

# ADVOCACY INFORMATION



A significant part of the value of your membership is the advocacy and legislative leadership EIMA provides to the EIFS industry. Members work together to promote and educate the construction industry, governmental leaders, project owners and designers on the value and benefits of EIFS. EIMA advocates change in local, state and federal laws and regulations to encourage equal opportunity for EIFS. Additionally, EIMA represents the EIFS industry at code development hearings and at meetings of standard developing organizations.

EIMA has developed an educational package of information on EIFS that can be used by any of its members in promoting EIFS and educating local officials, owners, architects, etc. on the value of EIFS. Please print, distribute and use this information as often as needed to help spread the word about EIFS and move the industry forward.

When facing a statutory or regulatory restriction against the use of EIFS or an unreasonable obstacle to its use, consider these steps:

1. Reach out to EIMA to see if it is already aware of the restriction/obstacle, and if EIMA can provide any background or additional information.
2. Set up a meeting with the local planning, zoning, or building codes department to understand the reasoning behind the restriction/obstacle, even though the local governing body might still have the final say on these matters. The goal is to obtain additional background for the restriction/obstacle. If you feel it's necessary to gain assistance from EIMA, please feel free to call EIMA. Please feel free to use the information on this page to help guide your conversation. Information you should obtain from your contact is the following:
  - a. How old is the restriction?
  - b. What were the concerns when it was passed?
  - c. What other exterior cladding or building materials are being restricted?
  - d. Typically, durability, appearance, and moisture control (use the Oak Ridge National Laboratory information found under the "Benefits of EIFS") are the most common topics of concern.
3. Follow-up with the locality to provide answers to any of their questions. Again, EIMA is willing to help with this.
4. If it doesn't appear as though the locality is going to budge, reach out to EIMA for assistance and help in developing a plan to move forward.

Examples:

**Case 1:** Success at Planning Commission in Shawnee, KS

In 2017, the EIFS Industry Members Association (EIMA) was contacted by a business liaison working on behalf of the City of Shawnee, KS. Their objective was to look into lifting existing restrictions against EIFS, for wider use in the city.

EIMA, an EIFS manufacturer, and a local distributor all worked together to put a message forward that would resonate with both the planning department and commission. Sharing the evolution of EIFS and the superior performance of the system were key points in addressing concerns raised by the city. Information on durability, aesthetics, and more contributed to successful meetings.

A local Kansas distributor was well equipped with talking points and facts, and attended several meetings on behalf of the group. In April 2018, the planning commission voted to allow EIFS with only a few minor caveats. This was the final approval needed to lift the previous prohibitions.

**Case 2:** City Council of North Augusta, SC

In early 2016, EIMA noticed some city councilmembers discussing the possibility of lifting a restriction on EIFS that had existed in North Augusta, SC. Representatives from EIMA reached out to one of the individuals who seemed to be showing the most support for a change and supplied this individual with useful information.

The information centered around 3 topics: an overall introduction to EIFS, durability, and the aesthetics/appearance the system can achieve. After this case moved through the process, the restriction on EIFS was largely eliminated.

Both of these cases show examples of where information, that can be found in this packet, have a proven track

