DIY EIFS Inspection

1 — Last update: Sep 03, 2023

Modern Wall Systems

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1. About This Manual

Modern Wall Systems

A complete do-it-yourself EIFS inspection guide.

Learn what to look for to prevent major damage to your property.

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This manual outlines the proper steps in inspecting your EIFS or stucco property for moisture intrusion and damage that can lead to costly repairs if left unattended. Although the information and equipment provided in our “DIY EIFS Inspection Kit” are all you will ever need to determine the current condition of your EIFS clad property, when buying or selling EIFS clad properties, many cities require EIFS inspections to be performed by third-party inspectors.

We also believe that nothing is better than the professional experience and knowledge that an EIFS/Stucco expert brings to every inspection.

ORDER YOUR EIFS INSPECTION TODAY!

This DIY EIFS Inspection Kit is for property owners or industry professionals who want to perform their own EIFS inspections to better understand the condition of the EIFS on their properties or want to learn the EIFS inspection procedures as recommended by EIMA.

The information contained in this manual *is for information purposes only, but we are sure you will find the information very useful.*

1.1. Disclaimer

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This website and the material covered are for informational purposes only.

We take no responsibility for what you do with this knowledge. We can not be held responsible for any property or medical damages caused by anything you read about on our website.

Your use of equipment needed to perform the EIFS inspections is done at your own risk. Remember to practice safety precautions at all times.

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Terms and Conditions

Ed Santana
Modern Wall Systems

1.2. EIFS Definitions

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Accessory: Any component installed in conjunction with an EIF System manufactured by that other than the system's manufacturer other than specific system components such as Portland cement and fiberglass reinforcing mesh. (i.e. starter tract, control joints, mechanical fasteners)

Aesthetic Joint/Reveal: An aesthetic joint/reveal is a shaped groove cut into the insulation board prior to the installation of the base coat and mesh. It serves as a design feature as well as providing a natural stopping point during the installation of the finish material. At no time can any portion of an aesthetic joint/ reveal be a flat horizontal surface.

Adhesive: Cementitious and Non-cementitious adhesives. Cementitious, either premixed dry base or polymer-based adhesive that is to be mixed with cement. Typically used for the attachment of EPS to gypsum, cement board or unpainted masonry substrates. The non-cementitious adhesive is a one-part incombustible adhesive typically used for the attachment of EPS to wood substrates.

Backer Rod: A closed-cell foam rod installed in a joint that is to receive sealant. Its purpose is to control joint depth and configuration as well as prevent three-sided adhesion.

Base Coat Adhesive: Cementitious and Non-cementitious base coats are applied to the face of the insulation board and which the reinforcing mesh is imbedded.

Brown Coat: The second coat of Portland cement plaster installed in a conventional hard coat stucco system. This coat is for leveling the wall surface in preparation for the installation of the finish material.

Casing Bead: Used as a stucco stop and exposed to eliminate the need for wood trim around window and door openings; also recommended at junction or intersection of plaster and other wall or ceiling finishes, and as a screed.

Cladding System: All components of the exterior of a building including but not limited to cladding material, windows, roof, flashings, and sealants.

Class PB EIFS: a polymer-based system applied over expanded polystyrene (EPS) board attached to the substrate with adhesive and/ or mechanical fasteners. Basecoat thickness will vary depending on the weight of fiberglass reinforcing mesh and the number of mesh layers covering the entire surface. Primer may be installed over the cured basecoat but is optional or by system specification. A Textured or non-textured finish coat is applied to primed or non-primed base coat.

Class PI EIFS: a polymer-based system applied over polyisocyanurate (PI) board attached over open (steel stud) framing or a solid substrate. Basecoat thickness will vary depending on the weight of fiberglass reinforcing mesh and the number of mesh layers covering the entire surface. Primer may be installed over the cured basecoat but is optional or by system specification. A textured or non-textured finish coat is

applied to primed or non-primed base coat.

Class PM EIFS: a polymer-modified, mechanically fastened EIFS. Insulation board and fiberglass reinforcing mesh are both mechanically attached to the framing and/ or substrate. Typically PM systems call for vinyl or zinc-coated trim accessories. Basecoat material ranges in thickness from ¼ to 3/8 inches. The base coat can be coated with a primer, depending on specifications. The finish material is applied over the primed or unprimed base coat.

Cold Joint: Occurs when a wet edge is not maintained. This can typically be avoided with proper scaffold, sufficient manpower, and aesthetic reveal/ joints.

Corner Bead – Expanded: A general-purpose corner bead is economical and most generally used. Has wide expanded flanges that are easily flexed. Preferred for irregular corners. Provides increased reinforcement close to the nose of the bead.

Cornerite: Galvanized Diamond Mesh Lath used as reinforcement.

Control Joint: Designed to relieve stresses of both expansion and contraction in large stuccoed areas. Made from roll-formed zinc alloy, it is resistant to corrosion in both interior and exterior with gypsum or Portland cement plaster. An open slot, ¼” wide and ½” deep, is protected by a plastic tape that is removed after plastering is completed. The short flanges are perforated for keying and attachment by wire-tying to metal lath or by stapling to gypsum lath. Thus the plaster is key-locked to the control joint, which not only provides plastering grounds but can also be used to create decorative panel designs.

Curing: This is one of the most critical aspects of good stuccowork. Cement is plaster requires water for hydration and to develop its full strength. If inadequate water is present, cement hydration is incomplete, producing weaker stucco. Curing during the early days of each coat is essential since shrinkage stresses tend to be high while the plaster has not yet gained full strength. Curing does not reduce overall shrinkage but it does delay it so that the plaster can gain strength and is thus better able to resist shrinkage stresses when the plaster dries later.

Direct-Applied Exterior Finish System (DEFS): An exterior finish system without an insulation board. Basecoat, regular or fiber-reinforced, fiberglass-reinforcing mesh, if required by the system manufacturer and finish coat applied directly to an un-insulated substrate.

