



INSTALLATION INSTRUCTIONS COATINGS

SURFACE PREPARATION

Before applying a ConSeal primer or coating, ensure the concrete is devoid of dust, dirt, oils, grease, form release agents, curing compounds, laitance, and debris. Do not apply ConSeal primers or coatings over an existing coating without contacting ConSeal's technical team. Conduct a thorough inspection of the surface's integrity. Static hairline cracks should be sealed with a cementitious paste or with an epoxy injection in accordance with ASTM C881. Remove sharp edges or concrete splatter. Start the coating application process **ONLY AFTER** the surface is verified to be clean, sound, and sufficiently dry per the primer or coating requirements. If necessary, patch or repair damaged areas, honeycombing, exposed rebar, etc. Testing shall be done in advance to assure compatibility of coating with the patching materials.

Concrete can be prepared using vacuum cleaning, air blasting, and water cleaning as described in ASTM D4258. Detergent water cleaning and steam cleaning as described in ASTM D4258 may be used to remove oils and grease from the concrete surface. To remove loose concrete, laitance, and to expose surface voids, dry adhesive blasting, wet adhesive blasting, vacuum-assisted abrasive blasting, and centrifugal shot blasting as described in ASTM D4259 may be used. High pressure water jetting as described in ASTM D4259 may also be used.

Acid etching as described in ASTM D4260 may be used to remove laitance and weak concrete. All acidic materials shall be removed from the concrete and the pH of the concrete shall be tested to assure the acid has been neutralized. Some sealers or primers may prohibit the use of acid etching. Hydrochloric acid, such as muriatic acid, is not to be used where metal (e.g., rebar) is exposed.

NOTE: When using a coating for the first time, it is advisable to coat a small test patch on a representative section of concrete and verify adhesion before proceeding to large scale coating projects.

TESTING OF A COATING SYSTEM

All concrete has unique variations. Concrete coating systems should be tested on the concrete intended for use along with adhesion performance testing as described in ASTM D7234. For further testing use ACI 302.2 as a guide.

For testing, a simple method that can be used in the field is ASTM D3359, Test Method A. An 'X' is cut into the coating with a sharp knife. Then, 1" (25 mm) wide pressure sensitive tape is placed along the center of the cut that was made, pressed firmly into place, and removed by a quick pull. Check for a loss of coating, especially at the intersection of the 'X'.

PRIMING

ConSeal CS-80 and ConSeal CS-85 are specifically designed for ConSeal's elastomeric coatings (CS-55, CS-1200, and CS-1800). CS-90 and CS-95 epoxy coatings, do not require a surface primer.

DO NOT USE PETROLEUM SOLVENTS SUCH AS MINERAL SPIRITS OR XYLENE FOR SURFACE PREPARATION. DO NOT THIN OR DILUTE ANY CONSEAL PRIMERS OR COATINGS BEFORE USE.

CS-80 SOLVENTBORNE PRIMER - Begin by ensuring the concrete surface is clean, intact, and completely dry. Once this is confirmed, you can immediately start applying a uniform layer of CS-80 primer to the area. Apply the primer evenly across the concrete and wait for it to dry. Inspect the coated surface for any missed spots or voids. **Apply only one coat of primer to the surface. Multiple coats may cause delamination.** After use, immediately secure the primer's lid to prevent it from drying out.

CS-85 WATERBORNE PRIMER - Before beginning the CS-85 application, confirm that the concrete surface meets one of two conditions: it has been air cured and dry for a minimum of 48 hours, or it has a surface moisture reading of less than 5%¹. Once you have ensured the surface is clean, undamaged, and dry, you can apply CS-85 primer. Apply the primer evenly across the concrete and wait for it to dry. **Apply only one coat of primer to the surface. Multiple coats may cause delamination.** Inspect the coated surface for any missed spots or voids. After use, immediately secure the primer's lid to prevent it from drying out.

¹ConSeal uses a Tramex CMExpert II digital concrete moisture meter for instant surface moisture readings.

STORAGE

DO NOT FREEZE! Always keep the containers sealed when they are not being used. Ensure that unopened containers are safeguarded against water, heat, and direct sunlight. It is important to store these original, sealed containers in an environment that is both cool and dry, ideally within a temperature range of 40°F to 90°F. If a spill occurs, contain it using an inert absorbent material, like sand, vermiculite, or kitty litter. Then, dispose of the waste responsibly, following all relevant local, state, and federal environmental regulations. Be aware that storing the product at temperatures above 100°F can decrease its shelf life. Once opened, pails should be used within six months for optimal quality.

CLEAN UP

Mechanical scraping will be necessary for cured product. Water based coatings that are still wet can be removed with warm, soapy water. All other coatings to be cleaned with denatured alcohol, MEK, or Acetone.

LIMITATIONS

- In areas where prolonged chemical exposure is anticipated, contact Concrete Sealants, Inc. for recommendations.
- Do not apply at temperatures below 40°F (4°C).
- Do not use on surfaces with an existing coating unless the coating is completely removed or otherwise advised by Concrete Sealants, Inc. technical staff.

KEEP ALL PRIMERS AND COATINGS OUT OF REACH OF CHILDREN

REFER TO CONCRETE SEALANTS SAFETY DATA SHEETS FOR ADDITIONAL INFORMATION

ENVIRONMENTAL CONDITIONS

The age of the concrete shall be as specified by the coating being used. The moisture content of the concrete shall not exceed the measure specified by the coating being used. The moisture test shall be completed after cleaning and drying, but before the application of the coating¹. Coatings shall be applied when the air temperature is within 20°F of the high temperature of the day. The relative humidity of the coating environment shall not exceed 80% at any time during application or curing for waterborne coating and waterborne primer products. If coating indoors, maintain a temperature range within 20°F during the application and curing of the coating. Additionally, the air temperature and the temperature of the concrete to be coated shall be a minimum of 5°F above the dew point temperature and rising.

