



## 4001 and 5000 Super High Performance Topcoat Installation Guide

### PRODUCT DESCRIPTION

4001 is a 2 component waterborne epoxy primer/sealer designed to improve the adhesion of coating systems to concrete and previously sealed surfaces or provide a breathable “Wet Look” seal over new or old concrete surfaces. 4001 is suitable for use over green concrete, and substrates with high moisture vapor emissions. 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, stone, epoxy, and other various substrates to protect against wear and chemical attack.

### COVERAGE RATES AND PACKAGING

4001	350 ft/gal 700 ft/kit	Sold as 2.0 Gallon Kit Or 5 Gallon Bulk
5000 Poly Urea Over Flat Surface at an Average of 4.5 Mils	375 ft/Gal - 468 ft/Kit	Sold in 2-Gallon Kit or 5 Gallon Bulk

### SUBSTRATE REQUIRMENTS

#### *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. Concrete may need to be mechanically profiled and prepared by shot-blasting, grinding, or other means of scarification so that it has surface profile equal to at least a 150 grit sandpaper. Substrate and ambient temperatures must be above 50°F (10°C), and not exceed 95°F (35°C) during installation of primer. Environmental conditions must not be near the dew point during installation of the primer or subsequent coatings and toppings.

#### *Other Substrates*

Consult with a Versatile Building Products representative for recommendations over other substrates.

### STEP 1) INSTALLATION OF 4001

(Note: Dry time is effected by environmental conditions. Do not force dry. Pot-life of material is 2 hours at 70F. Mixed material will not gel.)

#### *Mixing*

Mix 1 part by volume 4001 A-Component with 1 part by volume 4001 B-Component for 2-3 minutes using a jiffy-type mixing blade at no less than 400rpm. Transfer 4001 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. ***This is a 2-component product be sure to mix thoroughly.***

Do not apply material in extreme heat, best results are achieved when temperatures are below 80 degrees. Apply mixture to the substrate using a soft bristle push broom, brush, roller, or squeegee at a coverage rate of 350ft per mixed gallon inside and 450 sq ft per gallon when used outside. Do not puddle material. Allow material to dry to a clear film. Subsequent coats must be applied as soon as the film goes clear and within 1 hour of it going clear otherwise surface de-glossing with sand paper or buffing pads will be required. Additional coats may be necessary over highly porous concrete. Be sure to maintain a wet edge in order to avoid streaking or flashing of primer. ***Do not use material after 2 hour pot life, material applied after 2 hour pot life will turn white when dry.***

#### *Application Over Concrete as a Primer*

Apply mixture to the substrate using a soft bristle push broom, brush, roller, or squeegee at a coverage rate of 350ft per mixed gallon. Do not puddle material. Apply subsequent toppings and coatings in accordance with the manufacturer’s instructions. Typical coat-over windows are as follows, but will vary with the product:

Polyurea 5073	As soon as it goes clear and no longer than 1 hour after going clear Sand or screen the floor if more than 1 hours has passed.
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### ***Application Over Concrete as a Sealer***

Do not apply material in extreme heat, best results are achieved when temperatures are below 80 degrees. Apply mixture to the substrate using a soft bristle push broom, brush, sprayer, roller, or squeegee at a coverage rate of 350ft per mixed gallon. Do not puddle material. Allow material to dry to a clear film before applying subsequent coats and be sure to apply subsequent coats within 2 hours of turning clear. Apply a second coat to the surface at a right angle of first coat.

Additional coats may be necessary over highly porous concrete. ***Do not use material after 2 hour pot life, material applied after 2 hour pot life will turn white when dry.***

### **STEP 2) CLEANUP**

Immediately cleanup splatter marks with water. Clean tools with mild soap and water before primer dries.

### **STEP 3) 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 60 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 squeegeeing 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 squeegeeing).

#### ***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 4) 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**

- If in doubt, screen or sand the primer/underlying coat before applying topcoats.
- 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