



COVAL ULTIMATE TOP COAT

Technical Data Sheet

Revised 11-2023. Please reference the latest copy available at www.covaltechnologies.com

Ultimate Top Coat (UTC) for Epoxy, Terrazzo, and Stained, Polished or Sealed Concrete Floors and Counters

I. PRODUCT DESCRIPTION (Gloss, Satin, Matte)

Coval UTC is a thin film, single component, clear coating designed to protect finished substrates, decorative coatings from surface wear and harsh chemicals. It creates a covalent bond with the coating 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 paints. This prevents moisture, stains, chloride ion penetration, dirt, ice, acids, bird & animal waste, and graffiti damage to the substrate.

II. RECOMMENDED USES

- Epoxy
- Urethane
- Acrylic
- Terrazzo
- Ceramic and Porcelain
- Polished & Densified Concrete

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

Best practice is to apply enough coating to “wet-out” the surface averaging 100-125 microns, wet film thickness. If coating is applied too thick, it will attempt to cross link away from the surface, which may cause fracturing or delamination. Average square metre coverage will be approximately 6-8 m² per litre if the coating is properly applied. Over applying the coating will crack the coating or potentially cause delamination. Coval coatings are specifically designed for the substrates listed in the Technical Data Sheet and should never be applied to substrates not listed without testing.

III. PRODUCT CHARACTERISTICS

A. PROPERTIES

- Color: Clear, or clear to slight amber (depending on temperature and humidity)
- Finish: Gloss, Satin, or Matte
- Vehicle Type: Solvent Base
- Flash Point: Penskey-Martens closed cup -9C/15F
- VOC: Less than 100 g/L
- Weight/Litre: .88 kg/L
- Semi-breathable

B. DRY TIME

- Drying Time: (@ 25°C, 50% RH): Temperature, humidity, and film thickness dependent. (The higher the temperature and humidity, the faster the dry time).
- Touch Dry: 2-4 hours
- Walk on: 8-12 hours

- Dry to Recoat: Coval Coatings are designed to give excellent performance with a single coat. If recoating is necessary, wait for a minimum of 24 hours. 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 Technical Support.
- Full Cure: 7 days

C. SPREAD RATE

Recommended Spread Rate per coat:
Wet microns: 100-125 per coat
Dry microns: 7-13 average

D. COVERAGE

Coverage of 6-8 m²/L will vary depending on the porosity and texture of the substrate, as well as the applicator's method of application. Below are typical coverage rates:

- Epoxy: 8 m²/L
- Polished Marble, Granite: 8 m²/L
- Porcelain, Ceramic: 8 m²/L
- Terrazzo: 8 m²/L
- Polished & densified Concrete: 8 m²/L

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 (hours) | 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

During application, 1) turn off all pilot lights or open flames in the building, 2) always wear safety goggles and 3) wear an OSHA approved respirator.



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For further information and instructions, please see Coval FAQs online at www.covaltechnologies.com.

IV. APPLICATION INSTRUCTIONS

A. 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. 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. For all Coval finishes, use a gray cone jet tip (TX-VK8) or brown cone jet tip (TX-VK12), or for the Gloss finish, use a red fan tip (F110-04).
4. **It is not recommended** to use the brass full cone spray tip that is included with a sprayer, as it may result in over-atomizing the coating, which can lead to an "orange peel" surface.
5. **Matte or Satin Finish:** Do not use a fan tip when applying Matte or Satin finishes as this may cause overlap lines. Use a cone jet instead, using a circular motion with minimal overlap. Be sure to remove any fine micron filters in the sprayer or the matting agent may cause clogging.
 - a. With a five-litre container of ALL Coval products, shake vigorously, and before pump refills. With a 20-litre container, remove the lid and stir with a low or high-speed mixer until the matting agent is fully dispersed.
 - b. Pour Satin and Matte finishes through a paint screen.
 - c. Once poured, **re-shake the pump sprayer during application every 10-15 minutes** to re-suspend the matting agents for a consistent finish.
6. **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 put down enough to wet out the surface (100-125 microns). Puddling will cause too much surface tension and cause possible cracking or delamination.
7. Maintain consistent 200-225 kPa/30-33 PSI air pressure during the application by pumping the sprayer regularly and observing consistent droplet sizes. On average, re-pump the sprayer every 9-14 m² to create a consistent flow and finish.
8. Maintain a consistent distance from the surface of 30-45 cm.

