LABEL ELEMENTS: NOT APPLICABLE

SIGNAL WORD: NONE

HAZARD STATEMENTS: NONE

PRECAUTIONARY STATEMENTS: NONE

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### HAZARDOUS INGREDIENTS

Wt. %

CAS Number

NONE

## SECTION 4: FIRST AID MEASURES

**GENERAL:** REMOVE AFFECTED PERSON FROM AREA. TREAT SYMPTOMATICALLY.

**EYES:** FLUSH WITH WATER FOR 15 MINUTES. GET MEDICAL ATTENTION.

**SKIN:** WASH WITH SOAP AND WATER. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

**INHALATION:** MOVE TO FRESH AIR. IF BREATHING REMAINS OR BECOMES LABORED, SEEK MEDICAL ATTENTION.

**INGESTION:** GIVE 3 - 4 GLASSES OF MILK OR WATER. **DO NOT INDUCE VOMITING.** SEEK MEDICAL ATTENTION.

## SECTION 5: FIRE FIGHTING MEASURES

**FLASH POINT:** NA

**OSHA CLASS:** NONE SHOWN

**CONDITIONS OF FLAMMABILITY:** NA

**AUTO IGNITION TEMP.:** NA

**FLAMMABLE LIMITS:** LEL: NE UEL: NE

**SENSITIVITY TO IMPACT:** NONE

**HAZARDOUS COMBUSTION PRODUCTS:** CO, CO<sub>2</sub>,

**SENSITIVITY TO STATIC DISCHARGE:** NONE

**EXTINGUISHING MEDIA:** WATER, CO<sub>2</sub>, DRY CHEMICAL

**SPECIAL FIRE FIGHTING PROCEDURES:** NONE LIKELY WITH SMALL QUANTITIES. FOR LARGE QUANTITIES, FIREFIGHTERS AND OTHERS EXPOSED TO VAPORS OR PRODUCTS OF COMBUSTION SHOULD WEAR BUTYL RUBBER BOOTS, GLOVES AND BODY SUIT. SELF-CONTAINED BREATHING APPARATUS SHOULD BE WORN.

**UNUSUAL FIRE AND EXPLOSIVE HAZARDS:** POLYMER FILM CAN BURN, MATERIAL CAN SPLATTER ABOVE 100°C



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### SECTION 6: ACCIDENTAL RELEASE MEASURES

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** COVER SPILLS WITH ABSORBENT. PLACE IN METAL CONTAINERS FOR RECOVERY OR DISPOSAL. PREVENT ENTRY INTO SEWERS, STORM DRAINS, AND WATERWAYS.

### SECTION 7: HANDLING AND STORAGE

**GENERAL:** STORE IN COOL, WELL VENTILATED AREAS. KEEP AWAY FROM HEAT AND OPEN FLAMES. AVOID PROLONGED INHALATION OF HEATED VAPORS OR MISTS. AVOID PROLONGED SKIN CONTACT.

**STORAGE:** STORE BETWEEN 40°F AND 100°F PROTECTED FROM FROST AND DIRECT SUNLIGHT.

### SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

#### EXPOSURE LIMITS (ppm)

NONE

**ENGINEERING CONTROLS:** NO SPECIFIC CONTROLS NEEDED. GENERAL AND LOCAL EXHAUST RECOMMENDED.

**RESPIRATORY PROTECTION:** NONE REQUIRED IN ADEQUATELY VENTILATED AREAS. IF VAPOR CONCENTRATION EXCEEDS 20ppm FOR LONGER THAN 15 MINUTES, A NIOSH APPROVED RESPIRATOR FOR ORGANIC VAPORS IS RECOMMENDED.

**PROTECTIVE GLOVES:** NITRILE RUBBER

**EYE PROTECTION:** SPLASH-PROOF GOGGLES OR CHEMICAL SAFETY GLASSES

**OTHER PROTECTIVE EQUIPMENT:** LONG SLEEVED SHIRTS AND TROUSERS. EMERGENCY SHOWERS AND EYE WASH STATIONS SHOULD BE READILY ACCESSIBLE.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**BOILING POINT:** >100°C (>212° F)

