

Coval UTC

(Ultimate Top Coat)

PRODUCT DESCRIPTION:

Coval UTC (Ultimate Top Coat) is a thin-film, single component nano coating that can go on to multiple different substrates. It is typically spray applied for larger areas but can also be applied with a foam brush or even a microfiber cloth by a skilled applicator for smaller applications like countertops. The coating is clear, is dry to touch in a few hours and typically will get to 98% of its full hardness in 48 hours depending on the conditions.

RECOMMENDED USES:

Coval UTC is a great solution to combat moisture, most stains, mild acids, bird & animal waste, and graffiti.

- Polished & Densified Concrete
- Epoxy
- Urethane
- Marble
- Terrazzo

Thin Film Coatings:

CAUTION: Coval Coatings are professional grade coatings and should only be applied by experienced professionals. **Coval UTC** is a new kind of hybrid cross-linking coating. The coatings extreme crosslinking is the science that allows the coatings to be so hard and durable, yet so thin. As they cure, the extreme cross-linking creates a high surface tension which in turn gives the coating extreme hardness.

The best practice is to apply enough coating to “wet-out” the surface and leave it to dry. Do not exceed 45mils, wet film thickness. **MORE IS NOT BETTER.** If you apply the coating too thick, it will attempt to cross- link away from the surface, which may cause fracturing or delamination. Over applying the coating will either destroy the coating or cause whatever the coating is applied on to peel. Yes, it is amazingly strong.

Epoxy and Urethanes are typically 2 component and there are many different varieties. In addition to that, if they are not mixed properly there may be unreacted components at the surface. For that reason, always do a small section in a closet or inconspicuous area first to make sure that there are no issues with compatibility.

TESTING:

ASTM D-4060 Taber Abrasion	<1
ASTM D-3363 Film Hardness, Pencil	9H
ASTM D-245 Heat Resistance	230 C
ASTM D4541 Adhesion	1700 PSI
ASTM D3359-97 Adhesion	4
ASTM B117-111 Salt Spray Scribed	6

Stain Data:

***R= Removal Method**

***Tests are 30 minutes minimum**

Staining Agent*	Dry Cloth	Wet Cloth	Cleaner Needed
10% Citric Acid	R		
10% Nitric Acid	R		
20% Hydrochloric Acid	R		
30% Sulfuric Acid	R		
Acetone	R		
Balsamic Vinegar	R		
Betadine		R	
Black Crayon		R	
Brake Fluid	R		
Brown Shoe Polish		R	
Calamine Lotion	R		
Catsup	R		
Chocolate Syrup	R		
Coffee	R	R	
Ethylene Glycol	R		
Gasoline	R		
Glacial Acetic Acid	R		
Grape Juice	R		
Iodine	R		
Lipstick	R		
Methyl Ethyl Ketone	R		
Motor Oil	R		
Mustard		R	
Permanent Marker			R*
Picante Sauce	R		
Pickle Juice	R		
Red Wine	R		
Skydrol	R		
Sodium Hydroxide	R		
Spray Paint			R*
Tea	R		
Toluene	R		
Worcestershire Sauce	R	R	

R* Isopropyl Alcohol

Spread Rate

Recommended Spread Rate per coat:

Wet mils: 4.0-5.0 per coat

Dry mils: 0.4 average

Coverage:

Coverage: 250-350 sq. ft./gal - Coverage will vary depending on the porosity and texture of the substrate, as well as the applicator's method of application.

Dry Time:

Drying Time: (@ 77 F, 50% RH):

Temperature, humidity, and film thickness dependent. (The higher the temperature and humidity, the faster the dry time)

Touch: 1-3 hours

Walk on: 12 – 24 hours

Full Cure: 7 Days

Properties:

Color: Clear/White for the Gloss and White for Satin and Matte

Finish: Gloss or Satin or Matte

Vehicle Type: Solvent Base

Flash Point: (C Penskey-Martens closed Cup) -

9C/15F VOC: Less than 100 g/L

Weight/Gallon: 7.36

lb.

Semi - breathable

APPLICATION INSTRUCTIONS:

Coval UTC, as with most final finishes, is best sprayed on to achieve optimum finish and appearance. Use an Acetone Pump Sprayer with a red fan tip (F110-04), or a gray cone jet tip (TX-VK8). Using the brass spray tip that is included with the sprayer may result in over-atomizing the coating, which can lead to an "orange peel" surface. Maintain consistent air pressure by pumping the sprayer regularly. With all methods of application, always mask off any adjacent surfaces to protect them from overspray. If applying outdoors, make certain the ambient temperature is between 45°F and 105° F, and RH is under 90%. Make certain that there is no chance of rain for a minimum of 5 hours after the estimated time of completion of the coating process. Also make certain there will be no additional return of morning dew to the surface damp again before it has had a chance to dry for at least 5 hours.

