COVAL ULTIMATE TOP COAT

Technical Data Sheet

www.covaltechnologies.com

I.PRODUCT DESCRIPTION

(Gloss, Satin, Matte) **Coval UTC** is a thin-film, single-component, durable clear coating designed to protect finished substrates and decorative coatings from surface wear and harsh chemicals. It creates a covalent bond with the surface of the substrate and is easily and quickly applied with a solvent resistant spray system rated for acetone (pump, HVLP, or airless). **Coval UTC** builds an irreversible covalent bond through the available polar groups in epoxies, urethanes, and non-porous surfaces. This prevents moisture, stains, chloride ion penetration, dirt, ice, acids, bird & animal waste, and graffiti damage to the substrate and since Coval UTC is an anti-graffiti coating, cleanability is greatly enhanced.

II.RECOMMENDED USES

A. Epoxy
B. Urethane
C. Terrazzo
D. Ceramic and Porcelain Tile
E. Polished & Densified Concrete

CAUTION: Coval Coatings should only be applied by experienced coating installers.

III.PRODUCT CHARACTERISTICS

A.PROPERTIES

1. Color: Clear, or clear to slight amber (depending on temperature and humidity)
2. Finish: Gloss, Satin, or Matte
3. Vehicle Type: Solvent Base
4. Flash Point: Penskey-Martens closed cup -9°C/15°F
5. VOC: Less than 100 g/L
6. SG: .89-.91
7. Semi-breathable

B.DRY TIME

1. Drying Time at 21°F, 50% RH
   The higher the temperature and humidity, the faster the dry time.
2. Dry to Touch: 2-4 hours
3. Light Foot Traffic: 8–12 hours
4. Dry to Recoat: 24 hours
5. Full Cure: 7 days

C.SPREAD RATE

Recommended Spread Rate per coat:
Wet: 100-125 microns per coat.
Dry: 7-15 microns average

D.COVERAGE

Coverage will vary depending on the porosity texture of the substrate, as well as the applicator's method of application. Below are typical coverage rates:

Coverage Rates are Approximate

Substrate:	square meters/liter
Epoxy	8
Urethane	8
Terrazzo	7
Ceramic and Porcelain Tile	8
Polished and Densified Concrete	7

****Coverage rates will vary depending on substrate and porosity****
An additional 1.25- 3 sq.meters/L can be achieved on additional coats.

E.TESTING RESULTS

ASTM D-4060 Taber Abrasion:	
1000g @1000	30 mg
500g @1000	3 mg
Coating tested after 7 days.	
Coating continues to harden up to 30 days.	
ASTM D-3363 Film Hardness, Pencil	9H
ASTM D4541 Adhesion	11,721 kPa
ASTM D3359-97 Adhesion	4
ASTM B117-111 Salt Spray Scribed	6

Staining Agent	Resistance Time (h)	Cleaner Required
10% Citric Acid	12	Dry Cloth
Acetone	48+	Dry Cloth
Betadine	6	Wet Cloth
Brake Fluid	48+	Dry Cloth
Coffee/Tea	48+	Dry Cloth
Gasoline	48+	Dry Cloth
Permanent Marker	48+	Solvent
Red Wine	48+	Dry Cloth
Spray Paint	48+	Solvent
Urine	24	Wet Cloth

F.INDOOR SAFETY

Prior to application, 1) TURN OFF ALL PILOT LIGHTS OR OPEN FLAMES IN THE BUILDING.
During application
1) Always wear safety googles 2) Wear an OSHA approved organic vapor respirator.

IV.APPLICATION INSTRUCTIONS

A. SURFACE PREPARATION

1. SWEEP AND DUST FIRST

2. ALL SURFACES

IMPORTANT: REMOVE ANY SILICONE

a. Decontaminate any surface to be coated, removing oils, grease, wax, fatty acids, and other contaminants by using detergents, etching solutions, heavy duty cleaner/degreaser, steam, or chemical cleaning. Vacuum and rinse with water.

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b. Use generally accepted standards for concrete curing of 28 days and not more than 1.45 KGs. of moisture vapor pressure per 100 sq. meters per 24 hours.
c. Be sure the surface is dry to the touch before spraying Coval. Use a two-prong Moisture Meter calibrated for concrete reading <13%.

3.PREVIOUSLY SEALED CONCRETE

a. **Coval UTC** is compatible with densifiers and hardeners used after the concrete is placed or during the curing process. Lithium silicate, colloidal silica, and sodium silicate are generally compatible with **Coval UTC**. Clean before application.
b. MAKE A TEST AREA in an inconspicuous spot to ensure there is not any issue with the adhesion or curing process.

4.EPOXY

a. Spray **Coval UTC** directly over clean, fully cured epoxy following the Application Instructions in this document.
b. Follow the coating manufacturer's specification for duration of the epoxy to fully cure before application.
c. Wipe epoxy with Acetone before application and do not sand unless necessary.
d. If sanding is required, it may require two coats of **Coval UTC** because of porosity.

5.PORCELAIN AND CERAMIC TILE

Clean tile and grout until all stains are removed and it is in the desired appearance before applying **Coval UTC**. After the surface is completely dry, spray **Coval UTC** following the Application Instructions.

6.TEST AREA

When using **Coval UTC** on a new substrate for the first time, clean the area, then test it on a small, inconspicuous spot to ensure adhesion and determine that the desired look is achieved. Due to the wide variety and texture of surfaces and methods of application and environments, different reactions may occur. Once satisfied, work can begin. A slight enhancement or change in appearance from the natural surface will occur when using Coval.