Drainage Mat: One type is a three-dimensional core consisting of fused, entangled filaments and a second is a non-woven fibrous, plastic mesh. Both are used as a spacer to create a drainage plane.

Drainage Plane/Cavity: The space between the EPS insulation board and the weather/ moisture barrier through which incidental moisture can intercepted, conveyed, and drained to the face of the cladding system. Two types are drainage mat and fluted EPS.

Efflorescence: A crystalline deposit, usually white, that may develop on the face of a cementitious base coat, possibly from exposure to rain or damp conditions. Efflorescence deposited on the face oat is a bond breaker and will prevent adhesion of the finish or coating.

EIFS: Exterior Insulation and Finish System. A non-load-bearing exterior wall cladding system consisting of a thermal insulation board, adhesively and/ or mechanically attached to the substrate, basecoat with reinforced fiberglass mesh, and a textured finish coat.

EIFS-MD: EIFS with a drainage plane. A non-load-bearing exterior wall cladding system consisting of a thermal insulation board, adhesively and/ or mechanically attached to the substrate, base coat with reinforced fiberglass mesh, and a textured finish coat with a drainage plane allowing incidental moisture to drain to the face of the cladding system.

Embed: a method implemented to encapsulate the fiberglass reinforcing mesh in the basecoat

EPS: (See Insulation board)

Expansion Joint: a complete structural separation of building elements that allows for independent movement of abutting elements without damage to the assembly. Typically this is a separation through the EIFS as well as the substrate and framing or masonry.
Factory Mixed: a material that is delivered from the manufacturer ready to use from the container. (i.e. finish coatings and non-cementitious base coat)

Field Mixing: the mixing of a manufacturer-supplied material with additional materials not manufactured by the system manufacturer. (i.e. EIFS base coat and Portland cement)

Fasteners: Plastic washers used in conjunction with non-corrosive screws to attach both Class PB and PM insulation to the substrate and/ or framing. There is a great difference in the plastic washer used in the two different systems. Fasteners are considered an EIF System accessory.

Flashing: A non-corrosive material of metal or plastic at a systems termination or interface with an opposing cladding component used to drain moisture to the face of the wall assembly.

Finish: A textured and colored material, trowel or spray applied over the reinforced base coat with a graded aggregate of either silica or marble.

Insulation Board: Aged, molded, expanded or extruded polystyrene (EPS) foam. One pound expanded polystyrene is used with a Class PB or MD EIF System. Extruded polystyrene is used with a Class PM EIF System. Also, there is Polyisocyanurate insulation that is typically used with a Quick R system.

Lamina: Base coat, fiberglass-reinforcing fabric/ mesh and finish coat as a composite unit. Sometimes a primer coat is also incorporated, depending on the application and manufacturer’s system requirements.

Metal Lath: Metal lath embedded within the stucco provides reinforcement. It is readily shaped to ornamental contours to a degree not possible with other stucco bases. Metal lath is a mesh material formed from sheet steel that has been slit and expanded to form a multitude of small openings. It is made in Diamond Mesh and Rib lath types and in two different weights for most types. Manufactured from steel protected by a coating of black asphaltum paint. Diamond Mesh and 3/8” Rib lath are also available in galvanized steel.

One Coat Stucco (OCS): A factory blended, fiber-reinforced, Portland cement stucco base coat formulated for assured strength and durability.

Penetration: Any location in an EIF System where an object passes through all components of the system such as a window, door, lightbox, etc.)

Primer: A paint-like coating (tinted or untinted) installed over the base coat to enhance adhesion, equalize suction, and improve the workability of the finish material.

Reinforcing Mesh: Standard reinforcing mesh is a nominal 4.5 oz./sq. yd., symmetrical, interfaced open-weave glass fiber fabric made with a minimum 20 percent by weight alkaline resistant coating for compatibility with base coats.

Reinforcing Mesh – High Impact Mesh: Minimum 15 oz./ sq. yd., high impact, double-strand, interwoven, open-weave glass fiber fabric with alkaline resistant coating for compatibility with base coats. High impact mesh is also available in 20 oz./ sq. yd. from most EIFS manufacturers.

Sealant: Installed with or without a backer rod for the purpose to allow thermal expansion and contraction of dissimilar cladding components to prevent moisture intrusion at system penetration and terminations.

Sealant System: The use of a primer, backer rod, or bond breaker in conjunction with the installation of sealant.

Scratch Coat: The first coat of Portland cement stucco installed over metal wire or lath. This first coat should be a minimum of ¼" thick, measured from the backing to adequately cover the metal wire or lath, and still leave enough stucco to permit deep scratching (horizontally) to give a good mechanical key for the next coat which is the brown coat.

Stucco: *Conventional Hard Coat:* A solid cement plaster cladding of Portland cement and sand often containing lime, plasticizers, or other admixtures, applied over rigid or non-rigid backing fixed to wood or steel stud framing and reinforced with metal wire mesh or lath.

Substrate: The wall surface to which the EIFS is attached. Acceptable substrates include exterior grade plywood, oriented strand board, exterior grade gypsum sheathing, glass-faced gypsum board, cement board, clean unpainted masonry, concrete free of paint sealers and oils or contaminants, structurally sound unpainted clean Portland cement stucco.

Surface Mounted Objects: Anything attached to the face of the EIFS that penetrates the lamina. (i.e. light fixtures, downspouts) Each EIFS manufacturer has specific details for the attachment of surface-mounted objects.

Strip Lath: (see Cornerite)

Weather/Moisture Barrier: A sheet good or wet applied coating installed at the face of the substrate as a moisture barrier or drainage plane.

Wrapping: The process of totally encapsulating all EPS to seal and strengthen the system by bringing reinforcing mesh around the system terminations, embedded in the basecoat. Wrapping is also referred to as back wrap or edge wrap.

