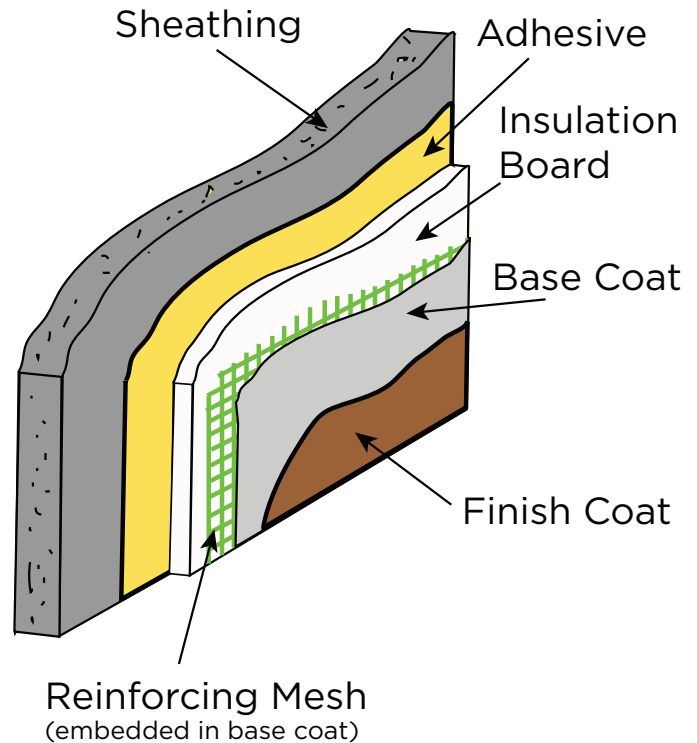


Synthetic Stucco – EIFS

Stucco is an exterior siding system that has been around for centuries. Synthetic stucco, or EIFS (Exterior Insulation and Finish System), looks like traditional stucco but it is a completely different system. As the name implies, EIFS incorporates a layer of insulation.

Here is a description of all of the layers:

- We start with bare sheathing. The exterior sheathing is usually plywood or oriented strandboard. In some areas, gypsum sheathing is permitted.
- Rigid foam insulation is attached to the sheathing with fasteners or adhesive.
- A coat of synthetic stucco is spread onto the insulation. This is called the base coat.
- Fiberglass mesh is then embedded into the base coat.
- A thin finish coat with textured and colored surface is applied over the base coat and mesh.



The rigid foam insulation in EIFS can be carved or shaped into architecturally interesting forms and accents, such as a window with a curved opening or frame. EIFS also provides excellent thermal insulation. Although it may sound like a great system so far, it has also posed some problems.

Face Seal Application

In residential applications, EIFS has been applied as a face seal system or barrier system. In a face seal system, the surface is assumed to be so impenetrable that no water can get past. In practice, however, water does get through. Since the face seal system relies on the assumption of its waterproof nature, the system does not provide a way for water to get back out. Trapped water leads to wood rot and, in severe cases, structural damage. A face seal system will only work effectively in geographical areas with little rainfall (less than 20 inches per year).

While most existing EIFS installations in North America are face seal, a better technique is one that accommodates some water leakage past the EIFS. Such a system is called a water-managed wall system. Today, most good EIFS contractors install this type of system. Unfortunately, it is not possible to convert a face seal system to a water managed system.

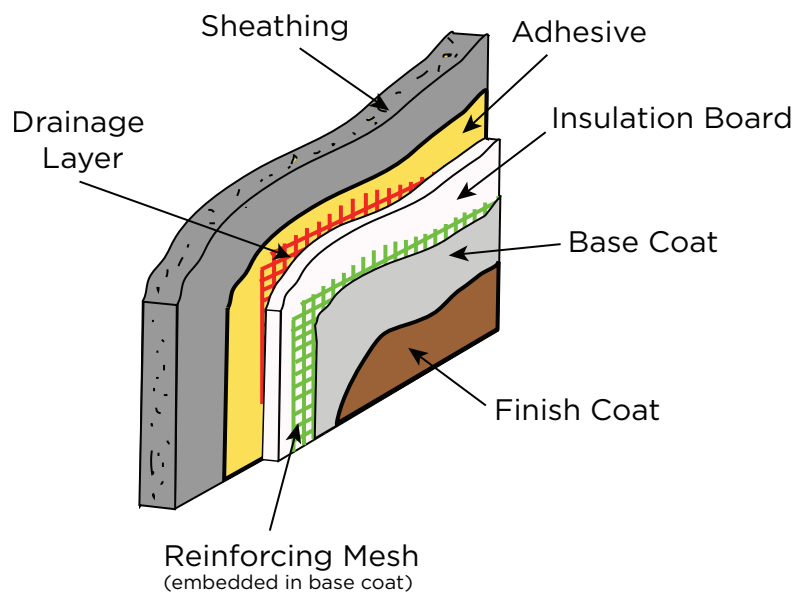
Most major problems with EIFS occur in coastal areas with a great deal of rainfall. The greater the average annual rainfall, the more sophisticated the water-managed wall system must be.

Ask an Expert

If you have EIFS on your home, it is a good idea to get an expert to inspect it. An expert can tell you if your exterior is made of EIFS, if it is a water-managed system or face seal system, and what you should do to improve the reliability of the system. In addition, an expert can do a simple moisture investigation to determine if water is leaking into the wall.

EIFS Tips for Homeowners

- Protect EIFS from mechanical damage. For example, do not lean a ladder directly against an EIFS wall unless you have provided something with which to spread out the weight, such as a piece of wood or foam padding.
- EIFS should be applied above grade only. Make sure landscaping does not create a problem. For example, Pillar to Post® inspectors commonly see planter boxes built in place against the wall of the house with dirt piled against the EIFS.



- Do a periodic visual inspection for unsealed openings, condition of joints around windows, bulging or cracking in the surface, and evidence of leakage inside the home.
- Have an expert inspect the EIFS to verify the type of system, and to make recommendations on priority repairs and ongoing maintenance.
- Clean and repair gutters to make sure roof water does not spill down the wall surface. Check the operation of the gutters during a rain storm.