ALL COATINGS SHALL NOT BE APPLIED TO FROZEN CONCRETE WITH A CORE TEMPERATURE BELOW 32°F.

APPLICATION INSTRUCTIONS

CS-55 APPLICATION: Stir CS-55 thoroughly before use. CS-55 must not be used on surfaces that are constantly submerged in water. In high humidity environments, consider CS-90 in lieu of CS-55. It is suitable for application on concrete structures when the concrete and air temperatures are within the range of 40° to 120°F. Reminder: The relative humidity of the coating environment shall not exceed 80% at any time during application or curing. Before beginning the CS-55 application, confirm that the concrete surface meets one of two conditions: it has been air cured and dry for a minimum of 48 hours, or it has a surface moisture reading of less than 5%¹. You can apply CS-55 using a roller, brush, or spray gun. For airless spray gun use, choose a spray tip size between 0.013” and 0.015” for optimal results. To prevent 'cracking,' ensure that the product does not accumulate in pools and that each coat is not too thick. For multiple coats, apply each new layer at a right angle to the previous one to strengthen the film integrity. If using a spray gun, maintain a distance of 12” to 24” from the surface and apply a light, uniform coat. Before applying additional coats, ensure that the previous coat is completely dry.

CS-90 APPLICATION: Stir both Part A and Part B components thoroughly in their separate containers before use. A primer shall not be used for ConSeal's CS-90 Water-Based Epoxy Coating. However, ensure the surface is devoid of dust, dirt, grease, form release agents, laitance, and debris. Once mixed individually, gradually combine the entirety of Part A into Part B (2:1 mix ratio by weight), stirring continuously until a uniform light blue color is homogeneously seen throughout the container. When applying the coating, use a brush or roller and aim for a recommended thickness of 5-11 mils wet. The ideal application temperature range is between 40°F and 120°F. The curing process typically takes 30-90 minutes, and this duration can decrease with higher environmental temperatures; note that the coating will not cure effectively in temperatures below 40°F. If applying an additional layer, once the applied coating has transformed from an opaque blue liquid to a blue tacky transparent film, another coat may be applied. CS-90 can be sprayed with professional, plural component spray equipment. Contact ConSeal for further details.

¹ConSeal uses a Tramex CMExpert II digital concrete moisture meter for instant surface moisture readings.

CS-95 APPLICATION: Stir both Part A and Part B components thoroughly in their separate containers before use. A primer shall not be used for ConSeal's CS-95 Ultra-Performance Epoxy Coating. However, ensure the surface is devoid of dust, dirt, grease, form release agents, laitance, and debris. Once mixed individually, gradually combine the entirety of Part A into Part B (2:1 mix ratio by weight), stirring continuously for a uniform mixture. **Promptly transfer the mixed coating to a paint tray to avoid a hazardous reaction with very high temperatures, which can become a burn hazard if left in the bucket.** Always mix in a well-ventilated area and **avoid** inhaling fumes from Part B immediately after opening. When applying the coating, use a brush or roller and aim for a recommended thickness of 10-20 mils wet. The ideal application temperature range is between 40°F and 120°F. Pot life when distributed into a paint tray is 30 Minutes at 77°F. The full curing process typically takes 4 to 6 hours, and this duration can decrease with higher environmental temperatures; note that the coating will not cure effectively in temperatures below 40°F. If applying an additional layer, abrade the cured surface lightly before the next application to ensure proper adhesion. CS-95 can be sprayed with professional, plural component spray equipment. Contact ConSeal for further details.

CS-1200 APPLICATION: Stir CS-1200 thoroughly before use. CS-1200 must be applied to concrete structures when the concrete and air temperatures are between 40°F and 120°F. Reminder: The relative humidity of the coating environment shall not exceed 80% at any time during application or curing for waterborne coating and waterborne primer products. Before beginning the CS-85 application, confirm that the concrete surface meets one of two conditions: it has been air cured and dry for a minimum of 48 hours, or it has a surface moisture reading of less than 5%¹. For application, use a 3/16" nap roller, brush, or spray gun. When using an airless spray gun, opt for a spray tip size between 0.017" and 0.021" to ensure proper coverage. To prevent cracking, ensure that the product does not accumulate in pools and that each coat is not too thick. For multiple coats, apply each new layer at a right angle to the previous one to strengthen the film integrity. If using a spray gun, maintain a distance of 12" to 24" from the surface and apply a light, uniform coat. Before applying additional coats, ensure that the previous coat is completely dry by obtaining a surface moisture reading of under 5%¹.

CS-1800 APPLICATION: Stir CS-1800 thoroughly before use. Before application, keep CS-1800 at approximately 70°F to facilitate a smoother application process. Apply CS-1800 to the primed surface using a brush, 3/16" nap roller, trowel, or squeegee to achieve the required thickness. Aim for a spread rate of 50 square feet per gallon for a 30 mils thick coating. If a second layer is needed, apply it at the earliest opportunity. Ensure that the previous coat is completely dry by obtaining a surface moisture reading of under 5%¹. CS-1800 can be sprayed with professional, high-pressure spray equipment. Contact Concrete Sealants for further details.

¹ConSeal uses a Tramex CMEXpert II digital concrete moisture meter for instant surface moisture readings.

DISCLAIMER: This publication is to assist users to understand the proper use of ConSeal's products. Contact ConSeal's technical staff for installation instructions that meet your specific requirement. Concrete Sealants, Inc. does not warranty any improper use of its products.