1.3. EIFS vs. Stucco

From time to time I am asked “Which is better, EIFS or stucco?” In my opinion, conventional stucco systems are obsolete in that one can achieve all the benefits of conventional sand and cement stucco with modern EIFS, and then some. That said, if applied correctly both systems will last for decades if properly maintained but you have to remember that traditional stucco cracks more often than EIFS because of the weight.

Stucco is a durable material that can enhance curb appeal and protect your property from the elements by forming a solid shield around the structure. (when properly installed) Traditional/hard-coat stucco can be less expensive than synthetic stucco systems, (EIFS) so it’s easy to understand its popularity.

Which one is best for your property?

Though both systems sound similar at first, EIFS and traditional stucco have differences that change how the stucco functions. Let’s have a look at the differences between stucco and EIFS.

WHAT IS TRADITIONAL STUCCO?

Generally, when someone is talking about regular stucco, they are referring to the traditional style that is a natural mix of Portland cement, limestone powder, sand, and water. Stucco is applied to a building using a 3-coat system over a metal lath base. From there, it is spread with the trowel over the ceiling, walls, and other surfaces where the stucco is being applied. Textured finishes and colors can be added to enhance the overall look and feel.

BENEFITS OF TRADITIONAL STUCCO

Traditional stucco has been a long-standing favorite in architecture for good reason: It’s a beautiful siding to work with. It’s also highly affordable for both homeowners and contractors.

Stucco cures quickly, is easy to repair, and any remediation that is eventually required is not much of a hassle. You can’t add as many decorative elements to stucco.

CONS OF STUCCO

1. Stucco is heavy, weighing about 10 pounds per square foot.
2. When damaged, traditional stucco requires remediation of an entire wall.
3. Stucco is prone to cracking over time, as well as water damage. If water gets into a traditional stucco system, there can be cracking, peeling, chipping, and even structural damage throughout the whole wall.
4. Stucco is susceptible to buckling in extreme weather. It can become very high maintenance in places with quickly changing seasons and varying weather patterns.

WHAT IS EIFS?

Unlike traditional stucco that utilizes natural ingredients and mesh, External Insulation and Finishing Systems (EIFS) stucco uses layers that add in synthetic materials. The first layer is comprised of a polystyrene foam board. Then, that is followed by a fiberglass mesh and a finishing coat. Some systems add in water-resistant barriers or other layers. When such layers are applied, EIFS provides more protection and

insulation than traditional stucco.

BENEFITS OF EIFS FOR YOUR HOUSE

The leading reason EIFS has gained popularity is the increased insulation. EIFS is more flexible than traditional stucco as well, so there is less cracking and crumbling as a result of shifting foundations or thermal expansion. The fiberglass layer provides more impact and crack resistance.

EIFS is lighter than traditional stucco by approximately 80% than hard-coat, and has a higher R-value, coming in between 4 and 5.6, which is notably higher than the 0.20 R-value of regular stucco. (R-value determined by the size of EPS, 1,2,3", etc)

CONS OF EIFS STUCCO

1. The installation process for EIFS stucco is much more complicated and time-consuming than traditional stucco. The multiple layers also need to be installed by an expert, since the risk of error runs high.
2. EIFS is more costly than traditional stucco.
3. You need to hire a professional contractor to install EIFS.
4. Without a trustworthy and experienced contractor on the team, EIFS is easy to mess up, and that can result in a lack of water resistance and long-term damages down the road.

WHAT IS THE BEST FOR YOUR HOME?

When you consider the differences in cost, installation, and maintenance, you might end up asking questions such as, "How do I decide what's best for my home?"

The answer depends on the very factors that separate traditional and synthetic stucco. A general rule of thumb is this:
Consider your budget, whether you would like a stylized wall or color, and your climate. If you live somewhere that receives a lot of inclement weather and precipitation, you might want a properly installed EIFS house. If you live somewhere with more constant temperatures and drier air, than traditional stucco might be best for you.

There is no denying that EIFS is a versatile and durable system, despite the higher price tag.

Now that you know the differences between EIFS and stucco, what else would you like to know? If you are looking for more information about these systems or have questions that were left unanswered, don't hesitate to get in contact with us. Fill out the contact form to get more information delivered right to your inbox! We're happy to share our years of knowledge and experience with you.

Contact us today.

