CEMSTONE®

EXTERIOR CONCRETE MAINTENANCE GUIDE

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Exterior concrete flatwork such as driveways, patios, building entrances, walkways and loading docks can greatly enhance the aesthetics and value of your property. Many factors play a role in sustaining the appearance, durability and longevity of your concrete. These factors include mixture design and production, placing, finishing, proper curing and maintenance. This document will focus on the maintenance aspect of keeping your concrete looking good. If you would like additional information on the other steps in creating a concrete project that looks and lasts for years to come, please contact Cemstone®.

PROTECTING YOUR EXTERIOR CONCRETE STARTS WITH SEALING

Properly sealed concrete helps maintain the appearance and durability of the concrete after it has had adequate time to dry out, which is approximately 28 days after placement. Sealers are designed to keep moisture and contaminants like deicing chemicals from being absorbed into the concrete.

Since sealers will wear over time and no longer function as intended, concrete should be sealed on a regular basis. Therefore, reapplication of the sealer should be conducted per the manufacturer's recommendations. You can spot check your concrete to determine when the sealer needs to be reapplied. When water no longer beads on the surface of the concrete, it is time to reseal.

Cemstone recommends the following when sealing your concrete:

- Always follow the manufacturers installation instructions.
- Prior to sealing/resealing, an aggressive power washing or power brooming may be required to remove any dirt or stains from the concrete surface. For deeper stains that are not easily removed, contact Cemstone Supply for a list of products and methods designed to remove tough stains.
- After power washing, the concrete surface shall be allowed to dry a minimum of 72 hours before applying any sealer material.

Based on the method of curing done at the time the concrete was placed, it is highly recommended that concrete be sealed prior to October 1 following these guidelines:

CURING METHOD 1:

Membrane Forming Cure

-Cemstone Cure & Seal
-Cemstone Cure & Seal Plus
-Tenon Ultimate Barrier
-Tenon Dissipating Cure

RECOMMENDED SEALER:

Acrylic Based Sealer

-Cemstone Cure & Seal
-Cemstone Super Clear Coat
-Cemstone Diamond Glaze
-Cemstone Siloxane Final Seal

CURING METHOD 2:

Moist Curing or Dissipating Curing Compound

RECOMMENDED SEALER:

Penetrating Sealer

-Cemstone Siloxane Sealer
-Tenon Salt Barrier

- OR -

Acrylic Based Sealer

-Cemstone Cure & Seal
-Cemstone Super Clear Coat
-Cemstone Diamond Glaze

Special precautions must be taken when sealing exterior concrete after October 1st. Contact Cemstone Supply for more information.

Shop CemstoneSupply.com to view all curing compound and sealers available.

CONCRETE PROTECTION

PROTECT YOUR CONCRETE FROM FREEZE-THAW DAMAGE

Two key conditions must occur to create deteriorating freeze-thaw damage. The first condition is saturation of the concrete, and the second is freeze-thaw cycles. Without the combination of these conditions, damage will not occur.

- The best concrete maintenance is the preventative kind. Preventative maintenance involves cleaning with a broom, power washing or rinsing to remove dirt and debris when weather permits.
- Fertilizers can contain substances which chemically attack concrete. Promptly sweep off any material that is inadvertently cast on the concrete when fertilizing lawns.
- Remove stains immediately. While sealers will help to protect concrete from stain absorption, it's still a good idea to remove oil, gasoline, or other spills as soon as possible.
- Avoid acids that aren't designed for use on concrete.
- Promptly remove snow and ice accumulation from your concrete.

DEICING CHEMICALS

Cemstone recommends that deicing chemicals be avoided in terms of increasing traction for exterior concrete as they can cause surface deterioration over time. That said, we recognize that public safety is paramount when discussing the removal of snow and ice from exterior concrete.

Therefore, consider the following when choosing to use deicing chemicals:

- The use of deicers is discouraged on concrete that has not had sufficient drying time before initial freezing. If deicers are anticipated for winter safety, the concrete should be specifically designed and placed in a method to resist scaling. In addition, the type of deicer and its application amount and frequency should be evaluated for its potential effect on concrete surfaces. (American Concrete Institute ACI 302.1R-15, "Guide to Concrete Floor and Slab Construction")
- Deicers lower the freezing point of water that can increase the number of freezing-and-thawing cycles and can increase the propensity for resaturation of concrete during the thawing period. (ACI 302.1R-15)
- After the first year, minimize the use of deicers since they increase the frequency and severity of freezing and thawing on concrete. Deicers, such as sodium chloride, urea, and weak solutions of calcium chloride, do not chemically attack concrete; however, deicers containing ammonium sulfate or ammonium nitrate will rapidly disintegrate concrete and should not be used. (ACI 302.1R-15)
- An adequate air-void system in properly designed and placed air-entrained concrete will generally withstand deicers for many years. The presence of a deicing solution in water-soaked concrete during repetitive freezing-and-thawing cycles, however, can cause an additional buildup of internal pressure.
- Ensure proper drainage and do not let water or deicer stand on the surface for extended periods of time. Deicer carried on cars can damage recently placed concrete.
- Properly cured concrete will reduce the detrimental effects of deicing chemicals.
- Avoid using deicing chemicals on your concrete, especially for the first winter. Sand or Cherry Stone® Traction Grit can be used for increased slip resistance.

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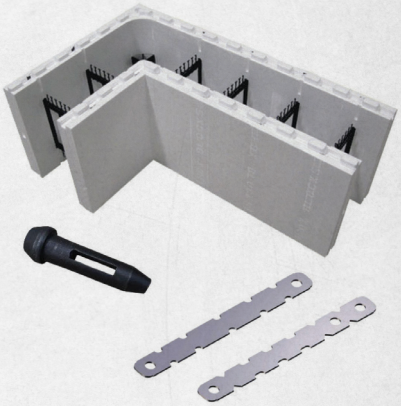

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