

# UreCoat®

## Flexible Urethane Coating



www.smooth-on.com

### PRODUCT OVERVIEW

UreCoat® is a two component urethane (A+B) that can be mixed and brushed onto a variety of surfaces to provide a flexible, tough and impact resistant coating. UreCoat® will bond to many surfaces and can be used as a flexible coating for expanded polystyrene (EPS foam), fabric, some metals and plastics, wood, rope (make vines for zoo exhibits) and more. Cured rubber is tough and UV resistant.

**Use as a Flexible Paint Base:** UreCoat® is "color neutral" and is easily colored with SO-Strong®, UVO® or Ignite® colorants to create a permanent paint for coating cured Smooth-On urethane rubbers or flexible foams. Cured UreCoat® will bend and flex with the rubber or foam part.

**Mix ratio is 100A:10B by weight** (gram scale required), pot life is 8 minutes, re-coat time is 30 minutes, tack free time is 2 hours and full cure is 16 hours at 73°F/23°C. UreCoat® contains no phthalates or VOC's.

### TECHNICAL OVERVIEW

Mix Ratio: 100A:10B by weight

Mixed Viscosity (cps): 3800 (ASTM D-2393)

Specific Gravity (g/cc): 1.05 (ASTM D-1475)

Specific Volume (cu. in. /lb.): 26.4

Pot Life: 8 min. (73°F/23°C)\* (ASTM D-2471)

Re-coat Time: 30 min.\*

Tack Free Time: 2 hrs.\*

Cure time: 16 hrs. (73°F/23°C)

Color: Translucent Amber

Shore A Hardness: 70 (ASTM D-2240)

Tensile Strength (psi): 1360 (ASTM D-412)

100% Modulus (psi): 503 (ASTM D-412)

Elongation @ Break: 876% (ASTM D-412)

Die C Tear Strength (pli): 256 (ASTM D-624)

All values measured after 7 days at 73°F/23°C  
\* Depending on mass

### UreCoat® Coverage Rates

| Amount                                      | Applied at 1/32" (0.8mm)                            | Applied at 1/16" (1.6mm)                            |
|---|---|---|
| <b>Trial Unit</b><br>(1.1 lbs./0.50 kg)     | <b>6.45 ft<sup>2</sup></b> (0.60 m <sup>2</sup> )   | <b>3.23 ft<sup>2</sup></b> (0.30 m <sup>2</sup> )   |
| <b>Gallon Unit</b><br>(9 lbs./4.08 kg)      | <b>52.8 ft<sup>2</sup></b> (4.91 m <sup>2</sup> )   | <b>26.4 ft<sup>2</sup></b> (2.45 m <sup>2</sup> )   |
| <b>5 Gallon Unit</b><br>(44 lbs. /19.96 kg) | <b>258.1 ft<sup>2</sup></b> (23.99 m <sup>2</sup> ) | <b>129.1 ft<sup>2</sup></b> (11.99 m <sup>2</sup> ) |

**Amount to Mix and Apply at One Time** - Because this is a coating, a small amount goes a long way. Mix only what you can comfortably brush on to your target surface in 8 minutes before material sets up.

### PROCESSING RECOMMENDATIONS

**Preparation** - Store and use material at room temperature (73°F/23°C). This product has a limited shelf life and should be used as soon as possible. If compatibility or effectiveness for your application is in doubt, a small-scale test is recommended.

**Safety** - Use in a well-ventilated area. Wear safety glasses, long sleeves and vinyl rubber gloves to minimize contamination risk.

**Environment** - Like all urethanes, UreCoat® is moisture sensitive and should be used in a low-humidity environment to minimize bubbles (below 50% RH).

**Surface Preparation** - Porous or non-porous surfaces should be sanded and then wiped clean with alcohol. Metals should be sanded, cleaned with alcohol and then coated with two coats of

spray shellac. Let dry. **If using UreCoat® as a paint base to coat urethane rubber or flexible foam**, wipe surfaces clean with alcohol and let dry. After weighing out components in separate containers, add SO-Strong®, UVO® or Ignite® colorant as desired to Part A and pre-mix thoroughly. Add Part B and mix all components thoroughly.

