

## UDT GRIND, CLEAR PRIME & SEAL WITH ULTRA HTS STANDARD OPERATING PROCEDURE (SOP)

This SOP provides the step-by-step process required to prime and seal prepared concrete using clear Ultra HTS high-solids urethane as a chemical and abrasion-resistant topcoat.

**BEFORE BEGINNING, ENSURE THAT ALL THE NECESSARY SUPPLIES AND EQUIPMENT LISTED BELOW ARE AVAILABLE.**

### Patch & Primer Application

- a. [MC Epoxy \(Standard Cure\), MC-UV Epoxy, or UltraSpartic 100, 95 or 85](#)
- b. [Epoxy Patch Additive](#) or Fast Patch material
- c. Protective walk-off matting
- d. [Rubber gloves](#)
- e. [Eye Protection](#)
- f. [18" roller frame \(Big Ben or Wideboy\)](#)
- g. [18" x 1/4" nap](#) or [18" x 3/8" nap rollers](#)
- h. [6.5" Edge roller frame](#)
- i. [6.5" x 1/4" nap](#) or [6.5" x 3/8" nap rollers](#)
- j. [Threaded extension pole x 2](#)
- k. [Easy Squeegee frame](#)
- l. [Flat, flexible squeegee blade](#) (Primer)
- m. [Flat, stiff squeegee blade](#) (for Epoxy Patch)
- n. [Trowel](#) (for patch material)
- o. [2" paint brush](#)
- p. [Chemical resistant tape](#)
- q. [Spiked shoes](#)
- r. [5-quart mixing bucket](#)
- s. [Powered drill & Drill mixing blade](#)



### Ultra HTS Topcoat Application

- a. [Ultra HTS high-solids urethane Parts A & B](#)
- b. [UDT Aggregate Additive #1](#) and/or [#120](#)(optional)
- c. Protective walk-off matting
- d. [Rubber gloves](#)
- e. [Eye Protection](#)
- f. [18" roller frame \(Big Ben or Wideboy\)](#)
- g. [18" x 3/8" nap rollers](#)
- h. [6.5" Edge roller frame](#)
- i. [6.5" x 3/8" nap rollers](#)
- j. [Threaded extension pole x 2](#)
- k. [2" paint brush](#)
- l. [Chemical resistant tape](#)
- m. [Rolling pan](#)
- n. [Spiked shoes](#)
- o. [5-quart mixing bucket](#)
- p. [Powered drill & Drill mixing blade](#)

### Additional tools or equipment

- a. [175 RPM roto](#)
- b. [Wet vacuum](#) or ["walk-behind" auto scrubber](#)
- c. [60-100 grit screens](#) or [Maroon Conditioning Pads](#)
- d. Degreaser or neutral cleaner (if contamination present)
- e. [Microfiber](#) and/or [tack duster](#)

## Environmental Testing

**Moisture Content:** 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 testing (ASTM F1869) or plastic sheet testing (ASTM D4263) and relative humidity probe testing (ASTM F2170) to determine if excessive levels of moisture vapor emissions are present before applying any coatings.

Slabs on grade shall have a moisture vapor emission rate of less than 3 pounds / 1,000 sf / 24 hours when measured by calcium chloride test and less than 75% relative humidity when measured using in situ probes.

Test the air temperature, relative humidity, and floor temperature in the area to be finished using a Psychrometer and Infrared Thermometer.

**Air Temperature:** Ultra HTS SHALL NOT be applied when the air temperature is above 90°F or below 55°F.

**Relative Humidity (RH):** Ultra HTS dry time is lengthened (slower) in low humidity and/or cool temperatures and shortened (faster) in high humidity and/or warmer environments. Ultra HTS SHALL NOT be applied when the RH is above 80%. RH levels below 20% may dramatically lengthen dry times.

**Floor Temperature and Dew Point:** Ultra HTS SHALL NOT be applied when the substrate (floor) temperature is less than 5° above the dew point (See DEW POINT CALCULATION CHART). Monitoring the substrate temperature, indoor temperature and RH, and utilizing fans and/or dehumidifiers as needed will help correct or prevent existing or possible dew point conditions until the installation is complete.

All substrates must be prepared by trained or experienced contractors or maintenance personnel. UDT and its representatives or sales agents will not be responsible for coating failures due to improper preparation processes, undetected moisture vapor emissions, or other unacceptable environmental conditions.

