



# From The Home Inspector

## Is Cultured Stone the New EIFS?

We all remember the trials and tribulations we experienced with EIFS-Synthetic Stucco. Water penetration through the exterior wall cladding system due to a number of installation errors and omissions such as: \*improper and inadequate expansion joints and caulking around windows and doors, omitted flashings in critical areas, stucco installed on top of roofing shingles and other roofing materials, stucco buried in the dirt along the bottom of the walls, not to mention leaky windows, themselves. And we all remember the results of these installation errors and omissions; rotten structural components, damaged wall and floor insulation and mold. Some of these cases resulted in extensive structural repairs and mold clean up procedures which ran into the thousands of dollars. Once the word got out, you couldn't give an EIFS clad house away and many REALTORS® were stuck in contracts with homes they could not market. The end result was a billion dollar class action law suit and severely damaged reputations of the product manufacturers, installers, and REALTORS®.

Well we may be on the threshold of a repeat of many of these same problems with the more recently and widely used Synthetic (man made) Stone we see on many new homes today. Cultured Stone is, like EIFS, an adhered exterior wall cladding. Unlike the stucco, the stone and the mortar used to adhere it are porous materials that will actually absorb moisture rather than repel it as stucco will. The stone is supposed to be installed on a competent drainage plane, which if properly installed and with the help of gravity should drain any water that enters behind the stone to release devices, such as Weep or drainage holes above windows and doors and a weep screed (continuous opening) along the bottom of the walls. In theory this type of drainage system sounds logical, but does it work if one or more of the sorely needed components is omitted or the make-up of the drainage plane is altered?

We can not see the drain plane mechanism, so we can not attest to proper installation. The result of several instances of stone removal in our area and around the country have revealed that in some cases the top layer of roofing felt within the drain plane bonds to and becomes part of the back side of the cultured stone wall, leaving a single layer of felt paper as a vapor barrier to act as the back part of the drainage plane. Several installations that I have seen in this area have had the two 30lb. felt layers replaced with a single 60lb felt vapor barrier for expediency. If the felt bonds to or becomes part of the stone, where is the drainage plane and how effective is the single layer vapor barrier? Keep in mind that felt paper that is continually under moisture conditions will not hold up forever.

Flashings, caulking and expansion joints are other intricate parts of these wall cladding systems, needed to keep water out from behind

the stone at critical locations (above windows and doors, at gutter terminations, and wall off-sets or transitions), many of which home inspectors are not seeing within the cultured stone installations during their visible inspection of these wall claddings. Moisture related problems as a result of improperly installed drainage planes, omissions of flashings, omissions of properly placed caulking, and expansion joints around windows and doors have been popping up around the country for several years and home inspectors in our area are now seeing some of these occurrences. Moisture penetration is on a limited basis now, but what about 5 or 10 years down the road?

What we are learning about these two exterior wall cladding systems is that they are both good quality systems with similar, fatal installation mistakes. For more details on proper, and now the "building code" required, installation of Cultured Stone check the Masonry Veneer Manufacturer's Associations Web Site Installation Manual at:

<http://www.culturedstone.com/literaturedocsInstallationAdheredConcreteMasonryVeneer.pdf>

Being informed about the products and components that go into the homes that you buy and sell is the best way to avoid problems where, as we all know too well, the REALTOR® ends up in the middle of the controversy. Understand the basics of cultured stone installation. Consult your builder or your buyer's builder with regard to his documentation of the stone installation from start to finish and watch for the most obvious telltale signs of an improperly installed cultured stone application:

- Cultures Stone installed directly on top of the roofing shingles.
- Cultured Stone buried below the ground along the bottom.
- No signs of weep holes on the stones along the top of window and door frames.
- The absence of caulking between the window & door frames and the stone.
- Absence of a proper flashing (if visible from the ground or a 2nd story window) between the roof/wall flashing and the gutter that abuts a stone wall.

These few visible items will generally signal a faulty stone installation that could result in leakage and problems for your Builder, Buyer, and/or You down the road.

Respectfully Submitted by:

Bill Dillon

Dillon Residential Services, Inc.