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2. EIFS Moisture Problems

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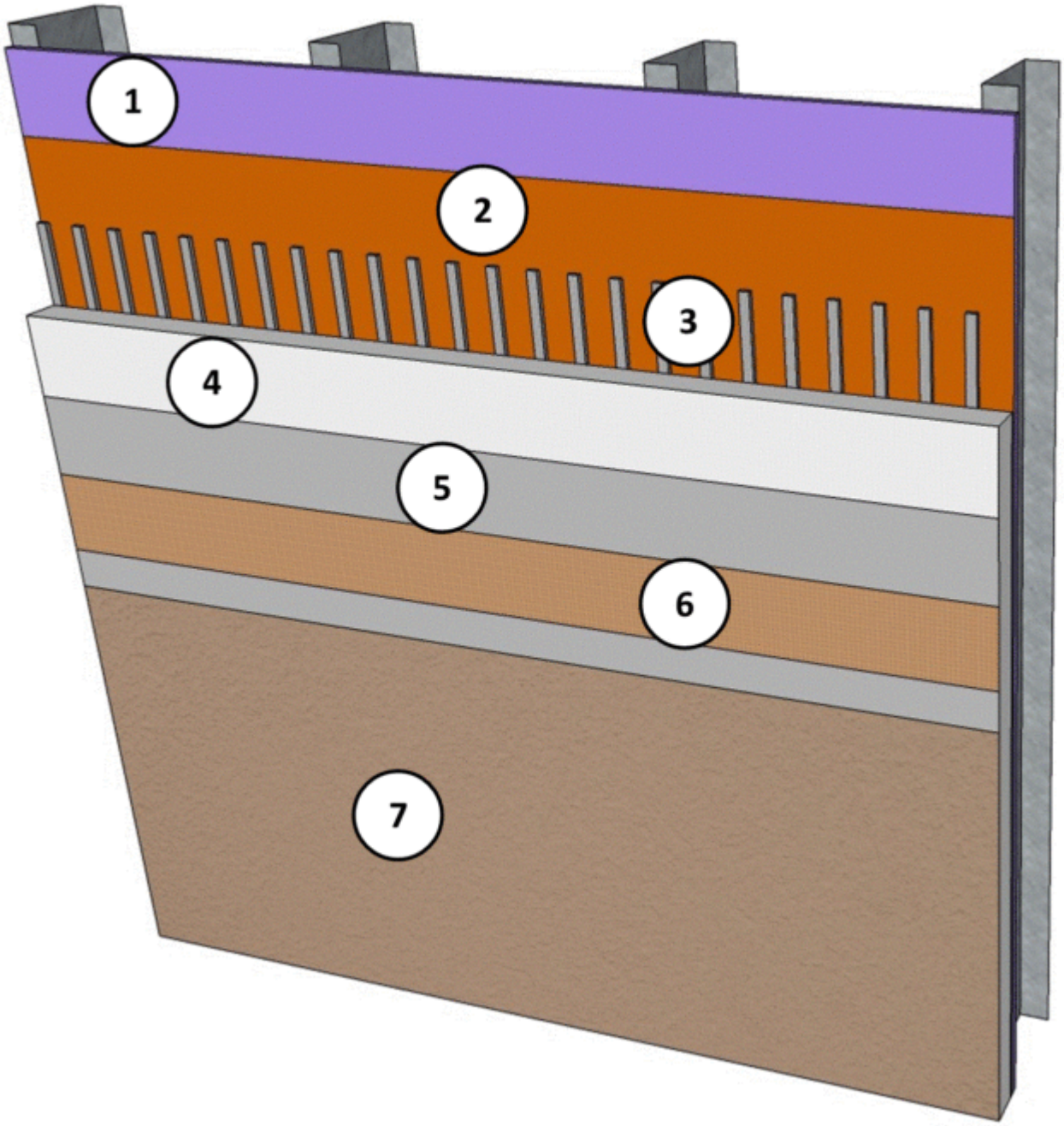
Exterior Insulation and Finish Systems (EIFS) are multi-layered exterior wall systems that are used on both commercial buildings and homes. They provide superior energy efficiency and offer greater design flexibility than other cladding products.



1. Framing and Approved Substrate (by others)
2. Rollershield Liquid-applied Air/Water Barrier (LAB)

3. Vertical notched adhesive and drainage channel
4. Master Wall Insulation Board
5. F&M or MBB Base Coat
6. Standard Mesh minimum
7. Superior Finish

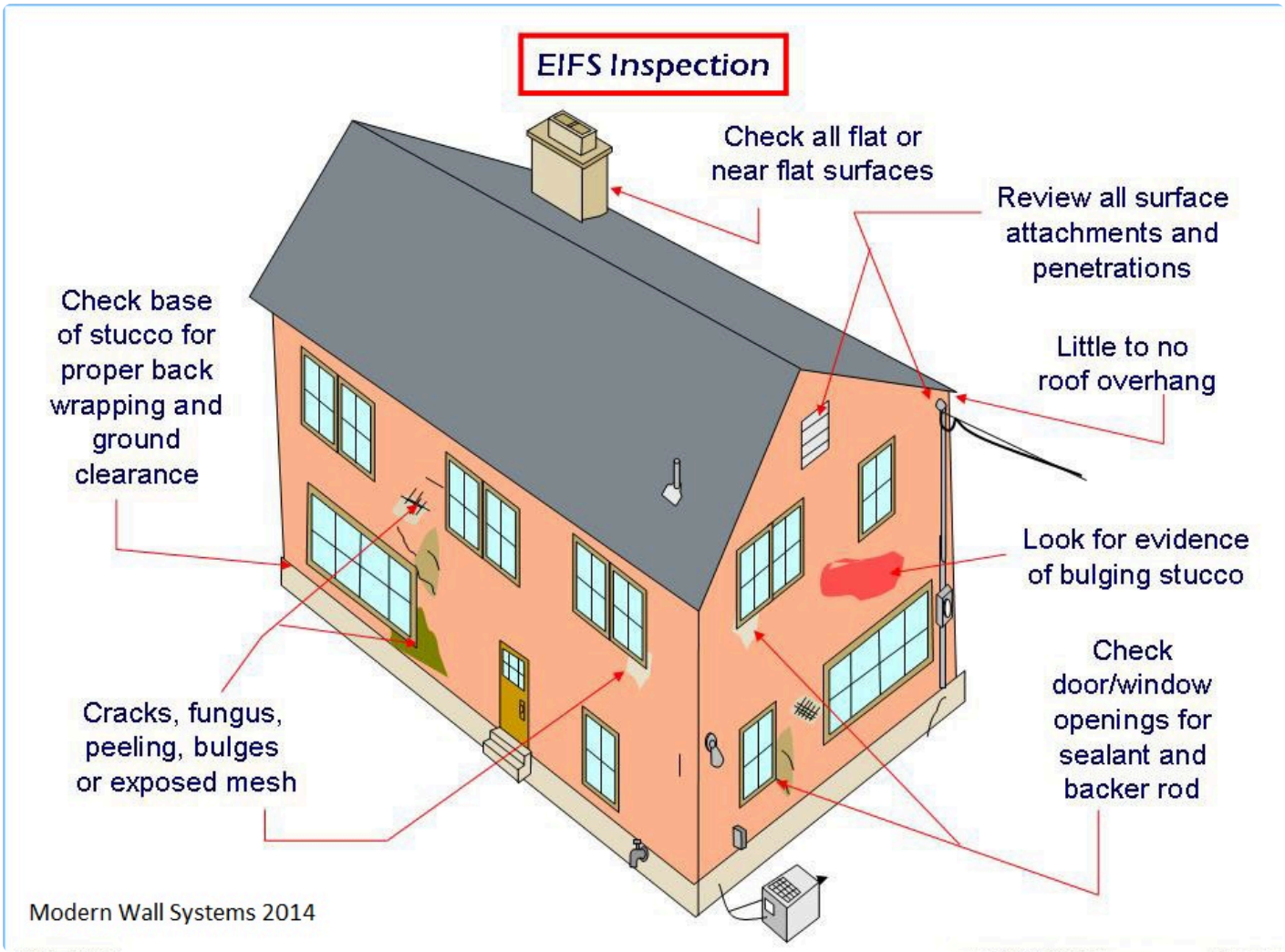
Developed in Europe in the 1950s, EIFS was introduced in the U.S. almost 50 years ago. They were first used on commercial buildings, and later, on homes. Today, EIFS accounts for nearly 40% of the U.S. commercial exterior wall market.