Test Area:

When using Coval UTC on a new substrate for the first time, test it on a small area first. Make sure that there are no unusual reactions or behavior in how the coating lays down. Once you are satisfied then start. If in doubt TEST first!

Surface Preparation:

Surface must be clean and dry and in sound condition. Remove all oil, dust, grease, dirt, and other foreign material. Any existing floor that has retained oil must be completely free from any further wicking action, as this will prevent a bond and the coating will delaminate.

IMPORTANT: REMOVE ANY SILICONE

Coval UTC will not adhere to silicones or polymer modified grouts. To determine if the surface is previously sealed or coated, sprinkle water onto the surface. If the water is absorbed and the surface becomes darker, it has not been sealed. If the water beads up, there is a coating or sealer that must be removed to allow adhesion to the substrate. Remove silicone sealers, then rinse with fresh water and allow to dry. **Moisture content not to exceed 13% before applying is required.**

APPLICATION TYPES:

For *Satin & Matte* finishes: stir the contents thoroughly in the bottom of the container with a low-speed drill mixer. This is to re-suspend the matting agents that have settled to the bottom before pouring into sprayer. Remove all particle filters in the sprayer to avoid clogging. **Re-shake the pump sprayer every 10- 15 minutes** to re-suspend the matting agents ensuring a consistent finish. **Only use an acetone proof pump sprayer and chemical resistant hoses.** Maintain an adequate PSI to create a consistent flow and finish. Maintain a 12-16" distance from the tip to the object. Be sure to filter the coating as you pour it into the sprayer to strain out fine particles in the matting agent. Use a random circular motion as you spray to avoid lap lines.

For the *Gloss* finish be sure that any overlap of the coating will not create the appearance of lines. This can be an issue on highly reflective floors where a thicker coating in one area will distort the light refraction. When applying the satin or matte we recommend using a cone tip on the sprayer and apply in a circular motion so that you do not create overlapping lines. We also recommend using a cone tip and applying in a circular motion on highly reflective floors.

Apply 4-5 mils wet film thickness (WFT) and never allow puddling. It is always best to spray on a few mockups to get the feel of putting down this product before attempting an actual project. Be careful not to apply too thick (THIN TO WIN) or allow the product to puddle as this will cause too much surface tension and possible delamination.

CLEAN UP:

Clean tools and flush equipment with acetone at least twice immediately after application. **IMPORTANT** - once coating is dry the tools will not clean up with acetone or any other solvent.

STORAGE:

If you have excess coating remaining in a container, we recommend:

1. Put a nitrogen or argon blanket on the top of the remaining liquid in the container or
2. Move the remaining coating to a smaller container with as little air/oxygen in the container as possible. Use only HDPE containers.

Do not use glass or unlined metal tins as the coating will react to both glass and metal. Store in cool dry location. Do not store solvent-based products in sun or in sun heated vehicle as overly heated product can turn dark in color and remain tinted when applied.

CARE AND MAINTENANCE:

Clean with a mop or Auto-Scrubber using a mild detergent then rinse with water. If an area becomes damaged, clean, and dry the surface and re-apply the coating. Alternatively, a wet scrub with a floor maintainer and white pad is optimal. Prevent any traffic on the area for a minimum of 8 hours. Keep moisture off repaired area and allow curing for 7 full days.

SAFETY AND ENVIRONMENTAL:

Always wear OSHA approved 1910.134 and ANSI Z88 2 respiratory protection. Fresh air and exhaust should be provided in enclosed work areas. If inhaled, remove affected person to fresh air and call physician immediately if physical difficulties occur. Wear butyl-rubber gloves and other skin protection to avoid contact. In the event of contact with skin, wash skin thoroughly with soap and water. Chemical safety goggles or splash shields are required. Do not wear contacts without eye protection. Immediately flush eyes with water for 15 minutes after contact and get medical attention. If accidentally swallowed, rinse mouth thoroughly and obtain immediate medical attention. (In enclosed areas, make sure to have an observer watching the applicator for any signs of physical distress)

Frequently Asked Questions

Will Coval protect the surface from stains? Yes. However, this is not an acid/alkali proof coating. It will protect from most normal spills if they are cleaned up in a reasonable time. See the YouTube video "Concrete Coat Stain Test" https://www.youtube.com/results?search_query=coval+group

Are all Coval coatings Graffiti Proof? All our solvent-based coatings are graffiti proof.

