DURA PROTECT™

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DURA PROTECT™ FAQ

WHAT IS THE DURA PROTECT™ SYSTEM?

DURA PROTECT™ is a proprietary paver treatment system that incorporates integral admixtures and inline surface treatments. The DURA PROTECT™ System works to enhance the original color depth of concrete pavers and extend color fastness or color durability over time. Paver physical properties and durability are also improved by increasing paver density and decreasing absorption.

HOW IS IT DIFFERENT FROM OTHER ADMIXTURES AND SURFACE TREATMENTS?

The DURA PROTECT™ System has been carefully optimized to synergize the performance of the integral and inline treatments. Unlike post-applied sealers and coatings, DURA PROTECT™ is applied during the manufacturing process, so pavers start life protected and maintain that protection for years.

WHAT IMPACTS CONCRETE PAVER COLOR?

Paver colors are determined by the raw materials used in manufacturing e.g. sand, stone, cement and supplementary cementitious materials such as fly ash and slag cement. Pigments are added to achieve the desired color hues and effects. Pigment particles are held in the cementitious and fine aggregate paste blend that binds the coarser aggregates together. Over time through mechanical wear like foot or vehicular traffic, chemical wear from acid rain, acid based cleaners or freeze thaw exposure, the fine particles on the surface of the paver may be worn away leaving a dusty residue and larger uncolored aggregates exposed, causing the paver to look faded.

Good quality pavers with high strength and low absorption will retain surface and color integrity for longer. Integral admixtures and surface treatment systems can help to raise paver quality and preserve color depth and hues.

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800.845.7644

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WILL DURA PROTECT™ PREVENT ANY EFFLORESCENCE FROM OCCURRING?

Efflorescence is a naturally occurring phenomenon that may affect any cement based material. Efflorescence is a deposit of soluble salts, usually white, that may form on the surface of stone, brick, concrete or mortar. This occurs most often when moisture present in the materials reacts with calcium hydroxide in cement to form calcium carbonate. The calcium hydroxide/water solution is drawn through the concrete matrix by wicking action and calcium carbonate is left behind as water evaporates from the surface, leaving an unsightly white residue.

Primary efflorescence in pavers usually occurs soon after manufacture when pavers are exposed to cold and wet. The worst efflorescence usually occurs in spring and autumn due to wet and slow evaporation conditions. Secondary efflorescence occurs after installation and can be induced by poor moisture control design or incorrect installation that traps moisture. Pavers are often exposed to rain or frequent wet/dry cycles from sprinkler systems. If correct drainage is not applied, moisture will collect in low areas. Many landscape fertilizers contain chemicals that contribute to efflorescence. Certain bedding and joint sands contain high soluble alkali contents that can also cause issues.

Efflorescence does not harm the pavers or impact physical properties. Left untreated, the white residue will usually slowly disappear by itself over time.

To minimize the potential for efflorescence, designers may specify efflorescence controlling admixtures that limit the movement of water through the concrete matrix.

WILL I NEED TO SEAL THE PAVERS AFTER INSTALLATION?

Pavers treated with the DURA PROTECT™ System are protected during the manufacturing process, and have a natural matte appearance with deep color that lasts for years. If a wet-look is desired, pavers may be sealed after installation with appropriate sealers. Water and stain repellent sealers may also be applied to increase protection in a “belt and suspenders” approach.

CAN POST-APPLIED SEALERS BE USED?

The DURA PROTECT™ System is compatible with many post applied sealers, including polyurethane, acrylic and water based products. It is not recommended for use with silane/siloxane based sealers. Test in an inconspicuous area prior to application. Follow manufacturer’s instructions when using cleaning and sealing products.

By improving the quality of the surface and the concrete matrix during the production process, DURA PROTECT™ reduces the occurrence of both primary and secondary efflorescence.

DOES DURA PROTECT™ CHANGE THE PHYSICAL PROPERTIES OF CONCRETE PAVERS?

DURA PROTECT™ pavers meet or exceed freeze-thaw durability and absorption conformance with ASTM C936 and CSA 231 when properly manufactured. Paver texture is not affected and pavers meet slip resistance coefficient of friction requirements per the recently adopted DCOF Acu-Test.