POLYURETHANE 100 VOC

PRODUCT DESCRIPTION AND USE

Polyurethane 100 VOC is a two component, high solids aliphatic polyurethane formulated to comply with California VOC regulations. This product offers a remarkable combination of performance properties not found in other polymer coatings. Polyurethane 100 VOC produces protective films which are hard, flexible and very impact resistant. These coatings feature high abrasion and scratch resistance, exterior durability, easy soil release and excellent resistance to a broad range of chemicals. For exterior applications, a UV stabilizer package is incorporated to ensure long term chalk resistance and gloss retention. A special accelerator is available when rapid project turnaround is required.

Polyurethane 100 VOC has been designed as a high performance top coat in various protective coating and seamless flooring applications. It provides maximum cleanability and stain resistance when used as a finish coat in color chip flooring or epoxy-quartz flooring. This coating is ideally suited for clean-room floors, automotive repair facilities, aircraft hangars and other high wear areas requiring resistance to fuels and chemicals. When used as a finish coat in wall coating systems, anti-graffiti properties are greatly enhanced.

Chemical Composition
Polyester polyol crosslinked with aliphatic polyisocyanate.

Colors
16 standard colors available, plus clear.

Limitations
- Do not use on unprimed substrate.
- Use of satin material requires the addition of accelerator during mixing.

TECHNICAL DATA

Physical Properties

Mixing Ratio, by Volume	2-1
Solids Content, by Weight (Pigmented)	62%
Solids Content, by Volume (Pigmented)	59%
Solids Content, by Weight (Clear)	60%
Solids Content, by Volume (Clear)	54%
V.O.C.	100 grams/liter
Viscosity, cps (77 degrees)	500 average
Pot Life (77 degrees, 1 quart mass)	2 hours
Pot Life (95 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.

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Physical Properties (Cont'd)

Dry Times (77 degrees)

Dry to Touch ..... 4-6 hours
Recoat ..... 10-12 hours
Light Traffic ..... 24 hours
Full Cure ..... 7 days

Higher temperatures will shorten cure time and lower temperatures will lengthen cure time.

Performance Properties

Gloss (60 degrees) 90-95
Gloss (satin material, 60 degrees) 50-60
Hardness (Konig) 122
Tabor Abrasion (1000 gm. load 1000 cycles, CS 17 wheel) ..... 38 mg. loss
Flexibility (ASTM D-222) ..... passes 1/8 inch
Impact Resistance (ASTM D-2794) ..... passes 120 inch-pound direct and reverse

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

* Exposures longer than 72 hours will soften the coating film

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
Polyurethane 100 VOC is intended to be applied over primed or previously coated surfaces. Do not apply directly to concrete. Surface must be absolutely clean, dry and free from all dirt, wax, oil, chalk, incompatible paint or detergent film. 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 Polyurethane 100 VOC 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, lightly sand surface to ensure intercoat adhesion, or apply a thin coat of Polyurethane 250 as a tie coat.

Mixing Instructions
Mix only that amount of material that can be used in a 2 hour period at 77°F. Higher temperatures and the addition of accelerator will reduce work time. In hot weather, mix smaller batches. If using the pigmented system, premix part A well before adding part B. Combining ratio is 2 parts A to 1 part B. **Proportion the amounts carefully and mix for two full minutes using a slow speed drill, scraping the bottom and sides of the mixing container.** Add 8 oz. for each gallon of Part A. Material is normally applied as received, but may be thinned with up to 15% solvent. Always thin the satin material to achieve a low application viscosity. When thinning in California, the compliant solvents acetone and PCBTF must be used. In hot weather, PCBTF is preferred due to its slower evaporation rate. In non-California use, MEK or Xylene are the preferred solvents. Avoid contamination with moisture. Reseal partially used containers completely after use.

Application Recommendations
Polyurethane 100 VOC may be applied by brush, roller or airless sprayer. Apply at 275-350 sq. ft. per gallon with 3/8" or 1/2" nap roller as a finish coat over primed concrete. May be applied up to 200 sq. ft. per gallon as a fill coat in aggregate-filled flooring systems using a rubber squeegee and back rolling with a 3/8" nap roller. If using the satin version of this material, it is very important to achieve a uniform application rate of 300-350 sq. ft. per gallon. Heavier films will be glossier, thinner applications will be flatter.

Handling Precautions
Material is flammable. Extinguish all flames, pilot lights and electric motors until all vapors are gone and the coating is hard. The vapor is harmful. Use only with adequate ventilation/or appropriate cartridge-type respirator. 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.