

Efflorescence

What is it?

Efflorescence is a calcium based salt that forms as a white deposit on the surface of cement based products such as cast stone. It is a combination of the calcium hydroxide in the cement and surface moisture. This draws the calcium to the surface where it forms crystals and combines with the carbon dioxide in the air to form calcium carbonate on the surface of the product.

Occurrence

Efflorescence is a temporary phenomenon and in time will disappear with a result of normal product weathering. The amount of time this takes will vary depending on pollutions, rainfall and other atmospheric conditions. Its not possible to predict when it will occur or how long it will last but it will mainly occur where there are damp conditions and weather. When the product is wet the visual effect of efflorescence can become invisible reappearing when the product dries.

Efflorescence in no way affects any structural integrity of any of the products.

Its also likely that efflorescence can occur from the motor joints and other cementitious based materials on site not just the cast stone products.

Prevention

While its not possible to fully prevent efflorescence steps can be taken to reduce the risk of it occurring. Good protection from the elements before and during site construction is essential. Also poor installation of moisture barriers and hard motor joints can contribute to the problem.

Treatment

Efflorescence is temporary and will disappear over time. We therefore recommend no treatment is given to the units as it can sometimes make the problem worse or affect the surface finish of the product.

However if it is essential that the phenomenon is removed we suggest using a proprietary acid washing agent (dilute hydrochloric acid). Health & Safety and the manufacturing guidelines should be adhered to and we recommend applying this method to a small trial area first.

Occasionally manually washing can draw additional salts to the surface and repeat washing may be necessary until all the salts have been removed.