# What Are EIFS?

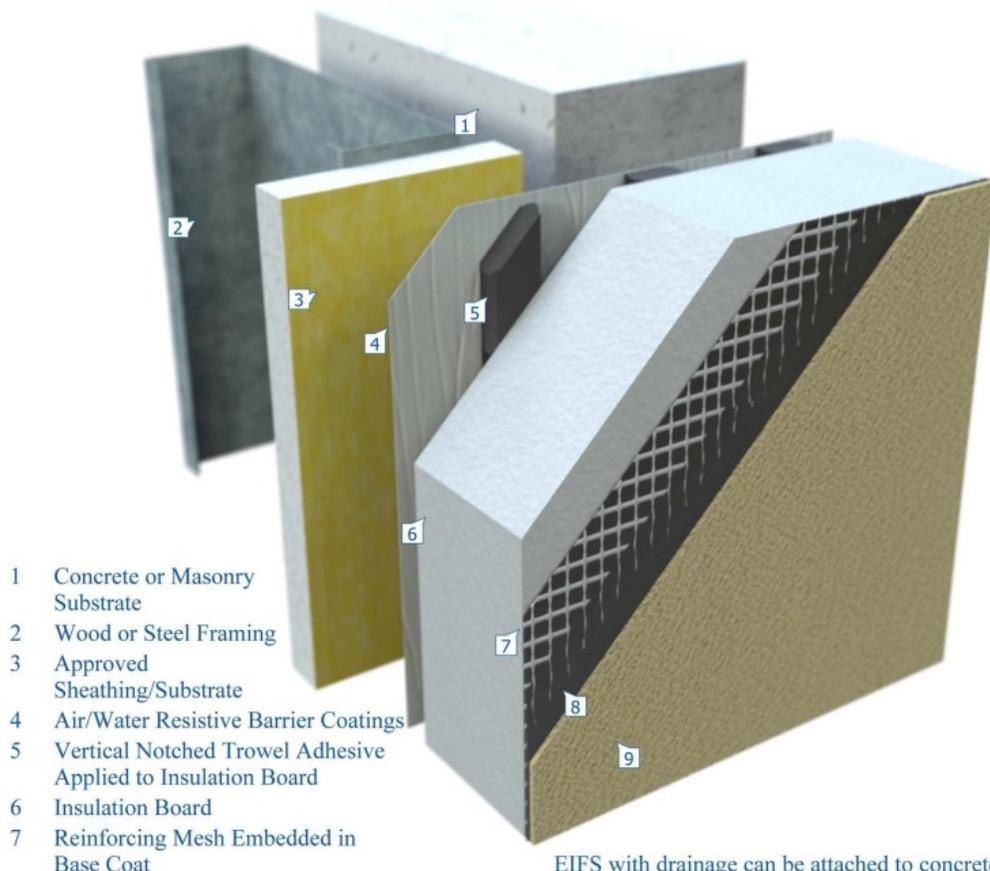
Exterior Insulation and Finish Systems (EIFS) are multi-layered exterior wall systems that are used on both commercial buildings and homes. They provide superior energy efficiency and offer much greater design flexibility than other cladding products.

EIFS were first introduced in the United States in the late 1960's, and were used on commercial buildings, and later, on homes. EIFS typically consist of the following components:

- A water-resistive barrier that covers the substrate
- A drainage plane between the water-resistive barrier (WRB) and the insulation board that is most commonly achieved with vertical ribbons of adhesive applied over the WRB.
- Insulation board typically made from expanded polystyrene (EPS)
- An insulation board is attached with an adhesive or mechanically to the substrate
- Glass-fiber reinforcing mesh embedded in the base coat
- A water-resistant base coat that is applied on top of the insulation to serve as a weather barrier
- A finish coat that typically uses colorfast and crack-resistant acrylic co-polymer technology

EIFS today are one of the most tested and well researched claddings in the construction industry. Research, conducted by the Oak Ridge National Laboratory and supported by the Department of Energy, has validated that EIFS are the "best performing cladding" in relation to thermal and moisture control when compared to brick, stucco, and cementitious fiberboard siding. In addition, EIFS is in full compliance with modern building codes which emphasize energy conservation through the use of CI (continuous insulation) and a continuous air barrier. Both of these components are built into today's EIFS products to provide maximum energy savings, reduced environmental impact over the life of the structure, and improved IAQ, Indoor Air Quality. Along with these functional advantages comes virtually unlimited color, texture, and decorative choices to enhance curb appeal and enjoyment of almost any home or structure.

## TYPICAL EIFS CONFIGURATION



EIFS with drainage can be attached to concrete,

According to the definitions of the International Building Code and ASTM International, an **Exterior Insulation and Finish System (EIFS)** is a nonload bearing, exterior wall cladding system that consists of an insulation board attached either adhesively or mechanically, or both, to the substrate; an integrally reinforced base coat; and a textured protective finish coat.