9. Use a circular motion when spraying to avoid lap lines.
10. 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.
11. For information regarding adding dyes or texture/non-slip additives to Coval, please see *Coval FAQ, Section V. Additives*.
12. With all application, always mask off any adjacent surface to protect it from overspray.
13. 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.
14. Confirm and schedule so that no morning dew, or sprinkler watering occurs 5 hours minimum after application.

B. 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.
- b. Use generally accepted standards for concrete curing of 28 days and not more than 1.4 kilograms of moisture vapor pressure per 92 m² per 24 hours.
- c. Be sure the surface is dry to touch before spraying Coval. Moisture meter <15%.

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, sodium silicate, and acrylic emulsions 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 manufacturer's specification for epoxy re-coat timetable and allow the epoxy to fully cure before application.



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- 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. PAINTED FLOORING

If in sound condition, clean the surface of all foreign material. Rinse with fresh water and allow to dry. Clean the old paint to the desired appearance before applying **Coval UTC**.

If the paint is peeling or badly weathered, re-application of the existing paint may be necessary. If re-painting is required, proceed with that process outlined by the paint manufacturer, then apply **Coval UTC**, following the paint manufacturer's re-application timetable, and recommended drying time.

6. PORCELAIN AND CERAMIC TILE

Clean tile and grout until all stains are removed. Do not spray **Coval UTC** following the application instructions in this Data Sheet, until the surface is dry.

7. 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.

C. MOVE

Do not exceed 15 minutes of wet-edge exposure. When replenishing the coating, quickly refill the sprayer and return to coating on the wet edge within 15 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.

D. INTERRUPTION OF WORK

1. If a stop is needed, use a control or expansion on the floor or clean tape line.
2. Clean the sprayer with acetone and resume work when ready.
3. After 15 minutes, the coating will not re-emulsify or melt into itself if stopped and restarted on the wet edge.

E. CLEAN UP

1. Clean tools and flush equipment with acetone twice (minimum) immediately after application.
2. Remove spray tips and soak in acetone.
3. **IMPORTANT:** Once the coating is dry, the tools will not clean up with any solvent.

V. STORAGE

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

- A. Put a nitrogen or argon blanket on the top of the remaining liquid in the container, **OR**
- B. Move the remaining coating to a smaller container with as little air/oxygen in the container as possible. HDPE containers only.
- C. Store in a temperature controlled 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.
- D. Shelf life: 12 months.
- E. Maximum storage temperature: 27°C.

VI. CARE AND MAINTENANCE

- A. Wipe up spills as soon as possible.
- B. Do not use heavy abrasive pads on auto-scrubbers.
- C. A soft brush or white buffing pad is sufficient to remove stains from the surface once cured.
- D. Neutral pH cleaners, disinfecting cleaners, and de-greasers will not damage the finish and can be used regularly.
- E. Remove paint spills or graffiti with rubbing alcohol and rinse with water.
- F. If high traffic areas show wear, lightly sand, and spray a fresh coat in the worn area once applied.
- G. Maximum temperature that **Coval UTC** can withstand continuously and under peak conditions when applied to a surface is, Continuous: 120°C, Peak: 180°C.

VII. SAFETY AND ENVIRONMENTAL

- A. Always wear OSHA approved 1910.134 and ANSI Z88 2 respiratory protection.
- B. 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.
- C. 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.
- D. 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.
- E. If accidentally swallowed, rinse mouth thoroughly and obtain immediate medical attention.
- F. In enclosed areas, make sure to have an observer watching the applicator for any signs of physical distress.