

Profiled Sheeting Efflorescence on Fibre Cement Profiled Sheeting

TECHNICAL
NOTE
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Efflorescence or 'Lime Bloom' is an occasional phenomenon on cement based materials, that is generally caused by water trapped between the fibre cement sheets whilst retained in the pack.

All cement based materials contain a certain amount of free lime, which is soluble in water. When a product becomes saturated and then dries out, the free lime migrates towards the surface of the material, where it can accumulate. The deposit is initially easily soluble, but if it remains on the surface of the product it can react with carbon dioxide in the atmosphere to form calcium carbonate, which is less soluble and therefore more difficult to remove. Further reactions then take place with carbon dioxide to form calcium bicarbonate, which again is soluble.

When packs of fibre cement material are uncovered and exposed to the weather, the product becomes more saturated than it would when fixed on the building, and therefore more lime can be deposited on the surface. The deposit accumulates and reacts with the atmosphere to leave a chalky white coating on the surface of the product.

Efflorescence rarely occurs on the surface of products when fixed in position. The material doesn't generally become saturated, and any surface deposit can be washed off by rainwater as it forms and whilst it is still readily soluble.

The duration of efflorescence depends on the thickness of the deposit and the prevailing conditions. Rainwater carrying dissolved carbon dioxide from the air can dissolve and mechanically remove the deposit.

We would recommend that the efflorescence should be allowed to weather off naturally, but it is possible to remove it from natural grey and painted products if an immediate improvement in appearance is required. Proprietary efflorescent removers, based on diluted acids, are available from Builders Merchants, but these should be tried on a small hidden area first. It is essential that the products are washed down with running water after a few minutes to remove the remains of the acid. Use of acids or other chemicals on site requires due care and precautions as required by the Health and Safety at Work etc Act 1974 and Control of Substances Hazardous to Health Regulations 2004.

Efflorescence is not detrimental to the fibre cement products which will continue to effectively perform their intended function. Efflorescence will disappear naturally and it is advisable to allow a minimum period of 12 months pass for this to occur.

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