EIFS with Drainage, another EIFS system, is the predominate method of EIFS applied today. As the name implies, EIFS with Drainage provides a way for moisture that may accumulate in the wall cavity to evacuate. It is a system that:

- Incorporates a water-resistive barrier (WRB) between the insulation board and the substrate (the surface to which EIFS is attached).
- Places the drainage plane between the WRB and the insulation board and is most commonly achieved with vertical ribbons of adhesive applied over the WRB.
- Incorporates by design other accessories and a means for evacuation of incidental moisture from behind the insulation board in addition to those components listed previously.

Whatever system applied, barrier EIFS or EIFS with Drainage, both systems are engineered to provide a durable, energy efficient, design flexible, and cost effective exterior cladding for virtually all building types. Ultimately the system used is determined by the architect in accordance with code and project requirements.

The growing popularity of EIFS is due to the fact that few, if any, competitive materials offer such a wide range of desirable product benefits. Chief among these are superior energy efficiency and virtually unlimited design flexibility.

## **Energy Efficiency and Energy Codes**

EIFS can reduce air infiltration by as much as 55% compared to standard brick or wood construction. And since walls are one of the greatest areas of heat and air conditioning loss, improvement in the wall insulation can be very meaningful in terms of energy conservation.

What's more, EIFS add to the "R-value" of a home or building. (R-value is a measurement of the resistance to heat flow; the higher the R-value, the better the material's insulating value.) Most EIFS use insulation board with an R-value of R-4 to R-5.6 per inch as the innermost layer in the wall system. When combined with standard wall cavity insulation, this extra layer can boost wall insulation from R-11 to R-16 or more.

Another point to keep in mind on new construction: Due to the energy efficiency of EIFS, it may be possible to specify lower-capacity heating and air conditioning equipment without sacrificing anything in terms of interior comfort.

The US Department of Energy (DOE) mandated on October 18, 2013, all States update their commercial building code to meet or exceed ASHRAE Standard 90.1 - 2010.

•EIFS was the first to meet standards of Continuous Insulation (CI) and has long been the solution to the expanded requirements.

There are a variety of case studies available validating the energy savings associated with EIFS; for a recent example of EIFS in action, you can check out the 2012 Better Buildings Federal Awards Program results, where an EIFS clad building helped reduce energy use by nearly 45% in a 12 month period.

## **Durability**

Unlike wood, stucco and other siding materials, EIFS rarely need painting. Most EIFS systems are specially formulated with 100% acrylic binder, which gives EIFS superior resistance to fading, chalking and yellowing. As a result, the systems tend to maintain their original appearance over time. And since the color is integral to the finish coat, even if the surface is scratched, the same color appears beneath the abrasion.

EIFS also have excellent resistance to dirt, mildew and mold, which helps keep the building exterior looking clean and freshly painted. Should the surface ever become soiled, it can usually be cleaned by hosing it down.

The systems are designed to be very flexible, which makes them highly crack resistant. When walls expand or contract due to rising or falling temperatures, EIFS are resilient enough to "absorb" building movement and thus avoid the unsightly cracking problems that are so common with stucco, concrete and brick exteriors.

EIFS has passed the stringent Miami-Dade County Hurricane Test, showing no impact against hurricane style weather.

## **Appearance/Design Flexibility/Aesthetics**

The rich appearance of EIFS bears a resemblance to stucco or stone, but the systems are far more versatile than these and other materials. Not only do EIFS come in virtually limitless colors and a wide variety of textures, but they also can be fashioned into virtually any shape or design.

With EIFS, skilled applicators can create all sorts of exterior architectural detailing that would often be cost-prohibitive using conventional construction -- cornices, arches, columns, keystones, cornerstones, special moldings and decorative accents are but a few examples.

Using this ingenious process, EIFS applicators can give a striking, distinctive appearance to any building or residence.

## **Moisture Control**

Recent research, conducted by the Oak Ridge National Laboratory and supported by the Department of Energy, has validated that EIFS are the "best performing cladding" in relation to thermal and moisture control when compared to brick, stucco, and cementitious fiberboard (commonly known as fiber cement) siding.