## Priming Instructions

- 1. PREPARE THE FLOOR.** Prior to priming, concrete shall be lightly shot-blasted or diamond ground with 30 – 80 grit metal bond diamonds to achieve a minimum of CSP 2 - CSP 3 concrete surface profile. Concrete must be cured prior to coating (poured and aged at a material temp of at least 75°F for at least 30 days), structurally sound, and free of contaminants including but not limited to waxes, loose paint, dust, dirt, grime, oils, release agents, curing compounds, and any surface laitance (a layer of weak and nondurable material. If the prepared concrete is suspected to be contaminated with grease, silicones, mold-release agents or concrete surface treatments, test for the presence of these contaminants by spraying a thin coat of water onto the concrete. If the water beads on the surface, contamination is likely present, and the concrete should be scrubbed with a degreaser or neutral cleaner, rinsed with clean water, and allowed to dry thoroughly prior to coating.
- 2. PATCH HOLES OR SPALLED AREAS.** Use a suitable “fast patch” material to fill holes or spalled areas. If using UDT Epoxy Patch Additive, mix the Epoxy Patch Additive into pigmented MC Epoxy (Standard Cure or Fast Cure) or MC-UV Epoxy according to directions. Mix epoxy parts A and B together for 3 minutes. Add Epoxy Patch Additive to mixed epoxy as desired (up to 1/3 the volume of mixed epoxy). Apply with a trowel or putty knife for small areas. Use a flat, stiff squeegee for larger areas. Allow to set up for a minimum of 1 hour prior to applying primer.
- 3. CHOOSE A PRIMER.** Choose a primer based on desired dry time, size of project, and experience.

	<b>Primer Pot Life</b>	<b>Average Dry Time</b>
MC Standard Cure	30 minutes	12- 16 hours
MC-UV Epoxy	30 minutes	12- 16 hours
UltraSpartic 100	17 minutes	3 - 6 hours
UltraSpartic 95	30 minutes	12 - 16 hours
UltraSpartic 85	12 minutes	1 - 2 hours

- MIX THE PRIMER.** Refer to the Part A product label and TDS for mixing instructions. Begin mixing the primer based on a coverage rate of 500 to 800 square feet per gallon. Reduce the primer with the following amount of xylene after the product is mixed. Immediately pour mixed epoxy onto the floor.
 

MC Epoxies =	5 - 10%
UltraSpartic 100 =	10 - 20%
UltraSpartic 95 =	5 - 10%
UltraSpartic 85 =	0 - 10%
- SQUEEGEE APPLY PRIMER.** Spread primer by pushing it with a flat, flexible squeegee at an angle. Press down firmly to achieve a thin coat (1-2 mils).
- BACK-ROLL THE PRIMER.** Pull tape across rollers to remove as much lint as possible. Use a dry 1/4" nap or 3/8" nap roller to back-roll the primer to eliminate streaks and ensure a consistent, thin film. Do not load the roller with primer. Keep rollers somewhat dry. Squeeze out excess coating from the rollers on a dry area of the floor as needed. Finish spreading and back-rolling each mix within the stated pot life.
- ALLOW PRIMER TO DRY.** Allow the primer to dry thoroughly before proceeding with the recommended body coat.

### Ultra HTS Topcoat Instructions

- MAROON PAD SCRUB OR SAND SCREEN THE FLOOR.** While this is not necessary for adhesion, it is recommended to lightly abrade the floor maroon pads or 80-120 grit screens and clean the primed floor. Wet scrubbing or screening with a 175 RPM roto and wet vacuum or "walk-behind" auto scrubber is recommended. Once dry, patch any major defects prior to applying the Ultra HTS topcoat.
- PREPARE ROLLERS.** Run tape across rollers to remove as much lint as possible.
- MIX THE ULTRA HTS.** Refer to the Part A product label and TDS for mixing instructions. Mix Ultra HTS based on a coverage rate of 500 square feet per gallon (3 mils). The 1.25 Gallon Kit will cover 625 square feet and the 5-Gallon Kit will cover 2,500 square feet. If using Aggregate #1 and/or #120, mix with Part A thoroughly then add Part B and mix for three minutes. Pour a portion of the mixed product into the rolling pan. Leave drill mixer in the mixing pail and remix product each time before pouring into the rolling pan.
- ROLLER APPLY ULTRA HTS.** Saturate edge rollers and 18-inch rollers by dipping them into the rolling pan. Roll a thin and even coat along the walls with the edge roller. Use the 18-inch roller to roll Ultra HTS in a side-to-side motion. Once the Ultra HTS is spread out proceed to roll a W pattern in the opposite direction of the initial roll. Roll slightly into previously rolled areas and feather (lift up) while rolling forward. Continue across the floor rolling with the edge roller and 18-inch roller. Throughout the project remix the Ultra HTS with the rollers in the roller tray to minimize settling of the Aggregate.

**5. RE-ROLL THE ULTRA HTS.** It is recommended to wear spiked shoes and re-roll the entire floor within 25 minutes to eliminate any drip marks and roller marks. This process will help ensure a smooth consistent result. One technician can continue to apply Ultra HTS while another technician re-rolls, or back-rolls product already applied to the floor. Continue with rolling edges. Complete all rolling and back-rolling within the stated pot life.

**6. ALLOW ULTRA HTS TO DRY.**

	70°F / 50% RH	60° F / 30% RH	50°F / 20% RH
Light Traffic	8 hours	12 hours	20 hours
Vehicle Traffic	48 hours	72 hours	72 hours