

MYTHBUSTERS

"I can't get brick to create the same appearance or intricate detailing of EIFS."

A brick exterior can be made to have a smooth, monolithic surface by painting the brickwork or by selecting mortar that matches the brick color. Quoins and other design features can be made with brick. Window surrounds can be made with special shapes, brick of contrasting colors, or in combination with other materials such as cast stone.

"Brick walls can leak just like EIFS walls."

Sure, brick walls can leak—that's precisely why they're designed as "drainage wall" systems. Brick walls are built with an air space, through-wall flashing and weep holes, so that any water that enters quickly exits. The newer generation water-management EIFS copy this drainage approach, but the air space is smaller and the effectiveness in use has not been proven. The finish coat does not permit water evaporation.

"EIFS is cheaper than brick."

The original barrier systems may have been cheaper, but the more complex and flashed drainage EIFS adds cost to the EIFS. Water-management increases the cost of EIFS at least two dollars per square foot, perhaps making EIFS as expensive as brick. The continuous inspections that must be performed on EIFS homes raise the cost even more.

"EIFS provides better, continuous insulation."

Placing a layer of rigid insulation on the outside of the sheathing in brick veneer provides similar continuous insulation. Further, the mass of the brick reduces the amount of heat transferred to the building.



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THE FACTS: BRICK VS. EIFS

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THE FAKE STUCCO ALTERNATIVE: EIFS

Never heard of EIFS? Don't worry, it's just another name for synthetic stucco. EIFS (pronounced "eefs") is an acronym for Exterior Insulation and Finish System. What is it? Let's start from the inside and move out: it's composed of interior finish (usually drywall), wood or steel studs, exterior sheathing (usually OSB in residential construction), rigid insulation board (usually expanded polystyrene) attached to sheathing with or without an air gap between, base coat with reinforcing mesh embedded, and an acrylic finish coat. Got that? But wait, it gets even more complicated.

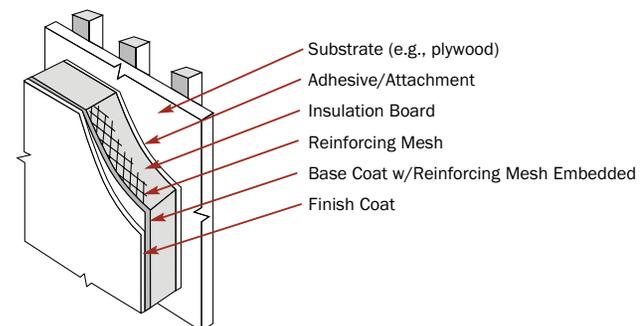
The EIFS is actually the insulation board, the base coat with reinforcing mesh, and the finish coat. The base coat contains polymers and portland cement. The reinforcing mesh may be plastic or glass. The finish coat typically contains an acrylic polymer along with sand.

EIFS is designed to be either a barrier or a drainage wall system. The barrier system was introduced first and has not performed well. Moisture frequently penetrated EIFS because of



improper installation around door and window openings and at wall and roof intersections. Cracking in the finish coat and failure of sealant in the joints and at adjacent materials permit water to enter the wall system. Once there, material deterioration begins and mold and mildew begin to grow. Such problems have become widely known. Barrier type EIFS have been banned by several localities.

In response to these problems, EIFS manufacturers have developed drainage or "water-management" systems. These add an air gap and a moisture barrier between the insulation and the sheathing. Most EIFS manufacturers are now producing drainage systems. However, many of the wall system's deficiencies remain.





HERE'S WHAT THE NATIONAL ASSOCIATION OF HOME BUILDERS SAID:

"In NAHB's opinion, barrier EIFS systems have proven to be incompatible with the existing wood frame construction methods typically used in residential construction in the United States."



EIFS STRENGTHS:

Design Flexibility

Architects and designers can create intricate detailing with EIFS. Its unique look appeals to many consumers. Recent additions include a faux-brick appearance.

Lightweight Finish

EIFS light weight allows many different shapes to be easily made—including quoins, raised bands and projecting window surrounds—that are harder to make with other, heavier finish materials.

Increased Energy Efficiency

The rigid insulation board used as a part of the EIFS system gives the wall added energy efficiency. EIFS have always been an energy efficient alternative to other sidings, especially in retrofits.

EIFS WEAKNESSES:

Moisture Intrusion Causes Rot

EIFS cannot keep water out of the wall. Water penetration is inevitable. EIFS acrylic finish coat does not allow the water to evaporate back out through the surface, trapping moisture that will rot the sheathing, studs and other structural members. Drainage EIFS systems are now required in many areas but are new and have yet to prove EIFS immune to the effects of water penetration.

Precision Construction Practices

Construction methods for the drainage systems have not changed. The base coat and mesh have to wrap around edges; the gap must be the correct size; the surfaces must be clean; the sealant and finish coat must be compatible. All of these are much more critical for joints in EIFS than they are for joints in brickwork.

Poor Fire Performance

EIFS is considered to be a "combustible material." The foam insulation will melt when exposed to temperatures around 300 °F, and can ignite at temperatures around 600 °F. In numerous fires, insulation has ignited and caused the fire to spread. In some fires, molten material has streamed

down from the burning building. Some cities have banned EIFS or severely limiting its use because of this.

Easily Damaged

You can easily punch a hole in an EIFS wall with a golf ball, a baseball, a weed whacker, a step ladder, a vehicle or your fist. Repairs to these areas are noticeable.

Insect Infestation

Since termites like warm damp places, leaky, waterlogged EIFS walls are a termite's favorite place to live. Birds and other animals have also been known to make their homes in EIFS.

Cracks Easily

Cracking of the acrylic coat can occur due to expansion and contraction of the system. Cracks will also allow more water entry.

Insurance Difficulties

EIFS clad buildings may result in higher premiums for home owner's insurance, if insurance is available at all.