

MAINTENANCE

TopCrete Maintenance Procedures

Introduction

TopCrete decorative concrete is finished with a toss-on color hardener on top of the concrete slab. The color Hardener provides a tough and strong colored surface to the concrete. The final coat on top of the hardener is usually a clear acrylic sealer the purpose of which is to protect the surface from dirt. Certain applications require a stronger chemically resistant coating such as epoxy for interior applications and Polyurethane for exteriors. In most cases it is this clear topping that wears out with time depending on how clean the environment surrounding the decorative concrete is and the type of traffic it is subjected to. The damage rarely reaches the hardened surface since it has a high abrasion resistance value.

Access to new works

Concrete slabs on grade require 28 days to achieve maximum strength. To avoid un-necessary damage, vehicular traffic should be absolutely prohibited in the first 7 days since the slab is still green. Foot traffic is possible after 48 hours from the application of the final coat of sealer and depending on weather conditions. The Acrylic sealer requires 48 hours at least for the curing to occur in moderate to warm weather. More time to cure increases the sealer strength. In Epoxy or Polyurethane applications, the slab should be fully cured (preferably for 28 days) after which the coating is applied. Curing time differs depending on temperature.

TopCrete 200 is regularly used with stamped concrete to produce the look of hand-set brick, tile, or aged stone. Used with a variety of imprinting tools, its rich finishing paste allows the production of sharp, clear, wear-resistant patterns.

Regular Light Duty Maintenance

Regular cleaning is essential to keep the surface free from dirt, sand and other agents that may cause abrasion. Washing with clean water & regular soap will be sufficient to do the job. Using water that contains calcium and / or other impurities may result in a whitening effect due to the evaporation of the water and the residue remaining in the grooves. In general pressure washing is possible provided that the tip of the pressure washer remains far enough not to engrave the concrete surface. Avoid using acids and harsh chemicals since this may affect the surface luster. In general any chemical that does not affect the bare hands will not affect the decorative concrete surface. Solvents (paint thinner etc..) should be avoided at all times since they will strip the sealer and dissolve it leaving a dull surface. Unless the coating is resistant to most chemicals it is not advisable to use harsh detergents to perform the cleaning.

Tire Marks

Tire marks are un-avoidable in some cases where the surface is lightly colored, coated with regular sealers and subjected to heavy turning vehicle loads. The turning of the wheels while the car is standing still will sometimes cause the sealer to burn under the tires. The burn marks are only as deep as the sealer coat. Commercial cleaners remove some of the marks. Stubborn marks can only be removed by removing the sealer with solvent and re-sealing. Obviously epoxies and polyurethanes provide more resistant flooring although it does not necessarily solve the problem. Marks on dark colors are less obvious and color selection is essential in reducing the need for more frequent maintenance.

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Annual Maintenance

In areas subjected to heavy duty commercial traffic it is recommended to clean and re-seal the surface periodically and inspect it for damages annually to provide a continuous like-new look. The frequency of maintenance is related to the type of coating used, project type and the surrounding environment. A maintenance program should be designed for each specific commercial project.

Damage due to breakage

In case the surface breaks due to impact of falling objects or after maintenance of infra structure utilities under the slab, the broken areas may be repaired by cleaning the hole and applying the same color hardener to match the existing color. Slight color variations should be anticipated and are normal.

Scratches in the coating

If the coating is subjected to superficial scratches they will become less visible when a secondary coat of coating is applied on top.

Average costs for maintenance

The cost of maintenance depends on the type of coating, the degree of damage as well as on the limiting environmental conditions (temperature, humidity, access time, etc..). In general a maintenance package would include the following:

1. **Initial Cleaning of the surface:** This is done with water and a detergent and if necessary with a pressure washer. In some cases a mild muriatic acid wash may be needed.
2. **Inspecting & repairing damage:** In case major cracks exceeding

1.5mm in width are present then it would be possible to patch them up and fill them.

3. **Chemical removal of the old coating:** If humidity has developed under the old coating it may need to be removed. In this case special solvents are used to remove the old coating. In some tougher coatings
4. **Application of new coating:** A new coating is then applied. Drying times depend on coating type and environmental conditions.

The average cost for maintenance (in 2016 US dollars): **US\$ 7 – 9 / Square meter** depending on all above factors. It is recommended to have an annual maintenance program for commercial projects where the flooring is subjected to heavy wear & tear. with new and un-wrinkled, non staining, reinforced, kraft curing paper.