Should defective EIFS be ripped off or not?

The answer is uncomplicated and applies to practically all types of cladding. For starters, you must go beyond the symptoms of water intrusion problems, and find the actual sources of the leaks. Most EIFS problems occur in residential construction due to a lack of quality control initiatives in the field at the time of construction. EIFS is not a cladding the average homeowner can repair, so if damage is found it is wise to hire an EIFS repair contractor who has been trained in the repair of EIFS structures by manufacturers.

Before you hire any so-called EIFS expert remember to do your homework and ask for references.

CLADDING AND THE BUILDING ENVELOPE: EIFS and other forms of cladding do not normally fail. That is to say, water does not penetrate directly through the surface of the cladding. It penetrates the building envelope.



Moisture intrusion issues? *Please Read: "Understanding Water" by Steve Peklenk**

The envelope includes secondary moisture barriers such as felt paper and Tyvek, flashing, and the primary moisture barrier which includes windows, doors, cladding, and sealants. The points of water intrusion are identical in virtually every condo or residential project I inspect. The windows were not flashed or caulked adequately and leaked at the lower corners, kick out or diverter flashing was not installed at roof/wall intersections, allowing roof runoff to get behind the cladding, and decks were not properly flashed.

If the above conditions did not exist, there would be no water damage.

BAD ADVICE? Many so-called EIFS professionals are quick to say, “You have a leak. Rip it off”.

The real answer: Most EIFS clad structures do not have to be stripped entirely but instead, all areas of possible damage should be strategically demoed by a qualified EIFS contractor. So please, do not rip off your EIFS without substantial forensic investigation.

1. Check roof/wall intersections to see if kick-out flashing has been installed to divert the flow of water away from the vertical wall.
2. Check the lower corners of windows for any gaps in the corner miters, and probe the sealant to determine if it is still flexible.
3. Look for any bulges at the second-floor line.
4. Carefully check your deck, if it is wood frame and attached to the house there should be visible flashing and no sign of wood rot.
   EIFS should not be installed below grade, so when replacing mulch, first remove the old mulch.
   85% of all remediation costs on residential buildings is less than $2,500 and is usually a maintenance issue. Keep in mind, water intrusion is cumulative. The longer water penetrates the building envelope, the greater the potential damage. If only everyone had used cement board instead of plywood back when EIFS was going up everywhere in the 80’s and 90’s then we wouldn’t have the issues we see today.

CONCLUSIONS: When your home leaks, it’s a warning sign of the problem. Something in the building envelope is usually the problem. If you have leaks in the ceiling, it may be the roofing, but it may also be flashing or clogged gutters.

Treat your home the same way your doctor treats your medical ailments. Symptoms are due to causes, and causes are what must be treated. Don’t waste your time treating the symptom (like slapping caulk on everything), it will just mask the core cause and could lead to more severe problems.

If you own an EIFS home, don’t panic.
If you plan to sell your EIFS home, get it inspected prior to putting it on the market, as any respectable real estate professional would suggest.
If you plan to buy an EIFS home, require an inspection as a condition of purchase.

2.1. EIFS Kick-Out Flashing

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A classic example of why you should always hire EIFS professionals for all things EIFS. 10 years down the road, when all the framing below the flashing is rotted out, who will get the blame? The EIFS or stucco guy. Clearly, the problem lies with the roofer and their flashing installation.