**SPECIFIC GRAVITY:** 1.0-1.1

**VAPOR PRESSURE:** ND

**MELTING POINT:** ND

**VAPOR DENSITY:** >1  
(AIR = 1)

**EVAPORATION RATE:** <1  
(BUTYL ACETATE = 1)

**SOLUBILITY IN WATER:** DILUTABLE

**pH:** 8.0 TO 11.5

**COEFFICIENT of WATER/OIL DISTRIBUTION:** ND

**ODOR THRESHOLD:** ND

**APPEARANCE AND ODOR:** MILKY WHITE LIQUID, MILD ODOR

**% VOLATILES BY VOLUME:** 68%

**%SOLIDS BY WEIGHT:** 34%

### SECTION 10: STABILITY AND REACTIVITY

**STABILITY:** STABLE

**CONDITIONS TO AVOID:** AVOID ELEVATED TEMPERATURES

**INCOMPATIBILITY (MATERIAL TO AVOID):** NONE KNOWN

**HAZARDOUS DECOMPOSITION PRODUCTS:** NONE KNOWN

**HAZARDOUS POLYMERIZATION (REACTIVITY):** WILL NOT OCCUR

**CONDITIONS TO AVOID:** KEEP FROM FREEZING

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**SECTION 11: TOXICOLOGICAL INFORMATION**

**LIKELY ROUTES OF EXPOSURE:** EYE CONTACT, SKIN CONTACT, INHALATION, INGESTION.

**EYES:**

ACUTE – MAY CAUSE MILD IRRITATION WITH BLURRED VISION.

CHRONIC – ND

**SKIN CONTACT:**

ACUTE – TRANSIENT IRRITATION AND REDNESS.

CHRONIC – ND

**SKIN ABSORPTION:**

ACUTE – ND

CHRONIC – ND

**INHALATION:**

ACUTE – INHALATION OF MISTS MAY CAUSE MILD RESPIRATORY TRACT IRRITATION.

CHRONIC – EXCESSIVE EXPOSURE TO HEATED VAPORS CAN CAUSE IRRITATION OF EYES, NOSE AND THROAT.

**INGESTION:**

ACUTE – MAY CAUSE MILD IRRITATION OF GASTRO-INTESTINAL TRACT

CHRONIC – ND

**CONDITIONS AGGRAVATED BY EXPOSURE:** NONE KNOWN.

**OVEREXPOSURE EFFECTS:** IRRITATION

IRRITANCY: YES - REVERSIBLE

SENSITIZER: NO

**ACUTE TOXICITY**

**ACUTE ORAL TOXICITY**

LD50, RAT >5,000 mg/kg

**SKIN CORROSION/IRRITATION**

RABBIT, NON-IRRITANT

**SERIOUS EYE DAMAGE/EYE IRRITATION**

RABBIT, SLIGHT IRRITATION

**CARCINOGENIC DATA:** NTP: NONE

OSHA: NONE

IARC: NONE

TERATOGENICITY: NO

MUTAGENICITY: NO

EMBRYOTOXICITY: NO

SYNERGISTIC MATERIAL: NO

**SECTION 12: ECOLOGICAL INFORMATION**

**TOXICITY**

**ACUTE TOXICITY TO FISH**

LC50(96 HR): >100mg/l, DANIO RERIO (ZEBRA FISH)

**ACUTE TOXICITY TO AQUATIC INVERTEBRATES**

EC50( 48 HR): 70.7 mg/l, DAPHNIA MAGNA (WATER FLEA),

**ACUTE TOXICITY TO ALGAE/AQUATIC PLANTS**

ND

**TOXICITY TO BACTERIA**

EC50: > 10,000mg/l

ACTIVATED SLUDGE



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### SECTION 12: ECOLOGICAL INFORMATION CON'T.

#### PERSISTENCE AND DEGRADABILITY

**BIODEGRADABILITY:** NOT READILY BIODEGRADABLE

**BIODEGRADATION:** 60%

**EXPOSURE TIME:** 28 DAYS

**METHOD:** OECD TEST GUIDELINE 302B OR EQUIVALENT

### SECTION 13: DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL METHODS:** NOT A HAZARDOUS WASTE BY RCRA CRITERIA (40 CFR 261). PLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

### SECTION 14: TRANSPORT INFORMATION

**DOT PROPER SHIPPING NAME:** NOT REGULATED

**HAZARD CLASS:** NA

**UN NUMBER:** NA

**PACKAGING GROUP:** NA

**DOT PRODUCT RQ LBS (KGS):** NA

**HAZARD LABEL:** NA

**HAZARD PLACARD:** NA

**ADDITIONAL INFORMATION:** NONE

### SECTION 15: REGULATORY INFORMATION

**VOC: COMPONENT** = 2 gms/Liter

**AS APPLIED** (Part of a multi-component system) = 35 gms/Liter

**TSCA (TOXIC SUBSTANCE CONTROL ACT):** ALL COMPONENTS ARE LISTED IN THE TSCA CHEMICAL SUBSTANCE INVENTORY.

**CERCLA (COMPREHENSIVE RESPONSE COMPENSATION and LIABILITY ACT):** ND

#### SARA TITLE III

**SECTION 312 HAZARD CLASS:** SLIGHT HEALTH HAZARD

**SECTION 313 LISTED INGREDIENTS:** NONE ABOVE de Minimus LEVELS

**CALIFORNIA PROPOSITION 65:** THE BELOW LIST OF COMPOUNDS IS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM: NONE