EIFS are among the most water resistant exterior surfaces you can put on a house. But as with all claddings, EIFS must be correctly installed and properly detailed if they are to perform properly. Otherwise, moisture can get behind the systems and cause damage, just as it can with wood siding, brick or any other exterior.

Water intrusion is seldom a problem on commercial structures with EIFS. Water intrusion damage to homes is uncommon, but when it does occur, the moisture typically affects only small areas which can be easily and inexpensively repaired.

In cases where homes have been damaged, the problems have been traced to the use of poor quality (even leaky and/or non code-compliant) windows and/or improper flashing and sealing. As a result, when building with EIFS, it is wise to use quality windows (such as those with AAMA certification) which are code-compliant, and to make sure there is proper flashing and sealing around windows, doors, roofs, deck-to-house attachments, and all other exterior wall penetrations.

Periodic maintenance should include thorough checking of the flashing and sealing to ensure that the building envelope remains watertight. Damaged or missing flashing should be repaired or replaced immediately; likewise, cracked or deteriorated sealants should immediately be repaired, or removed and replaced.

## **Fire Testing**

EIFS have passed the major fire resistance tests that are required by the building codes. EIFS have passed fire resistance, ignitability, intermediate multi-story, and full scale multi-story corner tests; meeting the standards set forth with each test. These tests include:

- Fire Resistance (ASTM E 119) – EIFS PASSED, showing no negative effect on the fire resistance of a rated wall assembly.
- Ignitability (NFPA 268) – EIFS PASSED with no ignition at 20 minutes of radiant heat exposure.
- Intermediate Multi-Story Fire Test (NFPA 285 (UBC 26-9)) – EIFS PASSED
- Criteria included resisting the spread of a flame within combustible core/component of panels from one story to the next. In addition, resisting lateral spreading of flames from the origin of the compartment fire to adjacent spaces.

Unlike wood, stucco and other siding materials, EIFS rarely need painting. Most EIFS systems are specifically formulated with 100% acrylic binder, which gives EIFS superior resistance to fading, chalking and yellowing. As a result, the systems tend to maintain their original appearance over time. And since the color is integral to the finish coat, even if the surface is scratched, the same color appears beneath the abrasion.

EIFS also have excellent resistance to dirt, mildew and mold, which helps keep the building exterior looking clean and freshly painted. Should the surface ever become soiled, it can usually be cleaned by hosing it down. The systems are designed to be very flexible, which makes them highly crack resistant. When walls expand or contract due to rising or falling temperatures, EIFS are resilient enough to “absorb” building movement and thus avoid the unsightly cracking problems that are so common with stucco, concrete and brick exteriors.

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In cases where homes have been damaged, the problems have been traced to the use of poor quality (even leaky and/or non code-compliant) windows and/or improper flashing and sealing. As a result, when building with EIFS, it is wise to use quality windows (such as those with AAMA certification) which are code-compliant, and to make sure there is proper flashing and sealing around windows, doors, roofs, deck-to-house attachments, and all other exterior wall penetrations.

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Since its introduction in the United States in the late 1960's, many improvements have evolved in Exterior Insulation and Finish Systems (EIFS).

**Validation through Studies and Tests**—According to research conducted by the Oak Ridge National Laboratory and supported by the Department of Energy, EIFS have been validated as the best performer in relation to moisture control and thermal efficiency when compared to brick, stucco, and cementitious fiberboard siding. EIFS also have undergone several fire tests required by building codes and passed every one. EIFS have passed fire resistance, ignitability, intermediate multi-story, and full scale multi-story corner tests; meeting the standards set forth with each test.

**EIFS with Drainage**—EIFS with Drainage offers the same benefits as the older version of EIFS, but; it contains a drainage cavity that permits the evacuation of any incidental moisture accumulation to be removed, and; it provides protection to the substrate by use of a liquid-applied water resistive barrier (WRB).

