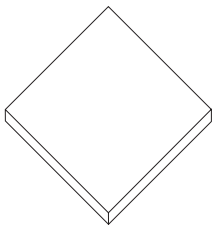




efflorescence



prevention, removal  
& summary



**contributing factors – general**

Efflorescence is caused by multiple factors acting in combination and usually triggered by climatic and environmental conditions. Views vary as to which factors are the major culprits and it is usually impossible to determine the exact causes of a specific case with absolute certainty.

**prevention**

There is as yet no single concrete additive that will reliably prevent efflorescence. It is generally accepted that there are various processes that when employed can reduce the likelihood of efflorescence. These include but are not limited to –

- a reduction in the water/cement ratio of product mix.
- produce a highly compacted product which is very dense and thus difficult for moisture to penetrate.
- ensure product cures slowly by using curing chambers that are high in humidity.
- After production, if only for a short while, product should be stored protected from weather.

BEST employs these and other preventative measures and is forever conscious of the need to ensure that efflorescence not become a concern with its products.

**on site causes**

Efflorescence may also have its origin in the material upon which concrete pavers are laid. If the material used to construct the base and the bedding sand used for any paving project has a high sodium content then these naturally occurring salts can migrate to the surface of the pavers.

Special consideration should be given to selection of base and bedding material to reduce the possibility of efflorescence.

**removal of efflorescence**

As a rule, efflorescence will weather away naturally within one or two years. If immediate removal is required, this can be achieved by washing with a solution of diluted hydrochloric acid. Generally a 3% solution of hydrochloric acid is used. Before acid is applied, paved area should be dampened with water to kill the initial suction. This prevents acid from being sucked into pavers before it has a chance to react with the surface deposit. Acid washing should be followed by washing pavers with water, in order to prevent continued action of the acid on the pavers.

When acid washing, always start with a trial on an inconspicuous area.

**summary**

Efflorescence is a complex but natural phenomenon which whilst unsightly, is generally harmless and of no risk to the integrity of the concrete product affected.

Efflorescence must be taken for what it is – a natural occurrence in a product made from natural raw materials.