B.GENERAL

1. Coval UTC looks best when applied with a sprayer to achieve optimum finish and appearance. It is designed for use over surfaces in
   II. Recommended Uses.
2. When possible, use a Coval Acetone Sprayer. ***Only use a solvent resistant spray system rated for acetone.*** Options include a pump sprayer, an HVLP, or an airless sprayer, fitted with chemical resistant hoses.
3. With the Coval sprayer, use a gray full cone tip for smaller/mod ulated areas, or use a black full cone tip for wide open areas. You can also use TeeJet gray hollow cone jet tip (TX-VK8) for smaller areas or a TeeJet Brown hollow cone tip (TX-VK10/12) to spray larger areas. DO NOT USE other spray tips as it could produce inconsistent results.
4. Using a cone tip apply Coval UTC using a circular motion with no more than a 10% overlap. Maintain consistent 30-35 PSI air pressure during application by pumping the sprayer regularly and observing consistent droplet sizes. Keep the tip perpendic ular to the floor and maintain a consistent distance of 30-40 cm from the surface.

2ND COAT & RECOAT APPLICATIONS Dry to Recoat: Coval coating are designed to give excellent performance with a single coat. If recoating is necessary, wait for a minimum of 24 hours, and lightly buff the surface using a 3M Maroon Scotch-bright pad. It may take longer due to cold temperatures and low humidity, so always do a test area before recoating. Do not mix Gloss, Satin, or Matte sheens on recoats, without consulting, Coval Technologies Support.

TECHNICAL TIPS DO & DON'T

1. **All Finishes:** Apply 100-125 microns 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 but install enough to wet out the surface (100-125 microns). Do not allow the product to puddle as this will cause too much surface tension and cause possible cracking or delamination.
2. Apply with little overlap of the coating to avoid the appearance of lines. On highly reflective floors, a thicker coating in one area will distort the light refraction.
3. For information regarding adding dyes or texture/non-slip additives to Coval, please see the Coval FAQ document, Section V. Additives
4. With all methods of application, always mask off any adjacent surface to protect it from overspray.
5. Maintain a consistent distance from the surface of 30-40 cm.
6. Use a circular motion when spraying to avoid lap lines when using a cone jet tip.
7. Apply with little overlap of the coating to avoid the appearance of lines. On highly reflective floors, a thicker coating in one area will distort the light refraction.
8. For information regarding adding dyes or texture/ non-slip additives to Coval, please see Coval FAQ, Section V. Additives.
9. With all application, always mask off any adjacent surface to protect it from overspray.
10. If applying outdoors, make certain the ambient temperature is between 7°C and 40°C, and Relative Humidity (RH) is 90% or lower. Check the forecast for low wind and no chance of rain for a minimum of 5 hours after the estimated time of completion of the coating process.
11. Confirm and schedule so that no morning dew, or sprinkler watering occurs 5 hours minimum after application.

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a.MOVEMENT

Do not exceed 10 minutes of wet-edge exposure. When replenishing the coating, quickly refill the sprayer and return to coating on the wet edge within 10 minutes. Be prepared with Coval UTC ready to refill a sprayer. For larger jobs use a pump system or multiple applicators to maintain the wet edge.

b.INTERRUPTION OF WORK

i. If a stop is needed, use a control or expansion on the floor or clean tape line.
ii. Clean the sprayer with acetone and resume work when ready.
iii. After 10 minutes, the coating will not re-emulsify or melt into itself if stopped and restarted on the wet edge.

C.CLEAN UP

1. Clean tools and flush equipment with acetone twice (minimum) immediately after application.
2. Remove spray tips and soak in acetone.
   IMPORTANT: Once the coating is dry, the tools will not clean up with any solvent.
3. When cleaning sprayer, pour in 1 L of acetone and secure cap of sprayer, shake vigorously to clean all side walls of tank and pump. Then pressurize tank and spray acetone through to thoroughly rinse hose, wand, and spray tip.
4. Release pressure, remove spray tip from wand and place in cup of acetone.
5. Add another 1 L of acetone to tank and repeat rinsing cycle.
6. When finished, release pressure, open cap, hold wand above tank and release residual acetone from hose and wand.

D.STORAGE

If excess coating remains in a container, Coval recommends the following:

1. Put a nitrogen or argon blanket on the top of the remaining liquid in the container, (Argon gas can be found in small containers, sold as wine preservers on amazon) OR
2. Move the remaining coating to a smaller container with as little air/oxygen in the container as possible. Use only HDPE containers.
3. Store in a cool, dry location. Do not store solvent-based products in the sun, warm storage area, or in a sun-heated vehicle as overly heated products can turn dark in color and remain tinted when applied.
4. Shelf life: 12 months
5. Store in temperature-controlled environment not to exceed 27°C.

V.CARE AND MAINTENANCE

1. Wipe up spills as soon as possible.
2. Do not use heavy abrasive pads on auto-scrubbers.
3. A soft brush or white buffing pad is sufficient to remove stains from the surface once cured.
4. Neutral pH cleaners, disinfecting cleaners, and de-greasers will not damage the finish and can be used regularly.
5. Remove paint spills or graffiti with rubbing alcohol or acetone and rinse with water.
6. If high traffic areas show wear, clean area with 3M maroon scotch bright pad. Tack floor with acetone keeping the leading edge of the microfiber pad always moving in the same direction. Then apply a fresh coat of Coval UTC.

VI.SAFETY AND ENVIRONMENTAL

1. **INDOORS, TURN OFF AND EXTINGUISH ALL PILOT LIGHTS OR OPEN FLAMES IN THE BUILDING.**
2. Always wear OSHA approved 1910.134 and ANSI Z88 2 respiratory protection.
3. 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.
4. 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.
5. 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.
6. If accidentally swallowed, rinse mouth thoroughly and obtain immediate medical attention.
7. In enclosed areas, make sure to have an observer watching the applicator for any signs of physical distress.

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