**Improved Sealants**—Sealants used to fill joints in EIFS continue to improve over time. For EIFS, in general, low modulus sealants that maintain their properties with exposure to ultra-violet (UV) light are recommended. In addition the sealant must, at the very least, comply with ASTM Test Method G1382-97. Most sealants meet or exceed this standard, and many continue to outperform it.

Of course, in the selection of any sealant, other functional factors must be considered such as anticipated joint movement, substrates to which the sealant will be bonded, exposure to cyclical movement, and exposure to temperature extremes. Additional information can be obtained by referring to ASTM Test Method G1382-97, Standard Test Method for Determining Tensile Adhesion Properties of Sealants Applied to Exterior Insulation and Finish Systems (EIFS), Class PB. Also, the user should always consult with the sealant manufacturer for guidance on suitability, design, and proper use and handling of the sealant.

**Improvements to Finishes**—Improvements continue to be made in EIFS finishes. For example some leading manufacturers have finishes that allow the moisture that accumulates between the finish and the base coat to migrate harmlessly to the exterior. Another example is the finish that is glossy and allows any dirt buildup to wash away with rain. Additionally, manufacturers can match any color and provide many different finishes including the appearance of brick and metal.

**EIFS Listed in Building Codes**—Since 2009, the International Building Code and International Residential Code, both published by the International Code Council, provide for, within the code itself, the use of Exterior Insulation and Finish Systems (EIFS).

**Insurance for EIFS**—The availability of affordable insurance coverage for both commercial and residential EIFS projects continues to improve. This is true for coverage for EIFS applicators as well. As more insurance firms become aware of the advantages of EIFS, they will respond to the market.

**Streamlined Evaluation Reports**—Currently, the most widely-used evaluation is the International Code Council's Evaluation Service (ICC-ES). EIFS have long met the ICC's acceptance criteria and those of the legacy organizations that merged to make up the ICC. The information that is contained in these reports has recently been streamlined to make their use easier. This is because, when a building product or system is not provided for in the building codes, evaluation reports may be referenced by the local building official to ascertain if the product or system has been reviewed to comply with certain evaluation criteria that have been established by the model building codes.

# EIFS Training & Inspection Programs

## EIFS Doing It Right®

EIFS Doing It Right® is a national, standardized education and certificate program available from the Association of the Wall and Ceiling Industry (AWCI). It is a two-day course that focuses on generic EIFS installations according to industry standards. Instruction covers the essential knowledge and techniques for correct EIFS installations and proper inspections. The content is based on industry accepted standards and best practices and is updated as the industry changes. The focus and basis of the generic instruction are class PB systems; both barrier and drainage, with an overview of class PI systems, direct applied exterior finish systems (DEFS) and acrylic finish over portland cement plaster (stucco). The program is geared to EIFS applications for new commercial construction.

There are three certificate categories, each with pre-qualifications:

- EIFS Industry Professionals
- EIFS Mechanics
- EIFS Inspectors



Course topics include:

- Industry Standards and Specifications
- Material Storage and Temporary Protection
- Substrates and Efflorescence
- EIFS with Drainage and Flashing
- EPS Boards, Mesh, Basecoat and Finish Coat
- Adhesive and Mechanical Attachment
- Joints, Sealants and Repairs
- Inspection: Philosophy, Scheduling & Methodology, Reports
- Design Considerations

