

## Reference Guide for Stucco Repair

TECHNICAL BULLETIN

Stucco, being cement based, is a brittle material that is prone to cracking. Why does it crack? Some of the primary causes include:

- Improper installation of any wall component
- Shrinkage of green lumber
- Building movement
- Thermal expansion and contraction
- Installing interior wallboard or loading the roof after the stucco has been applied

In the past, stucco has been repaired using these typical methods:

- Patch and paint
- Patch with stucco, caulk, patch and repair compounds, home brews
- Paint with fog coats, acrylics, latex, elastomerics, etc.

Acrocrete offers an alternative to the stucco repair methods of the past. It is an approach that improves the finished appearance and reduces maintenance costs in future years. There are two basic approaches to installing a Acrocrete Stucco Resurfacing System. Depending upon the extent to which various symptoms appear, you can select the approach that is best for your project.

Symptoms	Common Causes	Possible Results if No Action is Taken	Evaluation / Preparation	Repair Method*
Cracks at wall penetrations	Building movement caused by thermal expansion and contraction cycles or wind.	Water intrusion; leaks into interior; deterioration of finish and stucco; deterioration of sheathing and framing.	Consult qualified structural engineer for recommendations.	Base coat, mesh and finish over entire wall surface
Random "spider" cracks	Thermal expansion and contraction cycles. Improper stucco mix. Improper stucco curing.	Lead to larger cracks, increasing the potential for water intrusion and same sequence as above.	Clean surface prior to application of Acrocrete products.	A. Base coat, mesh and finish over entire wall surface B. Base coat and finish over entire wall surface
Dimensional, linear cracking	Wood sheathing not gapped. Improper lath and trim accessory installation.	Water intrusion; leaks into interior; deterioration of finish and stucco; deterioration of sheathing and framing.	Consult qualified structural engineer for recommendations. Invasive sheathing/ substrate inspection will likely be needed for evaluation.	1. Repair crack 2. Base coat, mesh and finish over entire wall surface
Localized water stains in interior.	Defective water-resistive barrier or incorrect application of barrier, sealant or penetration issues.	Structural damage; wood rot; delamination.	Determine and correct source of water penetration.	Repair as required by specific cause
Linear cracks and stucco loosened from building.	Misapplication of lath; wood rot; separation of the Scratch and Brown coats.	Water intrusion; leaks into interior; deterioration of existing stucco; deterioration of sheathing and framing.	Remove and replace damaged stucco, sheathing and framing.	1. Use Acrocrete Stuccobase as patching material. 2. Base coat, mesh and finish over entire wall surface
Control and/or expansion joints missing at floorlines, changes of substrate, at adjacent materials, as required by building code, and cracks present.	Lack of expansion/control joints.	Water intrusion; leaks into interior; deterioration of finish and stucco; deterioration of sheathing and framing.	Router out and install a proper joint.	1. Install approved sealant. 2. If resurfacing the wall, do not run finish into or over joint.

\*Clean the wall surface in all cases and perform bond test, as required prior to application of Acrocrete products

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Symptoms	Common Causes	Possible Results if No Action is Taken	Evaluation / Preparation	Repair Method*
Blistering, peeling, flaking, severe chalking	Moisture penetration	Water intrusion; deterioration of finish and stucco.	Determine and correct source of water penetration. Replace any weakened stucco areas. Clean wall surface.	1. Use Acrocrete Stuccobase as patching material as needed. 2a. Base coat and finish over entire wall surface. 2b. Base coat, mesh and finish over entire wall surface
Random cracking appears soon after construction	Inadequately or improperly cured stucco.  Improper Stucco Mix	Lead to larger cracks, then water intrusion and same sequence as above.	Evaluate the integrity of the stucco to ensure that it is sound. Replace any areas that are not sound.	A. Base coat, mesh and finish over entire wall surface B. Base coat and finish over entire wall surface
Peeling, flaking of paint or colored stucco over brown coat	Loss over time of bond to stucco brown coat.	Water intrusion, deterioration of finish and stucco.	Power wash to remove loose paint or stucco.	A. Base coat, mesh and finish over entire wall surface B. Base coat and finish over entire wall surface
Efflorescence (White crystalline deposits on wall surface; white streaks)	Moisture penetration	Deterioration of finish and stucco.	Determine and correct source of water penetration. Clean with commercial cleaning product designed for removing efflorescence.	Base coat and finish over entire wall surface
Existing, but failing elastomeric paint (Bubbling when wet; cracking, peeling)	Moisture penetration	Deterioration of finish and stucco.	Determine and correct source of water penetration. Perform adhesion test. If <15 psi tensile bond, the coating will need to be removed. If ≥15psi, clean the wall in preparation for applying base coat.	A. Base coat, mesh and finish over entire wall surface B. Base coat and finish over entire wall surface

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Cracking stucco can be minimized by paying attention to several key practices during design and construction. Keys to best installation:

- Solid foundation and framing
- Proper sequencing of wallboard installation and roof loading
- Proper installation of the sheathing
- Proper installation of the building paper/secondary weather barrier/flashing
- Proper installation of the wire lath and trim accessories
- Installing adequate control joints
- Proper mixing of sand and cement
- Allowing for adequate curing time
- Applying stucco to proper thickness
- Properly applying compatible finish

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