

TECHNICAL INFORMATION SHEET

Efflorescence on Walls

Efflorescence:

Efflorescence is defined as a crystalline deposit of soluble salts, usually white in colour that appears on the surface of concrete, masonry, or stucco. Efflorescence salts are usually sodium, potassium, magnesium, calcium, and iron (ferrous); carbonates of sodium, and calcium; or sodium bicarbonate or silicate. However, almost any soluble salt that finds its way into the material may appear as efflorescence.

All masonry and concrete materials are susceptible to efflorescence. Water-soluble salts that appear in chemical analysis as only a few tenths of 1% are sufficient to cause efflorescence.

Temperature, humidity, and wind particularly affect efflorescence. In the summer, even after long rainy periods, moisture evaporates so quickly that comparatively small amounts of salt are brought to the surface. Usually efflorescence is more common in the winter when a slower rate of evaporation, allows migration of salts to the surface.

1. Efflorescence needs 3 things for it to occur:

- There must be soluble salts in the material.
- There must be moisture to pick up the soluble salts, and carry them to the surface.
- Evaporation or hydrostatic pressure must cause the solution to move.

Note: If any one of these conditions is not there, efflorescence cannot occur.

2. "Lime Bloom Efflorescence" is a calcium carbonate deposit, which forms in the following way.

- Portland cement chemically creates calcium hydroxide as it cures.
- Small amounts of calcium hydroxide migrate to the surface and react with carbon dioxide from the air to form a film of calcium carbonate or "Lime Bloom"

Instructions state that the finish coat is to be applied to surfaces free of efflorescence. In any material that contains Portland cement, efflorescence can occur, and is more likely under cool damp conditions. Adequate protection of the system from moisture while it is being installed can reduce the likelihood of efflorescence occurring.

The occurrence of efflorescence is not a defect on the Parex products.

How to Remove Efflorescence:

We recommend this work is completed by a competent person or a profession company.

Test a small area in an inconspicuous location and allow the tested area to dry. Then evaluate the results before proceeding. To remove efflorescence, the wall is first dampened with water followed by an application of a dilute solution of 1 part muriatic acid (hydrochloric acid), and 10 parts water.

Specialist materials for civil engineering, infrastructure and construction

A commercial efflorescence remover may be used in place of the muriatic acid. Follow the manufacturer recommendations. Take all necessary precautions for personal safety, and to prevent damage to the surroundings. Make sure you apply the solution while the wall is still wet.

A soft nylon brush can aid in removal of the efflorescence, but may increase removal of colour from the finish. Several applications may be necessary. Rinse thoroughly between applications.

This method may damage the finish or the colour requiring you then to re-apply the finish. Satisfactory texture appearance of new finish may require re-base coating with a full synthetic base coat. The need to apply base coat will need to be evaluated at the project.

For additional information or other Technical Information Sheets, please visit our Web site link http://www.parex.co.uk/Render_Systems/Technical_Information_Sheets_and_FAQs

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