

TECHNICAL BULLETIN

Efflorescence

Efflorescence is white “fuzzy” deposits (soluble salts) that form on concrete, brick, block, stucco, mortar and other masonry surfaces when exposed to moisture. In most cases, the salt deposits migrate to the painted surface through cracks that have developed in the masonry substrate. In addition to creating an unattractive appearance, deposits can grow and will cause adhesion problems if not properly removed before repainting. In order for efflorescence to occur, these three conditions must exist simultaneously:

- Soluble salts must be present in the masonry substrate.
- Water or moisture must come into contact with the salts.
- There needs to be a path for these salts to migrate to a surface where water can evaporate.

Other possible contributing factors:

- Failure to properly prepare the surface by removing all previous salt deposits.
- Excess moisture escaping through exterior masonry walls from the inside.
- Painting masonry surfaces before they are fully cured.

Removing efflorescence

In mild cases, efflorescence can be removed by dry brushing with a soft nylon or bristle brush. However, if the salt deposits continue to re-develop, corrective measures may be necessary in order to resist the recurrence of efflorescence. The recommended steps are as follows:

- Remove the efflorescence and all other loose material (dirt, unbound sand and deteriorated paint, etc.) with a wire brush, a power brush or power washer; if a wire brush is used, follow by thoroughly rinsing the surface.

- Wash the surface with a solution of one part phosphoric acid to seven parts water (for safety, always add the acid to the water; never add the water to the acid). Citric acid is the safest and easiest to use; however, it is slightly less effective.
- Rinse thoroughly with clean water.
- Allow the surface to dry completely.
- If efflorescence still exists, repeat above steps.
- Seal the surface with a high-quality primer designed to hold back efflorescence.
- Repaint with a premium-quality acrylic finish.



Caution: Phosphoric acid will burn the eyes and skin. Always wear protective clothing, goggles, rubber gloves and boots when acid-washing.

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