

The Tape That Stands Up to Stucco

As a surface material, stucco is renowned for its beauty and versatility. In fact, did you know that every building tradition in human history has used stucco in some way, shape, or form? The recipe—usually some combination of cement, lime, and fine sand—may have varied, but examples of stucco work occur in Roman architecture as early the 2nd Century AD, in Aztec architecture of Mexico and in 20th Century Mizner architecture of South Florida. Whether you are updating ceilings, walls, or stucco exterior, first choose the right type of stucco and then consider the benefits of contractorgrade stucco tape for your next high-performance building project.

Types of Stucco

Genuine stucco is made from a mixture of lime, sand, and water applied in layers and supported with wire lath. The process can vary depending on the geographical location of the work site, but it is a multi-step process impressive in its simplicity.

There are many types of stucco claddings, but they can best be



split into three primary types: traditional three-coat stucco; newer one-coat stucco; and exterior insulating and finish systems (EIFS). Each can be a durable, protective cladding, but each requires a different set of installation details to achieve these results. Each can create an exterior air barrier, depending, again, on details at penetrations, transitions, and the edges of the wall cladding.

We discussed the <u>benefits of three-coat vs. one coat stucco</u> here, but to review:

Three-coat stucco is a longstanding, nonproprietary cladding system that has a scratch coat, then base, then finish coat, resulting in a 7/8-inch- to 1-inch-thick cladding. This system is the most time and labor intensive.

One-coat stucco systems have just one base coat about 1/2-inch thick with a thin finish coat, so these claddings are sometimes called "two-coat." The base coat is a blend of portland cement, fibers, and proprietary additives, with each system carrying its own International Code Council (ICC) Evaluation Service (ES) report that dictates the installation details. There is less labor and time required for this system than three-coat stucco, but custom installation standards must be followed.

Exterior insulation and finish systems (EIFS) is different from the cement based stucco in the sense that it is lighter and more flexible. It is at time referred to as synthetic covering because of the concepts it uses. Just like the cement based covering, it is made up of three layers. The first layer



is the insulation board which is either glued to the wall or attached to it mechanically. The second layer is a base coat and the third layer is the finishing and it might have some color. EIFS can be up to 4 inches thick, giving it many energy advantages over conventional stucco.

Why Stucco? Six Benefits of Stucco

As one of the most popular exterior finishes for homes and businesses, there are many benefits associated with stucco, including:

- 1. It is fire resistant; because its components are fireretardant, it makes stucco noncombustible
- 2. It is durable while it is not easy to damage, it is easy to repair
- 3. It is a natural insulator it helps maintain your home's interior temperature
- Stucco can be colored for a finish more durable than paint
- 5. In most climates, Stucco outlasts wood and vinyl, and it has even proven to be more durable than brick. You're looking at an exterior with a lifetime of half a century!
- 6. It is low maintenance. In comparison to other materials such as siding, stucco does not need to be repeatedly painted or reinstalled. This can help you to save an ample amount of money in regards to home improvements.



Plus, you won't have to worry about the upkeep of this particular finish.

Is Stucco Waterproof?

Generally speak, the answer is no. Indeed, no siding is 100% waterproof. The fact that stucco is usually a continuous surface means that any water that does get in has a hard time getting back out. This isn't to say that stucco is a bad choice for siding; it is just very important to get flashing details right, to choose the right sheathing, and to provide an air gap for drainage.

Once you accept that the stucco itself lets water through, it's easy to understand why the building envelope must be made watertight before the stucco is applied. Building codes require that stucco installations use a minimum of two layers of water-resistive barrier material beneath the lath to protect the sheathing. That way water driven into the permeable stucco surface dries to the outside.

Building scientist Joseph Lstiburek makes a number of recommendations to circumvent the problems in his article "The Perfect Storm Over Stucco." Further information on this issue, including recommendations for stucco installation details, can be found in the article, To Install Stucco Right, Include an Air Gap.



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How to Choose the Right Tape for Stucco

Stucco work is demanding, requiring tapes designed specifically to survive the weight of plaster; adhere to multiple surfaces, not just concrete and wood; withstand the heavy scraping associated with stucco work; remove cleanly when the job is done. Plus, it needs to stand up to a multitude of elements, sometimes severe temperatures and bond appropriately to a variety of surfaces.

