COVAL CONCRETE COAT

Technical Data Sheet

www.covaltechnologies.com

I.PRODUCT DESCRIPTION (Gloss, Satin, Matte)

Coval Concrete Coat is a thin-film, single-component, clear coating designed to protect finished substrates, decorative coatings and dense, non-porous masonry from surface wear and harsh chemicals. It creates a covalent bond with the concrete substrate and is easily and quickly applied with a solvent resistant spray system rated for acetone (pump, HVLP, or airless). Use a primer underneath **Coval Concrete Coat** on porous or soft substrates to seal the pores before application. Primers include **Coval Concrete Primer**, or a densifier. A primer is not needed on tight or dense concrete. Coval Coatings are UV stable and resist moisture, stains, chloride ion penetration, dirt, ice, acids, bird and animal waste, and graffiti damage to the substrate

II.RECOMMENDED USES

A. Concrete floors including both hard trawled or grind and seal applications
B. Stamped overlays and concrete overlays
C. Vertical masonry
D. Precast concrete
E. Concrete terrazzo and epoxy terrazzo

Coval coatings should only be applied by experienced coating installers. Coval coatings are specifically designed for the substrates listed in the Technical Date Sheet and should never be applied to substrates not listed without testing.

III.PRODUCT CHARACTERISTICS

A.PROPERTIES

1. Color: Clear, or clear to slight (depending on temperature and humidity)
2. Finish: Gloss, Satin, or Matte
3. Vehicle Type: Solvent Base
4. Flash Point: Penskey-Martens closed cup 9C/15F
5. VOC: Less than 100 g/L
6. Specific Gravity: .91-.93
7. Semi-breathable

B.DRY TIME

1. Drying Time at 70°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. *SEE APPLICATION INSTRUCTIONS FOR DETAILS*

1. SPREAD RATE PER COAT
   (recommended) Wet mills : 4.0-5.0 mil per coat
   Dry mil: 0.3-0.6 mil 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:	Sq. Ft. / Gal Coverage
Broom Finish Concrete over Primer	250
Trowel Finished Concrete	300
Stamped Concrete Overlay	300
Vertical Masonry	300
Precast Concrete	300
Terrazzo	300

****Coverage rates will vary depending on substrate and porosity****
An additional 50-125 sq.ft/gal can be achieved on additional coats.

E.TESTING RESULTS

ASTM D-4060 Taber Abrasion:	
1000g @ 1000	30 mg
500g@500	3 mg
Coating tested after 7 days.	
Coating continues to harden up to 30 days.	
ASTM D1308	No staining
ASTM D3273/D3274	No fungal growth
ASTM D-3363 Film Hardness, Pencil	9H
ASTM D4060	.14%
ASTM D4541 Adhesion	1700 PSI
ASTM D3359-97 Adhesion	4
ASTM B117-111 Salt Spray Scribed	6
ASTM D7234	601 PSI

Staining Agent	Resistance Time (hours)	Cleaner Required
10% Citric Acid	12	Dry Cloth
Acetone	48+	Dry Cloth
Balsamic Vinegar	12	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

A.INDOOR SAFETY

Before application, **1) TURN OFF ALL PILOT LIGHTS OR OPEN FLAMES IN THE BUILDING,**
During Application
2) always wear safety googles 3) wear an OSHA approved organic vapor respirator.

IV.APPLICATION INSTRUCTIONS

A. SURFACE PREPARATION

1. Sweep, Dust and Decontaminate

IMPORTANT: REMOVE ANY SILICONE

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 cleaning, or mechanical removal. Ensure the polished surface is beading water and has the final permanent look desired.

2.Unsealed Concrete

a. Remove laitance and concrete dust, making sure the surface will absorb **Coval Concrete Primer or a densifier**. If using Coval Concrete Primer, refer to Coval Concrete Primer TDS or contact Coval Technical Department before application.
b. Use generally accepted standards for concrete curing of 28 days and not more than 3 pounds vapor pressure per 1000 sq. ft. 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 Concrete** is compatible with densifiers/hardeners used after the concrete is placed or during the curing process. Lithium silicate, colloidal silica, potassium silicate, and sodium silicate are generally compatible with **Coval Concrete**. Clean the surface before application. Do a test area.
b. **Coval Concrete** is not formulated for application over painted surfaces or epoxy.

4.Test area

a. When using **Coval Concrete** on a new substrate for the first time, clean the area, then test it on as mall, inconspicuous area to ensure adhesion and determine that the desired look is achieved. Due to the wide variety of texture and porosity of concrete and masonry surfaces and the various methods of application and environments, different reactions may occur. Once satisfied, work can begin.
b. There will be a slight enhancement or change in appearance from the natural surface when using Coval coatings. It will depend on the color of the concrete.
c. If ever in doubt about a coating, TEST it first.

B.GENERAL

1. **Coval Concrete** looks best when applied with a sprayer to achieve optimum finish and appearance. It is designed for use over surfaces in Section 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/ modulated 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 concrete 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 perpendicular to the floor and maintain a consistent distance of 12"-16" 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

- **All Finishes:** Apply 4.0-5.0 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 but install enough to wet out the surface (4.0-5.0 mils). Do not allow the product to puddle as this will cause too much surface tension and cause possible cracking or delamination.
- 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.
- For information regarding adding dyes or texture/non-slip additives to Coval, please see the Coval FAQ document, Section V. Additives
- With all methods of application, always mask off any adjacent surface to protect it from overspray.

C. OUTDOOR APPLICATIONS

a. Make certain the ambient temperature is between 40°F and 105°F, 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.
b. Confirm and schedule so that no morning dew, or sprinkler watering occurs 5 hours minimum after application.

D.CLEAN UP

1. Clean tools and flush equipment with acetonetwice (minimum) immediately after application.
2. Remove spray tips and soak in acetone.
   IMPORTANT: Once the coating is dry, the toolswill not clean with acetone or any other solvent.
3. When cleaning the sprayer, pour in 1 qt. 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 qt 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.

E.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 80°F.

F.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 Concrete.

V. 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.