



5000 POLY UREA Installation Guide

PRODUCT DESCRIPTION

5000 POLY UREA is a general use 100% solids clear urethane topcoat that exhibits good chemical and excellent wear resistance while providing a deep high gloss surface. 5000 POLY UREA is designed for use over concrete and epoxy to protect against wear and chemical attack, for other various substrates it is recommended that a test area be done first to check adhesion and performance. We do not recommend 5000 for exterior use. The technology we used to slow the cure rate down causes slight yellowing in the final film when exposed to UV.

COVERAGE RATES AND PACKAGING

5000 Poly Urea

Over Flat Surface at an Average of 4.5 Mils

375 ft/Gal - 700 ft/Kit

Sold in 2-Gallon Kit or
5 Gallon Bulk

Over Flake (more surface area) at an Average of 6.7 Mils

180-220 ft/Gal – 360-440/Kit

SUBSTRATE REQUIREMENTS

Concrete

Concrete shall be structurally sound and stable. Concrete shall be free of dust, dirt, grease, contamination, surface laitance, and other potential bond-breaking substances that could impair adhesion. All cracks, gouges, and other surface defects need to be addressed prior to coating installation. Substrate and ambient temperatures must be above 35°F during installation of coating. Relative humidity should not exceed 65% during installation of the coating. Environmental conditions must not be near the dew point during installation of the coating. Moisture Vapor Transmission of the substrate must not exceed 3lb per 1000 ft per 24 hours. For high MVT substrates, consult with a Versatile Building Products representative for recommendations. Concrete must be mechanically profiled and prepared by shot-blasting, grinding, water-jetting, or other means of scarification to produce a Concrete Surface Profile (CSP) between #2 and #4, according to International Concrete Repair Institute (ICRI) Guideline No. 03732

Concrete Priming

Under most conditions concrete shall be primed with an approved primer if applying 5000 Poly Urea directly over it. Consult VBP for further information.

Other Substrates

VBP does not recommend 5000 to be used over substrates other than concrete or cementitious overlays manufactured by VBP. If going over sealed surfaces like polymer stains or other types of sealer be sure to lightly sand the surface to de-gloss it. Then do a small sample area to check the adhesion before proceeding (do a cross hatch test). If going over non concrete surfaces you must do a mock up sample to test it on actual material and understand that it is being done at “your own risk”.

STEP 1) INSTALLATION OF 5000 POLY UREA

Note: Cure time is effected by environmental conditions. Do not force dry. High humidity and/or low temperatures can cause haziness and blushing in the coating. Material has a pot-life of 45 minutes based on an insulated 200 gram mass at a starting temperature of 73°F.

Warning: Large masses of mixed and/or heated material will have a shorter pot-life, typically 2 gallons will have a 25 minute working time at 70 degrees. Thin material as listed below to increase pot life.

Hot Weather Tips

5000 has a shorter pot life in very hot conditions. Keep core temperature of 5000 below 80 degrees whenever possible; if it is above 80 degrees bring core temperature down by icing (do this hours before doing job so the core temperature is lowered) or placing in a cool environment the day before application. If instructions are not followed excessive heat may cause outgassing, foaming and hazing of 5000 where it has been applied too thick or where material settles into joints, etc. as well as a shorter pot life.

Cold Weather Tips

Accelerator 50 may be used to speed the cure of 5000 at lower temperatures. Also, allowing extra induction time of mixed material in the container will also help speed the cure, however this should only be done by experienced applicators.

Going Over a Monolithic Floor Tips (solid colors or smooth surfaces show all of the minor defects)

Use of an 18-inch lambs wool roller applicator is preferable. Until you are comfortable and familiar with the material we recommend that you only mix up one gallon at a time and that it can be placed within 15-20 minutes. For maximum pot life, after mixing get material on floor as soon as possible by pouring out of mixing container immediate after mixing. On larger areas squeegee and backrolling is a must to maintain a wet edge (be sure you have enough manpower; typically 2 guys are backrolling to every 1 man squeegee).

Thinning

Advantages of thinning the 5000 are a lower viscosity which makes it easier to roll and an extended potlife. 5000 can be thinned with up to 1 pint of Acetone (Acetone is SCAQMD compliant) or MEK (MEK will add 100 VOC to a gallon and is not SCAQMD compliant) for each one gallon of material being used. If thinning be aware that the solids will be reduced to approximately 88% and if Acetone is used the VOC will not change. Solvents are extremely flammable, be sure that all containers are metal and all sources of ignition have been turned off.

Mixing

Material should be at room temperature (70-75 degrees) or below if in extreme hot conditions. Mix 5000 POLYUREA A-Component with 5000 POLY UREA B-Component at ratios listed on container for 2-3 minutes using a jiffy-type mixing blade at no less than 400rpm. Transfer mixed material to a second mixing vessel and mix an additional 30 seconds to ensure that material along the sides of the first mixing vessel have been properly incorporated into the mixture. **Caution: If you are not familiar with the product, Do Not Mix More than 2 Gallons at a Time. The more you mix the shorter your pot life will be.**

Application

Apply mixture to the substrate using a brush, roller, or squeegee at a desired coverage rate. Do not apply at rates less than 175 sq. ft. per gallon or out gassing bubbles may occur. Use spiked shoes when walking into wet material. Because 5000 has such high gloss be sure to remove dust from areas during application. When going over solid color surfaces be sure to backroll immediately and keep backrolling to a minimum which will help control micro bubbles.

Cure Times

Coating can typically accept light foot traffic in 12-16 hours, vehicular traffic with pneumatic tires in 96 hours. Full cure occurs in 5-7 days.

STEP 2) CLEANUP

Immediately cleanup splatter marks and tools with Acetone. Clean hands and exposed skin with mild soap and water, and/or citrus based hand-cleaner.

ADDITIONAL CAUTIONS AND RECOMENDATIONS

- DO not use on exterior surfaces because of slight yellowing
- Do not apply at less than 175 sq ft per gal or excessive moisture entrapment may occur in wet film
- Because 5000 has such high gloss be sure to remove dust from areas during application.
- When going over solid color surfaces be sure to backroll immediately and keep backrolling to a minimum which will help control micro bubbles.
- Do not force dry
- Coverage rates may vary
- Mask all areas that need protection
- Always wear protective clothing and equipment as required by OSHA and as necessary
- Read Material Safety Data Sheets before commencing work
- Store material at 50-70°F to prevent shortened pot-life due to excessive heat