As designers and manufacturers of contractor-quality <u>adhesive</u> <u>tapes</u>, we take the guesswork out of this decision by offering only those tapes which support the most robust requirements. That said, here are four questions to ask before choosing the right <u>stucco tape</u> for the job:

1. What type of host surface will be masked? Surfaces, Delicate, and/or Smooth, Hard-to-Stick To? It is always best to test adhesion to host surfaces prior to application, if possible. A high visibility color will ensure that the tape is not accidentally left on the surface after the project is completed. Additionally, an abrasion-resistant backing will protect the host surface, and a high tensile backing will prevent breaking from tough coatings during pull-through for



clean removal.

- 2. What amount of adhesion level is needed? Low, Medium, High, or Extreme? Even a smooth surface can present a challenge; for example, consider polyethylene sheeting. A high shear adhesive property to hold/seam is required. Make sure you select a product with enough tenacious rubber adhesive to grab and adhere to both smooth and rough irregular surfaces. A water-tight seal is assured by the right amount of adhesive for each step in the stucco process.
- 3. How long will the tape be expected to adhere to the host surface? Days, Weeks, Months? A premium adhesive tape coated with a UV resistant backing can provide the defense needed for as long as 60 days to ensure clean removal with no residue left behind.
- 4. What about environmental facts? Inspection? Disposal? To help prevent product spoilage, store the masking media in its original containers between 40°F and 90°F (5°C to 32°C). No liner tape construction makes clean-up swift and easy. Unless used for remediation purposes, no special disposal procedures are necessary.

Choosing the right product will go much smoother when you consider these potential challenges. For example, our <u>All-Purpose Stucco Tape</u> is a heavy-duty, high tack polyethylene tape, great for stucco masking, general repairs, and temporary mounting. With excellent low-temperature bonding, residue-free removal from most surfaces, and no curl, it's a great duct tape alternative.



Ideal for one coat stucco, our <u>Premium Grade One Coat Stucco</u> <u>Tape</u> is engineered with a high-performance rubber adhesive designed to provide superior holding power and limit residue when removed within a 7-day period.

And although best-rated for three-coat stucco applications, contractors have told us they use ECHOtape's Premium Grade
Stucco Cloth Tape for all types of outdoor construction and even marine projects. It holds strong under extreme weather conditions but removes cleanly without any adhesive residue within a 60-period.

Patching and Replacing Stucco with Stucco Tape — A Field Test

Don't take our word for it! While we are confident that <u>our tapes</u> are the best on the market, it's always great to see our tapes in action. So we sent stucco and plastering contractor Kirk Giordano of <u>Giordano Plastering</u>, <u>Inc</u>. a box of our stucco tape. See what he had to say on a video entitled "<u>ECHOtape — The Best Tape for Windows and Door Frames</u>".

We believe in the *roll of tape in every toolbox philosophy*, especially when working outdoors masking stucco, plaster, and concrete applications. For reliable adhesions that provides residue-free removal 7 days, 30 days or even up to 60 days later, consider ECHOtape's <u>premium stucco tape solutions</u>.



1 Coat vs 3 Coat Stucco Process: Understanding the Difference

Stucco provides a durable, low maintenance finish that adds lots of character to a house. It can be applied with either one coat or three coat process, but there is some confusion about the methods. Let's take a look at each technique as well as the advantage that each has to offer:

- What is Three Coat Stucco?
- What Is One Coat Stucco?
- Common Problems with Stucco and Home Building
- How Is Tape Used in Stucco Applications?

What is Three Coat Stucco?

Three coat is the original stucco process, consisting of paper and wire, a scratch coat, a brown coat, and a finish, or "top" coat. In industry terms — lath, scratch and brown. The finish



coat is not considered a step because it is needed on every type of application that is used, so they are mainly referring to the stages up until the finish coat.

More specifically, a lath of an asphalt-infused paper is applied over a weather-resistant barrier. Then a layer of furred chicken wire (meaning it sticks off the wall a little bit) is applied. Next comes the scratch coat, which is a base layer of field-mixed Portland cement, sand, lime, and water with a series of horizontal lines scratched into it. Then comes the brown coat. This layer is applied with a darby, or long trowel, to make sure the cement is applied evenly. Finally, a finish coat is put on with a hawk and trowel and it can be applied in a variety of textures. These coats come in a range of colors so no additional painting is needed.

