



PRODUCT CATEGORY: SURFACE PREP

CR-90™

PREMIUM CEMENT-BASED CONCRETE RESURFACER

Stronger than concrete at 5500 psi | Freeze-thaw stable

DESCRIPTION: CR-90™ is a high-performance, quick-turnaround concrete resurfacer that only needs to be mixed with water and can be used for both horizontal and vertical applications. CR-90 is a cost-effective, durable answer to expensive concrete replacement. CR-90 can be applied by trowel, sponge float, squeegee, or brush and can be broom finished. In addition, it can be spray-applied for knockdown and stencil applications, or used as a thin-stamp overlay. CR-90 is available in gray and can be integrally colored or stained.*

PRODUCT FEATURES:

- Ideal for resurfacing parking decks, patios, concrete steps, sidewalks, driveways, and pool decks
- Stronger and more durable than conventional concrete at 5500 psi
- Quick return to service
- Accepts stains, dyes, or integral colors*
- Can be broom finished, knocked down, or stamped
- Suitable for commercial or residential applications
- Contributes points to LEED®-certified projects
- Can be installed over 5-day-old, green concrete

SURFACE PREPARATION: CR-90 is not a vapor barrier, but it is insensitive to moisture from unabsorbed water of convenience in cured concrete. Concrete and concrete masonry surfaces must be open, solid, completely clean, free of oil, grease, curing compounds and sealers, asphalt, paint, dirt, or any contaminant that will act as a bond breaker.

Grease and oil must be removed through the use of a commercial degreaser, high-pressure steam, or a microbial cleaner. Follow manufacturer's recommendations and rinse with high-pressure washing. Weak, spalling concrete or areas of efflorescence must be cleaned down to solid, sound concrete by mechanical means, such as grinding, shot-blasting, or scarifying. Substrate must have

*The addition of colors/stains is the responsibility of the end user to verify satisfactory results.

PHYSICAL PROPERTIES

Packaging	50 lb. bag, 48 bags per pallet
Color	Gray
Shelf Life	18 Months
Water Requirements	4.0 to 5.5 quarts (3.8 to 5.2 L) per 50 lb. bag
Required Application Tools	Mixing Drum
	Mixing Paddle
	Measuring Pail
Approx. Coverage: 50 lb. Bag	1/16" (1.6 mm) covers 100 ft ²
	1/8" (3.2 mm) covers 50 ft ²
Installation Thickness	1/16" to 1" (1.6 to 25.4 mm) neat
	5" (12.7 cm) Extended with stone
Installed Weight (Per sq. ft.)	2.2 lbs. @ 1/4" (6.4 mm)
Application Temperature Range	50°F to 95°F (10°C to 35°C)
Set Time: ASTM C191 (70°F [21°C] @ 50% RH)	Working Time: 20 Minutes*
	Final Set: 60 Minutes*
Accepts Coatings: (70° F [21°C] @ 50% RH)	Water-based stains & sealers: 24 hours*

*Temperatures are greatly affected by weather conditions. Warmer temperatures will decrease working time, whereas cooler temperatures will extend working time.

a direct, tensile bond test reading of 150+ psi per (ASTM C1583). High-pressure wash the sound concrete to prepare surface. Acid etching or chemical cleaning is NOT acceptable. Exposed steel must be mechanically white-metal cleaned.

Expansion and Control Joints: Moving joints such as expansion or control joints must be clean and reflected through the CR-90. After application they should be filled with a product specifically designed for that purpose. Follow manufacturer's directions for application.

Note: CR-90 is not intended as a crack repair material. Cracking is an indication of stress on a substrate, which can occur in new or existing concrete. Even proper crack repair does not guarantee the elimination of an existing crack or prevention of future crack development.

PRIMING:

Concrete (Rough, Open, and Porous): For horizontal substrates, dilute AS-100™ with 1 part AS-100™ : 1 part water. Pour out and disperse primer with a soft, exploded-tip broom, leaving no puddles or bare spots. Broom out excess primer and allow to dry to a light-blue film. AS-100™ is pigmented, so protect surrounding areas from overspray. The CR-90 must be applied after a minimum of 2 hours and up to 4 hours. For applications involving more than one coat of CR-90, the subsequent coats do not require priming. For vertical substrates, dilute 1 part AS-100™: 1 part water, and apply by brush or roller as needed. CR-90 must be applied after a minimum of 2 hours and up to 4 hours. For applications involving more than one coat of CR-90, the subsequent coats do not require priming.

Well-Defined, Deep Repairs: Abrade smooth concrete to a rough surface to promote adhesion. Dampen surface areas where CR-90 will be installed to ensure there are no puddles or standing water.

MIXING AND APPLICATION: For each 50 lb. bag of CR-90, add 4.0 quarts to a maximum 5.5 quarts (3.8 to 5.2 L) of water.