What detergents should I use to clean a floor which has Coval? You can use mild normal household detergents. Do not use vinegar as it is highly acidic. Coval makes surfaces very easy to clean and keep clean. You will not need to use much detergent if any if the floor is kept in good condition.

Will Coval make the surface more slippery? Coval coatings are extremely thin and will follow the topography of whatever it is applied to. Depending on the surface, the coating will make the surface smoother by around 1–4%. If your floor was slippery before the coating, it will be slippery after Coval is applied.

How can I make a surface it less slippery? You can add an anti-slip polymer to UTC and then spray as normal. This is perfect for use in industrial kitchens, bottling and processing plants where the floors are often wet. Two to three ounces will create a nice non-slip surface. For raw concrete we recommend putting the non-slip additive in our Concrete Primer and then top coating with UTC. Continuously shake your pump sprayer during application to keep the particles suspended and remove all in-line filters in your sprayer to avoid clogging. A red fan tip in a random spray pattern will work the best.

Does Coval coating yellow over time? No there is nothing in Coval coatings that will turn the yellow.

Will a Coval coating over paint prevent the paint from fading? Yes and no, depending on the chemical backbone of the paint in question. Here is why: When Coval UTC is applied over a painted surface, it will create a barrier between the paint and the outside world. The reason paints fade is because UV light will attack the pigment in the paint, breaks that molecule down, and then that molecule oxidizes, and this oxidation makes the pigment lose its color. If there is some component in the paint that will turn yellow by UV light, Coval UTC will not prevent that from occurring. Coval UTC will not stop the UV light, but it will stop the oxidation of the paint.

Will Coval stop epoxy from yellowing? No. Coval will not stop UV light from passing through it. So, if the epoxy was going to yellow due to UV light, then it will still yellow with Coval UTC over the top.

Will my epoxy last longer if it is coated with COVAL? Yes, definitely! The UTC coating will stop the Epoxy from oxidizing and chalking. On floating storage tank roofs in Texas, the epoxy typically needs to be stripped and replaced every two years. With Coval over the epoxy it will last 5 – 7 years.

Will Coval revitalize faded paint? There are two mechanisms that make paint fade. One is that UV light is destroying the pigment and the actual pigment is fading. The second is that this oxidation on the surface is changing the topography of the surface (making the surface rougher) and light is scattering. This also makes the painted surface more faded. Applying Coval will fill in that rough surface and leave a glass like

finish and this will make the coating appear that it has brought the old paint back to life.

What should I do if I apply Coval to thick in one area by mistake? You should immediately try to remove the coating with acetone-soaked cloth. The sooner you try to remove the coating, the easier it will be to get off. Once you have removed as much as you can, allow the rest of the area to cure and then re-assess from there. Do not try to touch up that area while the surrounding area is curing.

How do I repair a scratch in the coating? This will depend on the nature and depth of the scratch. If it is a small scratch, you may be able to clean the area, use a microfiber cloth and wipe over the scratch. The new coating will fill in the scratch and is should be almost invisible. See the YouTube video of repairing a light scratch on a car: <https://www.youtube.com/watch?v=K048c6j0BKU>

How do I repair a large worn area in the coating? You may have to sand or grind that area and repair the underlying surface if it has going through the coating and damaged the substrate. Once that is repaired, clean the area thoroughly then coat over the damaged area graduating the coating in. Do not tape of the area otherwise you will see lines between the old coating and the repair?

Will Coval hide scratches in epoxy or urethanes? It will depend on the severity of the scratches. If epoxy is properly sanded to 220 grit with no deep scratches then yes, it will cover these. Coval is extremely thin and clear, so you will see deeper scratches. The Matte and Satin finishes will do a much better job at hiding scratches. Test a small area first to confirm.

How quickly can I drive over a Coval coated floor? Depending on the temperature and humidity of where you are, you can typically drive over the coating between 24 – 48 hours. The coating will not reach its full hardness for 5–7 days, but rubber tires will be fine.

Can I add a dye or pigment to Coval? Yes. We have several customers that add dyes and pigments to the coatings. However, adding a pigment can often interfere with the crosslinking of our coating so you should conduct tests or contact Coval to get recommendations on which dyes and how much to add.

How many coats of Coval should I apply? You only need one coat if the coating lays out and isn't absorbed by the substrate. If the substrate is too porous, then you may need more than one coat. When applying the coating to a floor you use an acetone sprayer and wet out the surface which will result in a good 0.4 – 0.6 mil dry film thickness in one coat. When applying on vertical surfaces, particularly non-porous substrates, you will need to use an HVLP sprayer and apply the coating much thinner 0.2 – 0.4 mil dry film thickness and you should apply two coats.