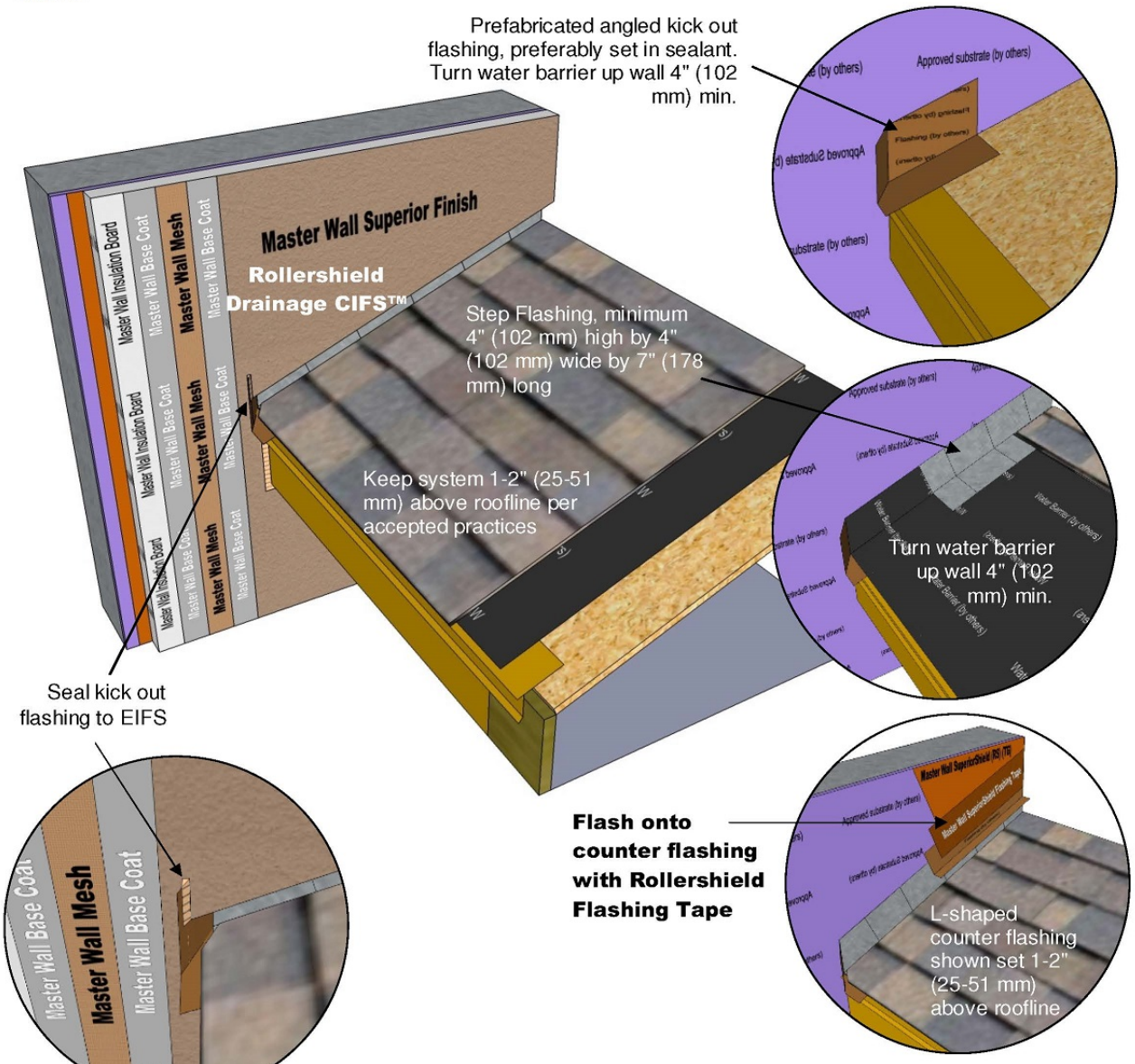
Kick-outs or diverters are typically manufactured from a recyclable engineered preformed non-corrosive, non-conductive, UV-resistant, Thermoplastic PolyOlefin (TPO) material designed for extreme weather conditions. They will not rust, corrode or conduct electricity, while their flexible, seamless construction can withstand ice damming and wind-driven rain.

These self-positioning, seamless kick-out diverters are designed for consistent placement to work with multiple roof pitches and remove the guesswork of in-field trial and error, eliminating failures. Proportionally sized to re-direct the large volume water runoff focused at roof eave-to-wall intersections.

- Use at any roof-to-wall intersections
- Designed to divert water into the gutter system
- Ensure that water will not enter the siding
- Reduce the possibility of mold due to water entering walls
- Reduce foundational damage by keeping water routed through the gutter
- Other colors are available upon request.

The proper roof/EIFS termination is critical and should always be installed by qualified professionals.

Rollershield Drainage CIFS™ – Continuously Insulated
Section 07 24 19



RDCIFS-41 KICK OUT FLASHING

Model Link: https://3dwarehouse.sketchup.com/model/229ecef5-fd2f-4964-bb5f-2a72cd9f1bad/Rollershield-Drainage-CIFS%E2%84%A2-Rook-Kick-Out-Detail

2.2. Does EIFS Really Leak

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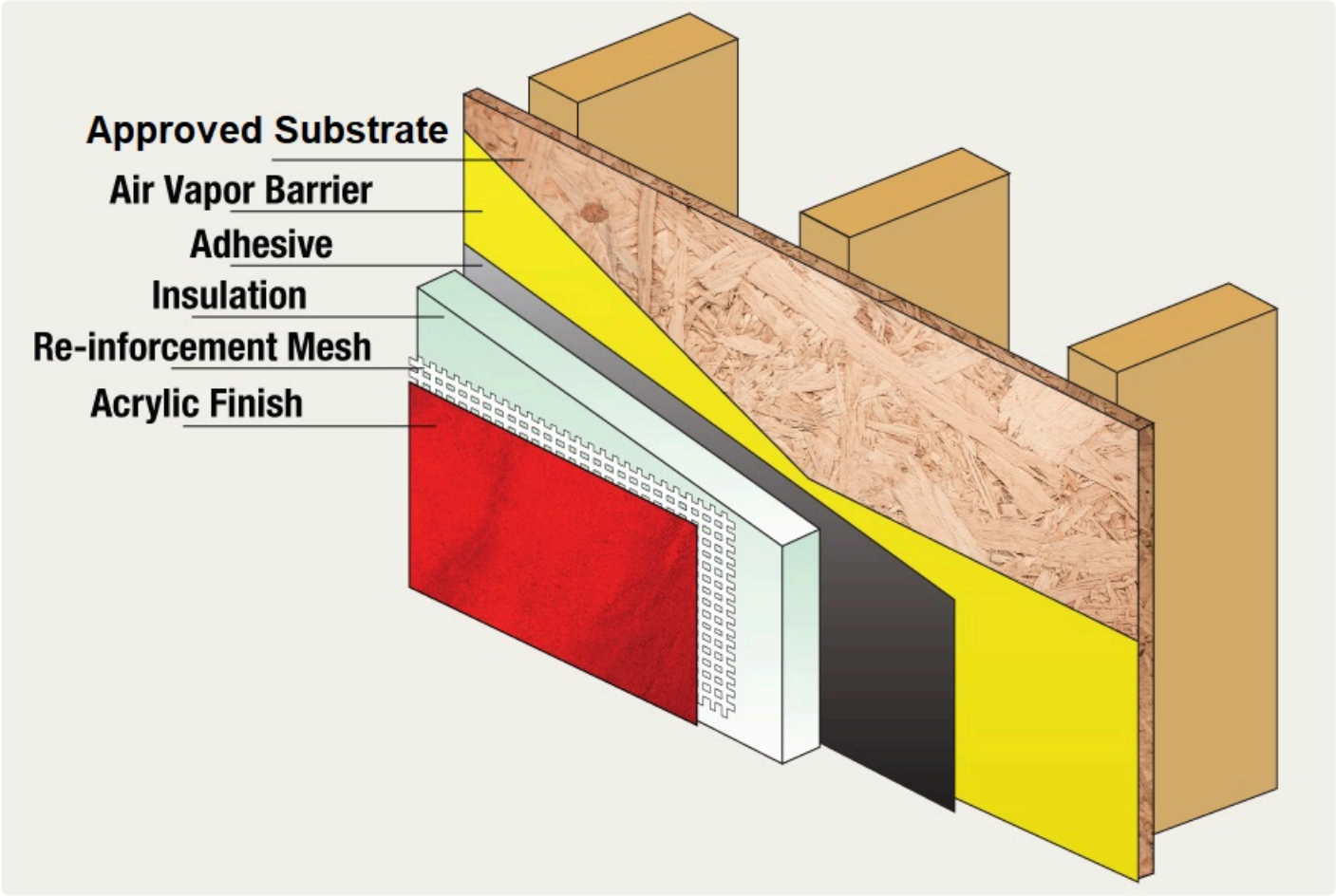
Does EIFS Really Leak? Learn More.