## EIFSMART Contractor



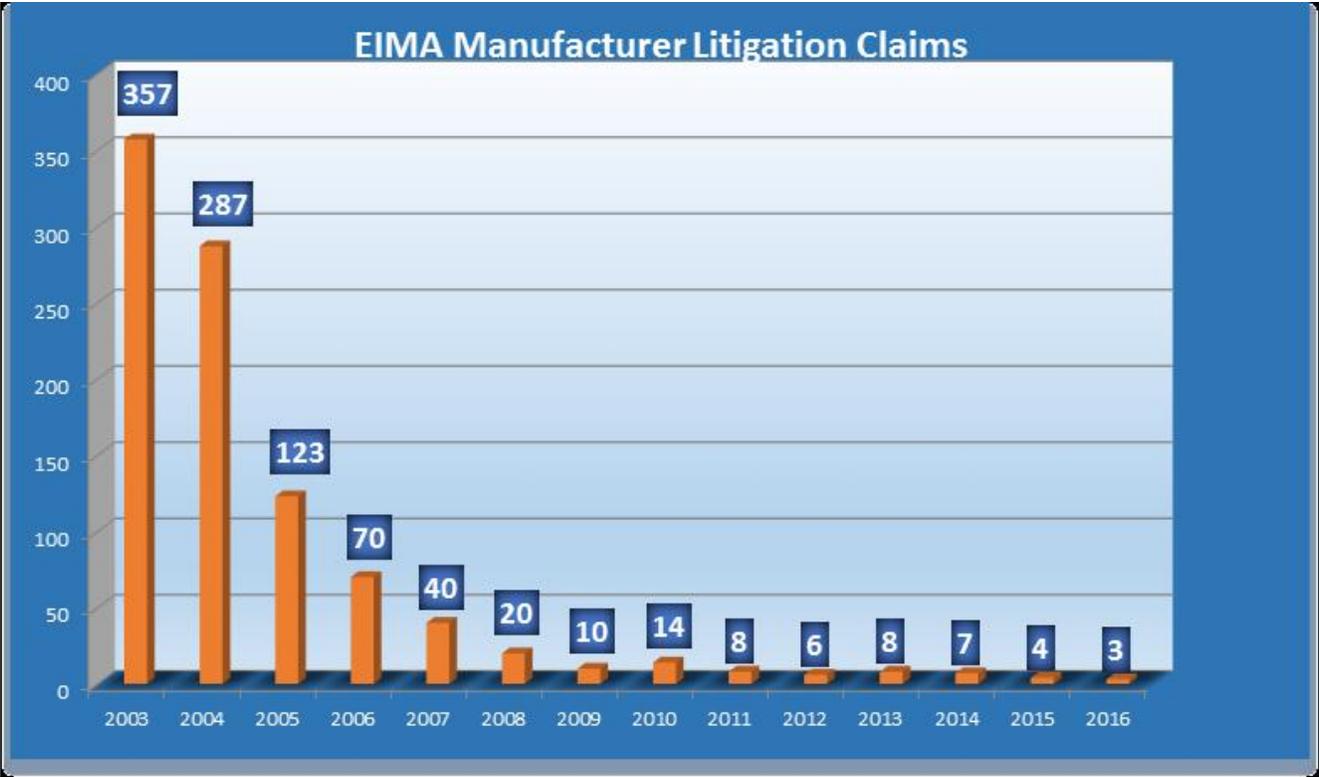
The EIFS*Smart* Contractor is a recognition awarded to companies that are committed to quality workmanship in Exterior Insulation and Finish Systems (EIFS). The company demonstrates its merit and commitment through EIFS education and certification. The recognition requires that a specified percentage of the employees have been educated in EIFS application and theory, according to industry standards and accepted means and methods of high-quality installations.

There is accountability to the distinction such as adhering to a Code of Ethics. This entails among other things, that the company employ trained and tested personnel in the EIFS Doing It Right methods. Only those who pass a rigorous examination earn the certification. These individual certifications are a requirement for the company recognition.

Companies wishing to become recognized as an EIFS*Smart* Contractor must meet the following requirements:

- 40% of the EIFS employees must hold a valid certification from AWCI
- This ratio is to be carried for each project
- At least one of the certified employees must be at the decision-making level so that the message of EIFS Doing It Right is adopted and directed from the top down.
- The foreman for each EIFS project is to be AWCI certified
- An annual reporting form attests that the criteria are met on a continuing basis in order to maintain the distinction and be listed on the National Registry at [www.awci.org/registry](http://www.awci.org/registry)

The litigation and claims history for EIFS has decreased dramatically due to many reasons. Below is a chart showing the ever-decreasing number of claims brought against four major EIFS manufacturers.



