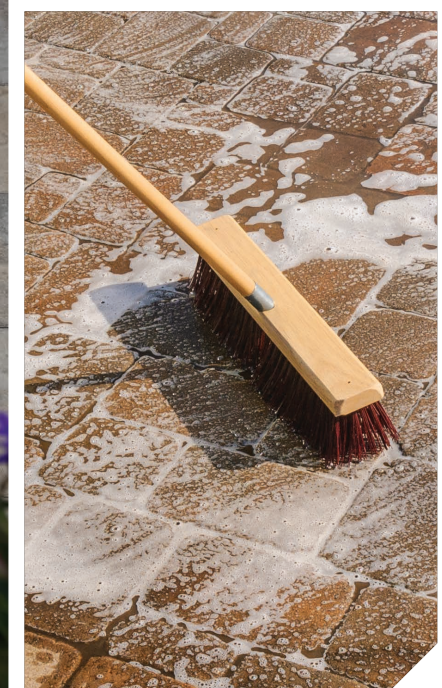
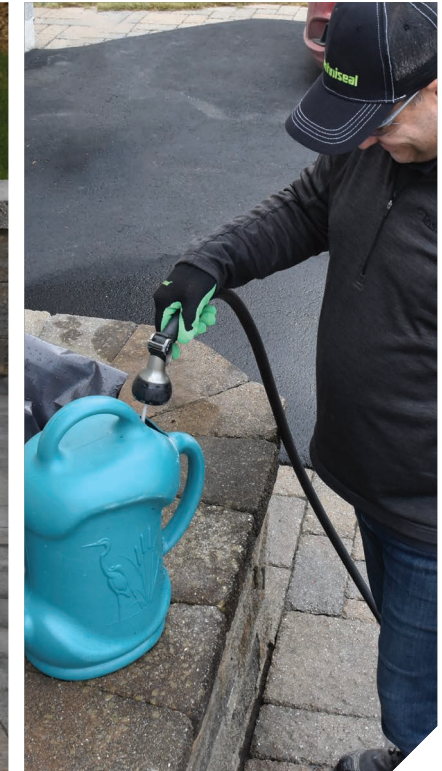




**CONTROL AND  
REMOVAL OF  
EFFLORESCENCE**



**QUESTIONS?**



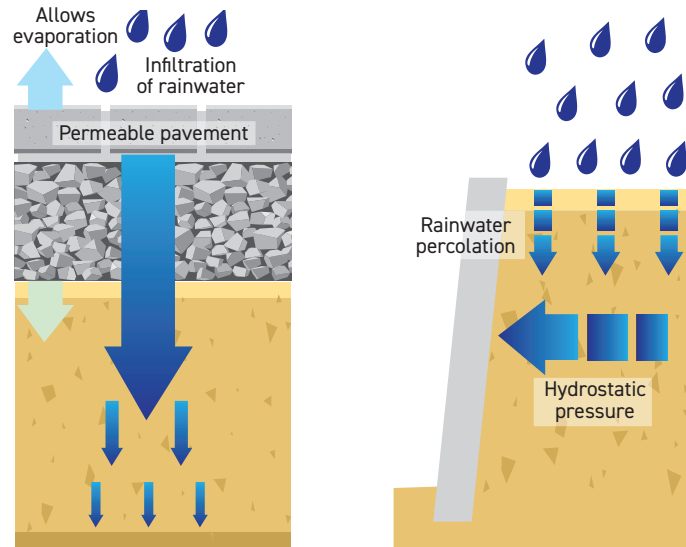
If in doubt, do not hesitate to contact our certified technical support team, available **Monday to Thursday 8 am to 5 pm (EST)**, and **Friday 8 am to 4 pm (EST)**.

- TO CONTACT OUR TEAM :**
- **Call:** 1 800 465-7325
  - **Email:** [service@techniseal.com](mailto:service@techniseal.com)
  - **Visit** [techniseal.com](http://techniseal.com) **and fill-in the form in the "Support" section.**

(xxx-xxx 02/2022)

## WHAT IS EFFLORESCENCE?

**Efflorescence is a powder-like deposit of soluble salts and bases**, usually white in color, that sometimes appears on the surface of natural stone, clay brick, concrete pavers, or any other porous building material. Naturally-occurring **salts found in soil, water, sand, gravel, and cement are dissolved by rain and groundwater**. Although it may be an aesthetic concern, efflorescence will not affect the structural performance of your product.



### Three conditions must occur:



Water-soluble salts must be present in the substrate.



Moisture must be available to transform salts into a soluble solution.



Salts must be able to migrate to the material's surface.

### CAUSES OF EFFLORESCENCE

A combination of circumstances causes efflorescence.

**First**, there must be soluble compounds in the stones (substrate) used.

**Second**, moisture must be present to pick up the soluble salts and carry them to the surface.

**Third**, some driving force - evaporation or hydrostatic pressure - must cause the solution to move. This moisture is drawn to the paver's surface, where it evaporates, leaving the salts behind as a white haze.

**If any of these conditions is eliminated, efflorescence will not occur.**

## SOURCES OF SALT

In some cases, the components used to manufacture products can react with chemicals in the atmosphere to form efflorescence. When calcium hydroxide is brought to the surface by water, it combines with carbon dioxide in the air to form calcium carbonate, which appears as a whitish, slightly soluble deposit.



### SOURCES OF MOISTURE

**Water serves as the vehicle** by which soluble salts and bases are transported to the surface, where they accumulate as water evaporates. A paver in contact with soil may absorb groundwater containing soluble salts. **Through capillary action, salts present in the soil may rise several feet to the ground level**, producing an accumulation of salts.

### EXTERNAL SOURCES OF MOISTURE

The development of efflorescence will eventually stop unless there is an external source of soluble salts leaching into the equation. It is related largely to water from the environment, for example from external sources like rain or groundwater traveling through concrete, and may appear as a uniform discolouration or as localised encrustations where the water exits the concrete.

## HOW TO PREVENT EFFLORESCENCE?

Although it is virtually impossible to eliminate all possibility of it occurring, several installation practices can minimize the potential for and intensity of efflorescence, including:

- Ensuring **proper grading and drainage** to prevent water from sitting on the stone.
- **Damp proofing** below and behind installations, particularly when using porous material like limestone (**other solutions offered by Techniseal®**)
- Covering unfinished walls at the end of each day to prevent moisture from building up behind the material.
- **Eliminate moisture** that is contributing to the formation of efflorescence. (If you just remove the efflorescence and allow the surface to dry out, the moisture from below will come back, and efflorescence will reoccur.

It's also worth noting that less porous stones absorb less water and may, therefore, be less prone to efflorescence.



## HOW TO REMOVE EFFLORESCENCE?



Techniseal® Pre-Seal Cleaner / HD Paver Prep is specially formulated to dissolve efflorescence (whitish salt) and remove ground-in dirt on pavers, slabs, and concrete retaining walls.

Containing no hydrochloric (muriatic) acid, it works deep without damaging the surface. It brightens up the color, cleans evenly and, enables protective sealant to better penetrate the material.



Use the suggested dilution recommended:

**New pavers:** 1 part product in 3 to 5 parts water.

**Older, never sealed pavers:** 1 part product in 4 to 6 parts water.

**Previously sealed pavers:** 1 part product to 6 to 8 parts water.

4 L of the concentrated product allows for the cleaning of approximately 200 sq. ft. (19 m<sup>2</sup>)

**IMPORTANT:** Users should ensure that this product meets their needs by carrying out a test under anticipated conditions of use on a 4sq. ft. (0.4 m<sup>2</sup>) area.