2.3. Caulking

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Always use an approved EIFS Sealant when caulking EIFS.
A low modulus-approved sealant is used as a weather sealant in order to seal terminations. This sealant is used in order to have the best paint-ability where painting is required. A durable watertight, flexible seal will form and the adhesion to EIFS and other porous surfaces is reflected in an outstanding curb appeal for your building.

Master Wall or any premium primer will be acceptable in order to ensure proper adhesion to the EIFS and other porous surfaces such as masonry surfaces. Metal and non-porous surfaces must be clean and rust-free. You may use a solvent to clean it with, which is available at most building supply houses.

Read more…

3. DIY EIFS Inspection Checklist

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EIFS, STUCCO, ROOFING & MORE

EIFS INSPECTION GUIDE

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MWS# 07240-EIG

Topic: Owner's Responsibilities for Cleaning and Maintenance of Exterior Insulation and Finish Systems

Related Technical Bulletins
Repairing EIFS
Sealant Use
Window Considerations
EIFS Inspection Guidelines Stucco Cracking
Fade Resistance
Efflorescence Considerations

A wall system or building envelope consists of all the building components. This typically includes the stucco cladding, windows, doors, penetrations such as pipes and vents and roof/wall connections. A wall system is more than a single component, more than just EIFS.

Inspecting the Wall System

A thorough visual inspection of the wall system is your best defense against problems. In general, you are looking for holes, breaks or cracks that could let water in. Bulk water in large quantities can cause problems over time. All the materials should be designed to shed water including quoins, window heads and brick
ledges.

Cladding

Inspect the cladding for any punctures, breaks, cracks, wrinkles, or blisters. Note their location.

- **CIFS®, EIFS and Similar Applications** (Rollershield Drainage CIFS®, Aggre-flex EIFS, Aggre-flex Drainage EIFS, QRW1 Drainage EIFS, Insulated Concrete Form (ICF) Coatings)
  - Temporarily seal holes in the EIFS Cladding with DAP® ALEX® Painters Caulk (http://www.dap.com/) or similar product. Schedule a permanent repair with Modern Wall Systems®.
  - Cracks, bulges, wrinkles, and blisters typically indicate structural movement. Temporarily seal the opening with DAP® ALEX® Painters Caulk or similar product. Once the cause of the movement is isolated (consult a professional), the cladding can be repaired following the industry standards.

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EIFS, STUCCO, ROOFING & MORE

MWS# 07240-EIG Cleaning & Maintenance

- **Stucco and other Finish Systems or Materials** (Master Wall® Cemplaster Fiberstucco, Finishes over Stucco/One Coat Stucco, Stucco Cement Board Coating, Uninsulated Finish (UF) System, Soffit System, ProTec® and ProGuard® panel applications, Interior Finish applications, ReCote™ applications, LiMa applications)
    - Hairline cracks are somewhat typical for stucco and are generally caused by shrinkage. They should be noted but are not a structural concern. If objectionable it can be painted with a quality 100% acrylic elastomeric paint (see painting).
    - Structural cracks are usually 1/16" or larger. Some type of structural condition usually causes these cracks. Consult a professional for recommended repairs. The cracks may be temporarily sealed with DAP® ALEX® Painters Caulk or similar product while repairs are scheduled with a stucco applicator.

- **Rollershield LAB under Other Cladding Materials** (Master Wall® Rollershield LAB)
    - Maintenance of the Rollershield is not normally needed. Inspect cladding materials for degradation and leaks and repair as necessary.

Sealants

Inspect the sealants for any deterioration, breaks, cracks, or blisters. Note their location for future repair. Sealants should be visible and are generally wide. They are used to bridge the gaps between the wall cladding and other wall system components such as windows, doors, pipes, lights, and vents.

In stucco systems, sealant should also be visible at the ends and butts of control joints (V-grooves). Sealants should be properly designed and professionally applied.

Windows & Doors

Inspect the windows and doors for signs of leakage and deterioration. Make sure gaskets are in good condition, any weep holes are clear, and any debris is removed from the units on a regular basis. Check with the window/door manufacturer to determine any manufacturer-specific maintenance requirements.