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**SECTION 16: OTHER INFORMATION**

**INITIAL ISSUE DATE:** JUNE 18, 2015      **REVISION DATE:**      **PREPARED BY:** J.W. ESSIG

**HAZARD RATING**

**HMIS:**                                      **HEALTH**    1                      **FLAMMABILITY**    0                      **REACTIVITY**    0

**LEGEND**

- ACGIH:**            AMERICAN CONFERENCE OF GOVERNMENTAL INDUSTRIAL HYGIENISTS
- OSHA:**            OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
- STEL:**            SHORT TERM EXPOSURE LIMIT
- TWA:**            TIME WEIGHTED AVERAGE
- PEL:**            PERMISSIBLE EXPOSURE LIMIT
- TLV:**            THRESHOLD LIMIT VALUE
- NA:**            NOT APPLICABLE
- NE:**            NOT ESTABLISHED
- ND:**            NO DATA

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## **POLYURETHANE 501**

### **PRODUCT DESCRIPTION AND USE**

Polyurethane 501 is a high solids, two component, water-based aliphatic polyurethane. This unique material provides performance properties equal to conventional solvent-based catalyzed urethanes without the associated health and environmental problems. Polyurethane 501 is VOC compliant in California. It offers substantial performance improvements over first generation catalyzed water-based polyurethanes, including higher film build capabilities, improved chemical resistance and resistance to hot tire staining.

Polyurethane 501 gives hard, durable coatings that feature good gloss, easy cleanability and superior abrasion resistance. Resistance to yellowing from U.V. light is excellent. For exterior desert applications, a special UV absorber package can be incorporated to ensure long-term chalk resistance and gloss retention.

Polyurethane 501 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 501 is also suitable for aircraft hangars, automotive repair facilities and garage floors. It is available in a satin finish.

### **Chemical Composition**

Hydroxyl functional resin dispersion crosslinked with aliphatic polyisocyanate.

### **Colors**

Clear and 16 standard colors

### **Limitations**

- Material must be mixed mechanically for proper performance.
- Application rate must be kept above 200 sq. ft. per gallon to avoid curing bubbles that occur in thicker applications.
- Applications over textured surfaces such as trowel-knockdown polymer concrete must be done with a 3/4" 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 90% and ventilation is poor. Improper cure will result.

### **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**

### **Physical Properties**

Mixing Ratio, by Volume .....	2-1
Solids Content, by Weight (Clear) .....	52%
Solids Content, by Weight (Pigmented) .....	64%
VOC, grams/liter .....	94
Pot Life (77 degrees, 1 quart mass) .....	3 hours
Pot Life (95 degrees, 1 quart mass) .....	50 minutes
Pot Life is reduced by increasing temperature and/or mass.	
Dry Times (77 degrees, 30% R.H.)	
Dry to Touch .....	6 hours
Recoat .....	12 hours
Light Traffic .....	18 hours
Full Cure .....	7 days
Higher temperatures and lower humidity will accelerate cure times.	
Lower temperatures and higher humidity will lengthen cure time.	

### **Performance Properties**

Gloss, 60° (clear material) .....	90
Pendulum hardness, sec (ASTM D-4336) .....	175
Tabor Abrasion - 1000 gm. load 1000 cycles, CS 17 wheel .....	39 mg. loss

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

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

## **GENERAL INFORMATION**

### **Moisture Vapor Emissions Precautions**

All interior concrete floors not poured over an effective moisture vapor retarder are subject to possible moisture vapor transmission 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 are present before applying any coatings. APF can supply moisture remediation products. Consult our technical service department. Arizona Polymer Flooring and its sales agents will not be responsible for coating failures due to undetected moisture vapor emissions.

### **Surface Preparation**

Surface must be clean, structurally sound and free of chalk, wax, loose paint or curing compounds. Application over concrete requires the use of a primer. Previously coated surfaces must be mechanically cleaned and abraded with 100 grit sandpaper or sanding screen to ensure intercoat adhesion.

### **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 2 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.**

### **Thinning**

Material is normally applied as received but may be thinned with water up to 10% during application to keep a low viscosity. **Any reduction water must be added after part A and B have been drill mixed.**

### **Application Recommendations**

Polyurethane 501 should be applied 200-350 sq. ft. per gallon by brush, roller or airless sprayer. Do not allow to puddle or accumulate in joint areas. Applications heavier than 200 sq. ft. per gallon will create bubbles in the cured coating. If multiple coats are required, and the material has cured for more than 24 hours, degloss with a black janitorial pad or fine sanding screen.

### **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.