## Safety First!

The Material Safety Data Sheet (MSDS) for this or any Smooth-On product should be read prior to use and is available upon request from Smooth-On. All Smooth-On products are safe to use if directions are read and followed carefully.

### Be careful

Part A is a TDI prepolymer. Vapors, which can be significant if material is heated or sprayed, cause lung damage and sensitization. Use only with adequate ventilation. Contact with skin and eyes may cause severe irritation. Flush eyes with water for 15 minutes and seek immediate medical attention. Remove from skin with waterless hand cleaner followed by soap and water. Prepolymers contain trace amounts of TDI which, if ingested, must be considered a potential carcinogen. Refer to MSDS.

Part B is irritating to the eyes and skin. If contaminated, flush eyes with water for 15 minutes and seek immediate medical attention. Remove from skin with soap and water. When mixing with Part A follow precautions for handling isocyanates.

**Important:** The information contained in this bulletin is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained from the use thereof, or that any such use will not infringe upon a patent. User shall determine the suitability of the product for the intended application and assume all risk and liability whatsoever in connection therewith.

**Measuring and Mixing** - Before you begin, pre-mix Part B thoroughly to re-disperse components that may have settled. A gram scale is required to accurately measure 100 Parts A to 10 Parts B. After dispensing into a mixing container, mix thoroughly for 2 - 3 minutes using a square edged mixing stick. Aggressively scrape the sides and bottom of the mixing container several times. Use the square edge of the stick to bring material off of the sides of the container and blend.

**Extending Working Time** - Reduce the mass of the mixture to increase working time. Example: layer two sheets of aluminum foil together and create a single-use flat tray with vertical sides to contain the liquid. After mixing parts A and B, pour mixture into the aluminum foil to reduce the mass. Your working time will be significantly increased.

**Applying** - Apply a thin layer to the surface, making sure there are no brush strokes. Wait 30 minutes for material to partially cure and apply a second layer. Subsequent layers can be added as desired.

**Thinning** - To thin UreCoat®, the recommended mix ratio is 100 Parts A + 10 Parts B + 25 or more Parts of mineral spirits depending on the application. Pre-mix solvent into Part A before adding Part B. Observe all safety precautions when handling solvents. Mix thoroughly to a uniform color (no streaks). **Spraying UreCoat® is not recommended.**

**Thickening** - UreCoat® can be thickened to a paste-like consistency for brushing or troweling onto surfaces. Ure-Fil® 11 is an effective filler for thickening this material. The recommended maximum filler load when using Ure-Fil® 11 is 100 parts UreCoat® Part A to 10 parts UreCoat® Part B to 15 parts filler by weight. Ensure filler is dry, and pre-mix filler with Part A before combining with Part B.

**Surface Finish** - UreCoat® will cure with a high gloss surface finish. If a matte surface finish is desired, we have two recommended techniques; once UreCoat® gels or partially cures (30 – 60 minutes after applying), lightly wipe surface with a lint-free cloth that will not shed fibers or a lightly brush surface with a soft paint brush. Do not wait until material is fully cured. Another option is to lightly dust the surface of partially cured UreCoat® with

powdered sugar. Once UreCoat® is fully cured, the powdered sugar can be washed away with water, leaving a matte surface finish.

**Curing** - Allow UreCoat® to cure overnight (at least 16 hours) at room temperature (73°F/23°C) before handling. Full cure time can be reduced heating the material 150°F/60°C for 4 hours. Allow UreCoat® to come to room temperature before handling.

**Clean Up** - Gently scrape as much uncured material from surface as possible with flat edge tool. Remove remaining uncured UreCoat® with alcohol.



**Call Us Anytime With Questions About Your Application**

Toll-free: **(800) 381-1733** Fax: **(610) 252-6200**

The new [www.smooth-on.com](http://www.smooth-on.com) is loaded with information about mold making, casting and more.