How do I remove the coating? For a floor you will need to grind or sand it off with a 60-grit grinder/sandpaper. If you are trying to remove the coating from a metal, abrasion blast.

What is the best way to install the coatings?

Use a pump sprayer that is for Acetone coatings. We also have a sprayer design we share with customers that uses a diaphragm pneumatic pump, with a chemical resistant hose. This allows for constant pressure and continuous spraying and is useful on large floor jobs. Acquire an assortment of spray tips such as: Red fan tip, Grey ConeJet, Red Conejet, 110 degree fan tip. Use smaller tips for smaller jobs and larger tips for bigger jobs.

Which product should I use over Epoxy, Acrylic or Urethane?

Ultimate Top Coat. Do a small test area first to be sure that the coating will cure and level out properly. Apply at 4-5 wet mil thickness. Some epoxies cure and create a microscopic dilutants or plasticizers that will repel the coating. If this is happening, a light sand with 220 grit screens will remove them. Be sure to remove any scratch marks before applying either product.

Will the solvent odor linger long?

No, if you ventilate the space after application the smell will go away in less than an hour. This means night applications, will not cause an odor the next morning.

What is the shelf life?

12 months in a temperature-controlled environment un opened.

How long do the coatings last?

It all depends on the environment. Many floors that have Coval coatings applied have withstood heavy industrial wear for 10 years or more. But like any product, eventually they will start to show wear. With these products, simply clean and re-coat areas that need repairs.

Do you have to sand between coats?

No, simply clean and reapply as needed. The coating covalently bonds to itself and no sanding is required between coats.

How Do I remove graffiti?

Isopropyl alcohol will release sharpie. We recommend acetone to remove spray paint.

Does the Concrete Primer prevent either coating from bonding with the concrete?

No, Concrete Primer and Ultimate Top Coat emulsifies the primer and they cross link together with the concrete.

What about Decorative Concrete Applications?

The Concrete Primer blends with acetone dyes. We recommend acetone dyes that are UV stable and can be used on exterior concrete. Installers typically combine smaller ratios than the normal 1:1 gallon ratios used with straight acetone dyes. For example, you may achieve a ratio of 2-2.5 gallons of dye per one gallon of Concrete Primer. Make a small batch to be sure the dye matches the color you wish to achieve. The advantage of this system is the primer dries very fast and colors can be layered, and several coats can be installed very quickly. Once the desired color is achieved install the Concrete Primer mixed with the dyes to the concrete surface.

How easy is clean-up after each application?

It is simple but do it quickly after finishing the installation. Be sure to depressurize your sprayer immediately after application and empty out all unused material and discard it. It's especially important to hold your wand in the air and pull the trigger to let gravity flush out all the coating in the hose and spray wand. Then dump this out and pore a few inches of acetone in the sprayer. Put the lid on the sprayer and swish acetone all over the walls and pressurize the tank enough to spray the acetone out into a safe area. Repeat this twice and use a rag and acetone to clean up the threads by the pump sprayer lid.

How long does it need to dry between coats?

Four hours minimum but be sure to touch the coating and make sure it is dry and not tacky before applying a second coat.

Can I apply the coating in cold weather on cold concrete slabs?

Not recommended. Use space heaters in the cold winter months to warm the concrete for several hours. With a small foam brush apply a test area to be sure the coating will level out and cure properly. Get the concrete as close to 60 degrees as possible.

Are the coatings breathable?

Yes, the coatings will allow moisture to evaporate underneath the coating and allow pressurized air to pass through the surface.

Can I apply the coatings over damp concrete?

Never, the surface must be completely dry.

What about broom finish driveways, patios, and sidewalks?

Yes, but you should sand the surface to knock off any weak concrete caused by the broom finish. A 32 grit sanding is the easiest way to do this, or a coarse Nylogrit brush. Concrete Primer is recommended because this will be a very porous surface.

For polished concrete what if a guard is already installed?

Do a test area, but lithium silicate and most silicate/siloxane guards and penetrating sealers should be compatible with both coatings.

How long should the concrete cure before application?

Coval follows industry standards and states 28 days. Countertop concrete blends with polymer additives have been successfully coated sooner, however always test first.

Can I use it over natural stone, ceramic, and porcelain tile and grout?

Yes,
in small areas like countertops it can be applied with a foam brush, roller, or square pad applicator. But for larger jobs spray it down with an acetone pump sprayer.