The big advantage of three-coat stucco is its strength and durability. Since it is twice as thick as one coat it's better able to hold up to wear and tear. The two drawbacks are time and cost. It can take weeks for each layer to be applied and cure. As a result, the extra materials and labor make three-coat more expensive than the one coat option.

What Is One Coat Stucco & What Is The Benefit?

The term one coat stucco refers to a blend of Portland cement,



sand, fibers, special proprietary chemicals, and water. This method speeds up the three coat stucco process by combining the scratch and brown coat into a single application of 3/8" to 1/2" thick. It is typically applied over rigid foam board and lath to provide an Energy Code required Continuous Insulated durable cladding.

That said, the term "one coat" is a misnomer because the first iteration had the colored finish coat mixed into the blend. Unfortunately, it resulted in uneven color and fibers that were visible at top layer so the two-coat method was adapted.

The one coat method is growing in popularity due to the advantages of speed and cost. Unlike three-coat, one coat saves money because the application takes approximately half the time resulting in quicker job completions, reduced labor costs, low maintenance, and life-cycle cost ratio. Yet, One Coat Stucco provides all the same benefits expected from three-coat stucco...durability, design flexibility, and fire resistance. The downside is that the thinner depth makes it is more susceptible to damage.

Common Problems with Stucco and Home Building

Stucco is actually a porous material and is designed to allow the absorption of water. Housewrap, or water-resistive



barrier, acts as a drainage plane, and as the stucco dries, water flows down the building paper and weeps out the bottom of the stucco. As long as the sheathing stays dry and water does not get trapped in the wall cavity, problems will be rare. But... they do still happen.

It's important that high-performance building professionals and contractors be aware of these issues for they are far less forgiving when water enters the system. For example the use of housewrap as a water-resistant barrier (WRB). House wrap is primarily an air barrier with water-resistive qualities. As a result of changes to building codes that specified the use of WRBs, contractors should be aware that in order to function properly there needs to be a space between the stucco and the WRB so that water can dry out. If this is not adhered to as a best practice, water can get trapped and degrade the entire wall assembly, not only leading to the growth of black mold but deteriorate the structural integrity of the building.

Also, improper window flashings continue to be an issue, as the stucco cladding is most vulnerable to excessive quantities of water entering the wall assembly at window flashings and roof wall connections.

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How Is Tape Used in Stucco Applications?

You may not be aware that <u>adhesive tape</u> is an important tool used in exterior stucco application. Stucco composite can damage windows and frames if it accidentally comes in contact with it during the application process, so contractors make sure to mask them off using a tape that is <u>specifically designed</u> to keep a strong hold against plaster and withstand intense sunlight and fluctuating temperatures. It is also important for the tape to be able to hold up heavy plastic sheeting that is used to keep windows and other surfaces clean and protected while stucco is being applied. Additionally, tape is used to create a watertight seal to protect surfaces not meant to get wet, as explained in the common problems section. (Plus, one of the steps in stucco application involves applying a light spray of water over the stucco surface to help it set!)

So why use <u>specialty stucco tape</u> instead of something more generic? It all comes down to choosing the right tool for the job. Stucco work requires tapes that are designed specifically to survive the weight of plaster; adhere to multiple surfaces, not just concrete and wood; and leave no residue when it's removed 7, 10 or even 60 days later. This means it needs to stand up to a multitude of elements, including sun, rain, wind and even severe temperatures, before removing cleanly.



Consider these related posts for more stucco information:

- The Tape That Stands Up To Stucco
- In The Field With Stucco Expert Kirk Giordano
- 2019 Stucco Market Trends

If you are involved in stucco contracting work, be sure to choose a tape designed with stucco purposes in mind in order to ensure a clean, high-quality job. Take a look at ECHOtape's stucco masking solutions here. And if you still have questions about stucco tape or any of our other pressuresensitive tapes, please contact us. We've made it our passion for more than 40 years to help professionals with their sticky issues!