The water range allows CR-90 to be mixed at different thicknesses. Determine the best consistency for your particular application, and mix all subsequent batches at the same ratio.

First, add desired water ratio to a mixing drum, and then add the CR-90 while mixing at full speed with mixing paddle attached to a heavy-duty 1/2" drill. Mix completely for 2 minutes or until lump free. Do not re-temper. No slaking required.

Pour the mixed CR-90 onto the primed substrate, and spread with a squeegee or trowel using enough pressure to assure good contact. Immediately broom finish while the material is still workable. For heavily spalled, rough concrete or concrete with large aggregate exposed, apply a base coat first by trowel. Allow the base coat to dry and apply a thin, uniform topcoat for broom finishing.

On vertical installations, immediately apply the CR-90 to the surface. Force CR-90 firmly into the properly prepared area ensuring full contact with all bonding surfaces. Fill the repair area and, after initial set, sculpt CR-90 to the desired final profile using a steel trowel. Shave from the center towards the bond edge at the existing surfaces. After initial set, a damp sponge can be used for smoothing to the desired finish.

For thin stamp overlay, mix CR-90, pour out onto properly prepared, primed substrate, and screed or gauge rake material immediately. Follow standard application methods for release agents, delay, tooling, staining, coloring, and sealing.

For small repairs, mix CR-90 to a stiff, putty-like consistency, and apply immediately to primed surface. After initial set, shape and shave material as needed, then sponge out to blend.

EXTENSION: CR-90 can be applied at a thickness of up to 1" (2.5 cm) neat. For applications from 1"-5" (2.5 to 12.7 cm), blend the mixed CR-90 with 1/4 cubic foot (25 pounds, or 11.3 kg) of clean, 1/4" to 5/8" (6.4 to 15.9 mm), crushed stone per 50 lb. of CR-90. Mix until completely coated; do not use sand or limestone. Do not add additional water, and reduce water as needed if stone is wet.

CURING AND SEALING: During application, ambient and substrate temperature should be a minimum of 50°F (10°C). CR-90 is self-curing—no wet curing methods or sealers are needed, but thicker applications should be protected from hot, windy conditions. Do not allow the product to freeze or to be exposed to water for 24 hours. Temperature, wind, and substrate conditions will affect the workability of CR-90. For best performance and to maintain the color of applied stains or integral pigments, CR-90 should be sealed. Sealers can be applied after 24 hours at 70°F (21°C) at 50% RH.

For standard applications where additional stain resistance and protection from salt or deicer is desired, apply an exterior-grade, UV-resistant, penetrating sealer.

COLOR MATCH: CR-90 dries to a light color typical to that of sidewalks; however, cements vary in color from region to region, thus affecting the color of concrete. Age and jobsite conditions will play a role. Therefore, CR-90 may not match the surrounding distressed concrete. A test application is recommended to determine color suitability.

When adding pigments to CR-90, measure and pre-color all of the mix water that will be used for that phase in large drums and mount a mixing drill to keep the pigment in suspension. Add the same exact amount of colored water to each mix and cross batch. Variations in the final color of pigmented cements can occur due to changes in temperature, humidity, and other jobsite conditions. Topical stains or tinted sealers can be used to even out variations, should they occur.

Note: For commercial applications, contact Technical Service at (800) 726-7845.

IMPORTANT APPLICATION NOTES:

- It is the responsibility of the contractor to review the complete technical data sheets of XL Brands® products referenced in this document, as more detailed information may be required. The information provided in this document acts only as a general guideline and may vary based on jobsite conditions.
- Expansion or isolation joints and working cracks must be reflected through CR-90.
- CR-90 is self-curing. No wet curing methods or curing compounds should be used.
- On new concrete, always test for sealers and curing compounds, which inhibit bond. If sealers and curing compounds are present, they must be removed by mechanical means prior to applying CR-90.
- Cooler temperatures, inadequate ventilation, and higher humidity can extend drying times.
- It is the responsibility of the contractor to determine the suitability of this product for the desired application.
- Do not exceed 1 lb. of integral color per 50 lb. bag.

ELIGIBLE LEED® CREDITS:

Regional Materials
Low-Emitting Materials
Recycled Materials

STORAGE: Shelf life is 18 months from manufacturing date in unopened, original packaging. Must be stored in a cool, dry location, elevated (off the ground or floor) at temperatures between 40°F and 90°F (5°C and 32°C). Protect from moisture and excessive humidity. Do not expose to direct sunlight during storage.

VOLATILE ORGANIC COMPOUNDS: 0 g/L (as calculated per SCAQMD 1168)

CLEANUP: Clean tools with water immediately after use or by mechanical means once dry.

HEALTH AND SAFETY: Always refer to the Safety Data Sheet (SDS) prior to use for proper handling, cleanup, and spill containment. SDS may be obtained by calling 706-508-5907.

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NOT LABELED FOR CONSUMER USE

KEEP OUT OF REACH OF CHILDREN

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