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The 2009 editions of the International Building Code and International Residential Code, both published by the International Code Council (ICC), provide for, within the codes themselves, the use of Exterior Insulation and Finish Systems (EIFS).

The action to approve the inclusion of EIFS into the building codes was first taken at the ICC Code Development Hearings in Palm Springs, California in February 2008 when hearings were first presented to an ICC oversight committee conducting their proceedings before an audience of over 800 code officials from around the U.S. Final approval took place at the ICC Final Action Hearings in Minneapolis, Minnesota in September of 2008 as over 1,000 code officials from every state overwhelmingly approved the adoption of EIFS into the ICC International Building Code (IBC) and International Residential Code (IRC). The inclusion of the EIFS provisions in the IBC and IRC:

- Simplifies the use of EIFS
- Simplifies specifying EIFS
- Simplifies product comparisons

Why was it important to get EIFS into the building code? Because it validates the product making it equal to other building products listed in the code and it takes some of the discretionary use of EIFS away from the code official provided they have not made amendments to the Code Sections referencing EIFS.

Further, provisions for the use of EIFS are contained in the standard of the American Society of Heating, Refrigerating, and Air-Conditioning Engineers entitled "Energy Standard for Buildings Except Low-Rise Residential Buildings", ASHRAE Standard 90.1.

## **SECTION 1408 of the IBC**

### **EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)**

**1408.1 General.** The provisions of this section shall govern the materials, construction and quality of exterior insulation and finish systems (EIFS) for use as *exterior wall coverings* in addition to other applicable requirements of Chapters 7, 14, 16, 17 and 26.

**1408.2 Performance characteristics.** EIFS shall be constructed such that it meets the performance characteristics required in **ASTM E 2568**.

**1408.3 Structural design.** The underlying structural framing and substrate shall be designed and constructed to resist loads as required by Chapter 16.

**1408.4 Weather resistance.** EIFS shall comply with Section 1403 and shall be designed and constructed to resist wind and rain in accordance with this section and the manufacturer's application instructions.

**1408.4.1 EIFS with drainage.** EIFS with drainage shall have an average minimum drainage efficiency of 90 percent when tested in accordance with the requirements of **ASTM E 2273** and is required on framed walls of **Type V construction and Group R1, R2, R3 and R4 occupancies**.

**1408.4.1.1 Water-resistive barrier.** For EIFS with drainage, the *water-resistive barrier* shall comply with Section 1404.2 or **ASTM E 2570**.

**1408.5 Installation.** Installation of the EIFS and EIFS with drainage shall be in accordance with the EIFS manufacturer's instructions

**1408.6 Special inspections.** EIFS installations shall comply with the provisions of Sections 1704.1 and 1704.14

## **SECTION 703.9 of the IRC**

**R703.9 Exterior insulation and finish system (EIFS)/EIFS with drainage.** Exterior Insulation and Finish System (EIFS) shall comply with this chapter and Sections R703.9.1 and R703.9.3. EIFS with drainage shall comply with this chapter and Sections R703.9.2, R703.9.3 and R703.9.4.

**R703.9.1 Exterior insulation and finish system (EIFS).** EIFS shall comply with **ASTM E 2568**.

**R703.9.2 Exterior insulation and finish system (EIFS with drainage).** EIFS with drainage shall comply with **ASTM E 2568** and shall have an average minimum drainage efficiency of 90 percent when tested in accordance with **ASTM E 2273**.

**R703.9.2.1 Water-resistive barrier.** The water-resistive barrier shall comply with Section R703.2 or **ASTM E 2570**.

**R703.9.2.2 Installation.** The water-resistive barrier shall be applied between the EIFS and the wall sheathing.

**R703.9.3 Flashing, general.** Flashing of EIFS shall be provided in accordance with the requirements of Section R703.8.

**R703.9.4 EIFS/EIFS with drainage installation.** All EIFS shall be installed in accordance with the manufacturer's installation instructions and the requirements of this section.

**R703.9.4.1 Terminations.** The EIFS shall terminate not less than 6 inches (152 mm) above the finished ground level