EIFSFACTS.ORG

The Real Facts About EIFS

- EIFS Basics -

EIFS is an acronym for Exterior Insulation and Finish Systems. It is a generic term for an exterior cladding system currently produced by some 30 manufacturers in the U.S. EIFS is also referred to as "Synthetic Stucco". This term is not entirely accurate in the context of talking about EIFS because there are other types of synthetic stucco products besides EIFS. The acronym is typically pronounced "EEFS" although some pronounce it as "EEFIS". Whatever.

EIFS consist of several components combined to produce the cladding system (see diagram 1). The first half of the acronym, "Exterior Insulation" is derived from the fact that the first component installed is a polymer-based foam board. This foam board is mechanically and/or adhesively attached to the exterior sheathing of the home. In this respect the foam board serves as an exterior insulating layer. Over this foam board is applied a synthetic base-coat material in which is embedded a fiberglass reinforcing mesh. This is typically referred to as the "base-coat". Is is usually a muddy-green color and dries down to a grey or greenish-grey. On top of the base coat is applied one or more "finish coats". This is the exterior layer that gives the product its stucco-like appearance. Hence the second part of the acronym "Finish Systems".

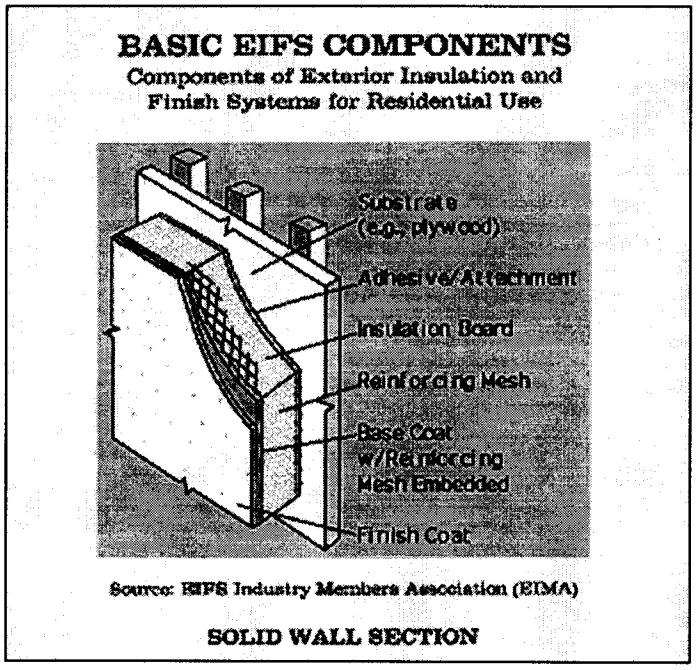

Diagram 1: EIFS Components

A Brief History of EIFS

EIFS were developed in Europe after World War II. There was a need to repair war-ravaged buildings without leveling and rebuilding them. EIFS was an ideal way to go. Data indicate that EIFS was successful in its performance as deployed in Europe. What EIMA typically won't tell you is that the use in Europe was almost entirely on concrete and masonry exteriors.

In 1969 Dryvit imported the first EIFS into the U.S. largely for commercial applications. One of the first users of the systems was the U.S. Army. EIFS began making inroads into the residential construction industry in the mid 1980's. No engineering changes were made to allow for differences between commercial masonry and steel construction and wood residential construction before it was introduced to the residential market.

The Problem

- Homes clad with EIFS (Exterior Insulation and Finish Systems) a.k.a. *synthetic stucco* have a very strong tendency to retain moisture between the sheathing of the home and the finish system. The design of EIFS, unlike other systems (brick, stone, siding, etc.), does not allow the moisture to drain out. The moisture can sit in contact with the sheathing for a prolonged period and rotting may result. Damage can be serious. Left *unchecked*, it can affect the structural components of the home. This is also an open invitation to termites.

- EIFS homes cannot be made "water proof", even by "professional" caulking applicators. All caulk joints fail, even those made under laboratory conditions by EIFS industry engineers. No residential windows are *waterproof*, they are designed and manufactured to a *water-resistant* standard. *Some water will always find a way in. When it can't get out you have a problem.*

- This problem is less severe in traditional, or "hard coat", stucco.

- Most "stucco" homes built in this area in the last ten years have EIFS.

- If you are not sure what kind of stucco you have ask your builder.

- A quick, but not foolproof, way to check is to knock on the wall with your knuckles and press on it with your fingertips. If you hear a hollow sound when you knock and the wall feels softer than concrete you probably have EIFS. If the wall sounds very solid and feels as hard as concrete you may have traditional (hard coat) stucco. *There are exceptions with very new finish systems. Very new systems may also be "drainable" or "water-managed".*

- EIFS homes built before 1997 have a 90%+ chance of having moisture intrusion problems. EIFS homes built since 1997 may have a reduced chance of moisture intrusion, but are not immune.

- There are few, if any, visual clues to the problem. It is behind the walls of the home.

- Local homes built by respected builders have been tested by experts. To date, more than 90% have had moisture intrusion problems. This is in agreement with the 93% - 94% hit rate experts predict.

- One of the largest builders in the country (with a major market-share in Fairfax County) recently

switched from EIFS to traditional hardcoat. When asked about the switch they indicated that it was "due to the bad publicity that EIFS has gotten, but we've never had any problem with EIFS". However, the Fairfax County Department of Environmental Management confirms that this builder did a complete tear-off of a two year old home in one of their major subdivisions, replaced all the windows and refinished the home with hard-coat. Residents of the subdivision stated that the "family was moved into another home prior to the tear-off". NOVASHOC members wanted to attend this subdivision's annual HOA meeting in September, but this was denied by the HOA's Board of Directors. The builder holds two seats on the Board.

- This is not a "North Carolina" problem; it's national. It was *discovered* first in North Carolina.
- Homes as young as 6 weeks of age have been found to have damage. We have seen model homes and homes still under construction in this area with serious problems.
- In Virginia, the owner has five years from the date of the occupancy permit to act under the Virginia **Statute of Repose** (limitations). After that the only relief may be under the EIFS manufacturer's express warranty if it is still in effect.