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Facts About Stucco and Cracking in Stucco

Stucco is a building material that has been used for centuries on nearly all types of construction - residential, commercial, municipal, and institutional buildings. Stucco in its raw state is a combination of portland cement, sand, lime, and water, which when properly proportioned, mixed, and placed, makes a tough, durable, fire and weather resistant exterior wall finish.

Stucco, as with all building materials, has limitations. One of the limitations of stucco is that under some circumstances it will crack. The reasons that stucco cracks are varied. Sometimes stresses transfer from the supporting structure and cause stucco to crack. For example, wood framing generally dries and settles in the first few years after new house construction. This type of structural movement can generate a visible crack in stucco. In other cases stucco may crack because of shrinkage shortly after application. Shrinkage is normal for all portland cement-based materials, and is often the cause of cracks in concrete sidewalks, patios, and driveways. Generally shrinkage cracks in stucco are very small and may not be visible because they are hidden by the stucco finish texture.

Although stucco cracks, the service and longevity of stucco are not necessarily affected, because stucco wall assemblies on wood frame construction have several features that prevent damage from water that can enter through cracks:

1. Stucco on wood frame walls is backed with a weather resistant sheathing membrane that prevents water from penetrating the wall construction in the event rainwater gets through a crack.
2. Stucco on wood frame walls is a water "drainage" type assembly; if water gets in through a crack it weeps out to the exterior via a weep screed that is placed at the bottom of the wall.
3. Stucco "breathes"; if incidental water gets in it can generally dry to the exterior because stucco is water vapor permeable.
4. Stucco, like concrete, is a portland cement-based material. Portland cement-based materials are not water sensitive. In fact water exposure can add to the hardness and strength of stucco.

Some degree of cracking in stucco is normal and should be expected. This is not a defect in the material or its application; it is simply the nature of stucco.