

LOOKING FOR LEAKS

Exterior Insulation and Finish Systems (“EIFS”) are somewhat unique in that they can be installed with almost no joints. The only joints that are required to go through the EIFS itself are normally a function of a joint in the wall behind the EIFS, not the needs of the EIFS itself. Since the EIFS coatings themselves are jointless, the likelihood that the EIFS itself is leaking is small. However, EIFS is often cited as the source of leaks, when, in fact, such is not actually the case. Most leaks in EIFS walls are caused by adjacent wall constructions that are not part of the EIFS itself. Below is information about some of those sources.

General: In order for water to get into a wall, three things are needed: the water, an opening, and some force that cause the water to go through the opening. If all three of these items are not present at once, then leaks will not occur. Since EIFS coatings themselves have no joints, it is best to look for leaks in areas other than the “field” of the EIFS wall.

Windows: Windows themselves, as discrete building elements, are a system of various materials, including the frame, glass, gaskets, hardware and other components. There are numerous seams between these materials. These seams can provide the avenue for water entry. Some leaks open and close, while others are fixed (do not open or close). Operable windows tend to leak more than fixed ones.

Sealants: Also known as “caulking”, sealants are wet-applied synthetic materials that cure into a flexible, rubber-like material. Sealants do not last forever, and they can have cracks within themselves and also have gaps between themselves and the adjacent wall elements (such as the EIFS, windows and flashings). Such interfaces are possible areas of water entry.

Interface: An interface is the junction between two or more materials. Interfaces abound in building walls. An example is the interface between a sealant bead and a flashing. Interfaces, if not watertight, can allow water entry. Watertightness can be achieved by various means, including bonding a material to another, and the geometry of the interface. Interfaces are a common source of water entry.

Flashings: Flashings are thin, shaped building elements, usually made of metal, but also sometimes made of plastics and other materials. Their main function is to divert water away from interfaces, thus preventing leaks. Flashings are often in the form of long pieces. These pieces have joints, corners and holes in them, and hence these interfaces within flashings are possible sources of leaks.

Water in Walls That Doesn't Come From the Wall: Buildings are composed of numerous construction elements, including roofs, decks and other exterior surfaces which can have water on them. Water often finds its way through the wall construction and surfaces far from its original source. Roof leaks are common leak source which often manifest themselves in the walls. Do not assume that water in a wall comes from the wall itself. Be methodical and look for all water sources.

Leaks That Are Not “Leaks”: Not all water exists in a wall due to the entry of liquid water from the outside. Water can also be deposited by other means, including the condensation of liquid water from gaseous water vapor. This can lead to damp conditions in a wall that are assumed to be from water “leaks”, when in fact they are due to hygro-thermal conditions that result in water being deposited in the wall due to the moisture in the air.

Leaky EIFS Coatings: It is possible for the EIFS coatings themselves to leak, This is extremely rare. Normally your time is much better spent looking elsewhere. Remember that the EIFS coatings are backed up by a layer of insulation, which is also water repellent. So even if the EIFS coatings leak, the chances of the water getting through the “field” of the EIFS is small.

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