Buildings in coastal areas will require special attention. Most window and door units are under-designed for the climate and can leak into the building. Most building codes now require the use of hurricane-rated components.

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MWS# 07240-EIG Cleaning & Maintenance

Flashing and Sheet Metal

Flashing and sheet metal are used to either protect water sensitive materials such as wood or to direct rainwater away from the building. Flashing and sheet metal should be check for deterioration and leaks – especially at the seams. Clear away any debris and check the following:

- Check head flashing at the tops of most windows and doors. They are usually used with most systems, but sometimes not with the Aggre-flex System. Confirm flashing requirements with the window/door manufacturer if in doubt.
- Where the roofing material meets the wall, a flashing is normally used. The most common is step flashing, small pieces of metal installed under asphalt shingles. Metal roofs usually use a continuous flashing. Where the roof ends a "kick out" flashing should be visible. This flashing directs water away from the building.
- The flashing in roofs should be visible. Usually the siding is kept up 1" to 2" but this can vary depending upon locally accepted practices.
- Flashing behind decks should be visually inspected and cleared of debris. Decks installed without flashing need to be corrected. Consult with your builder or architect for a determination.
- On commercial buildings, metal parapet caps should be inspected to make sure they are sloped, draining water to the interior of the building, and sealed at the seams to prevent water entry. Also, the face edge of the cap should be sealed to prevent any wind-driven rain.

Chimneys

Inspect chimneys to make sure it provides a watertight seal. Step flashings should be visible around the chimney and a cricket installed to divert water away from the chimney stack.

Other Penetrations

Penetrations such as electrical boxes, hose bibs, dryer vents, downspout cleats, and other terminations to make sure they are sealed. Correct any deficiencies using an approved sealant.

Other Considerations

A lot of keeping a home or building in good condition is common sense. Make sure sprinklers are not directed against the structure. Make sure the ground slopes away from the building. Do not pile mulch against the side of the home and leave a clearance of about 6" to 8" between the siding and grade. Check the roof and gutters for debris and deterioration.

On some older homes, the wall cladding may have been run below grade. Our Technical Bulletin MW#128 discusses some of the options.

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EIFS, STUCCO, ROOFING & MORE

MWS# 07240-EIG Cleaning & Maintenance

Cleaning

EIFS coatings are superior finishes. They are a 100% pure acrylic based textured coating and are available in a variety of standard and custom colors and five different textures. Depending upon the texture and climate regular cleaning may be necessary.

The easiest method is to use a garden hose to spray the wall and clean the surface. A mild household detergent such as Simple Green may also be diluted in water and the surface scrubbed with a soft bristle brush to remove stubborn dirt. Pressure washers may be used provided they are 2500 psi or less with a large spray fan pattern and always kept moving, keeping at least two feet from the surface.

Mold and mildew are usually green, pink, or black in color. It will typically grow in areas that receive minimal sunlight and/or poor air circulation or appear due to environmental conditions. A mixture of one-part household bleach to three parts water and possibly a little household detergent usually removes the growth. Always pre-wet the wall surface prior to applying the bleach and water solution and do not allow it to stand on the wall for a prolonged period prior to rinsing. Flowers and shrubbery may be affected by the solution and it is recommended that the vegetation be watered and protected. Always use safety goggles, gloves and protective clothing when using a bleach solution.

Stains that are exceedingly stubborn will probably require a specialty cleaner. This would include very stubborn dirt, mold, mildew, sprinkler rust stains, tar, and efflorescence. Specialty chemicals are available from these companies:

Demand Products	www.demandproducts.com	800-325-7540
EaCo Chem Inc.	www.eacochem.com	724-656-1055
Prosoco Inc.	www.prosoco.com	800-255-4255
ShoreBest Corporation	www.shorebest.com	800-860-4978
Wind-Lock Corporation	www.wind-lock.com	800-872-5625

Maintenance Products

There are a variety of products available that help with wall system maintenance. Below is a listing of products and their use:

ShoreBest Corporation	*2650 EIFS Protective Clear Coat* *2660 EIFS Graffiti Remover**
Wind-Lock Corporation	*Titan Penetrating Sealer*

*See Technical Bulletin MW#155 for additional information

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Painting

Painting the finishes are not normally necessary but it can be done using a high quality 100% pure acrylic paint. Do not use an oil or solvent-based product over EIFS products.

Owners of stucco may wish to use an elastomeric paint, which bridges minor cracking.

Compatible Paint Coating Products

Master Wall Inc.®	DuraCote, flat/semi-gloss premium coating Elasto-flex, flat elastomeric coating Roller-flex, flat coating SuperiorCote HP, premium flat hydrophobic coating
Glidden Company	Glidden® Stucco & Masonry Paint
Pittsburgh Paints	SUN-PROOF® Latex Exterior House and Trim Flat Perma-Crete® Elastomeric Coating
Porter Paints	ACRI-PRO 100® Flat Exterior Acrylic Perma-Crete® Elastomeric Coating
Sherwin Williams	A-100® Exterior Flat Latex ConFlex XL™

As always, follow good painting practices and manufacturer's instructions. Finish corner to corner and back roll for best results. Due to the texture of the finish, two coats of paint are normally required.

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Bi-Annual Inspection Checklist

Date: _____

Wall Cladding
Wall Cladding Type: _____
Punctures, cracks, breaks, wrinkles, or blisters?
Mold and/or Mildew?
Soiled, needs cleaning?

Sealants
Cracking within sealant?
Sealant Separated from Cladding?
Sealant separated from other surface?
Blisters within sealant?
Properly installed?

Windows and Doors
Windows/Doors are leaking?
Weep holes are functioning properly?
Sealant at jamb and sill intersection functioning properly?
Mold and/or mildew on windows?

Roofs, Flashing and Sheet Metal
Are sheet metal and flashings directing water to the exterior of the wall cladding?
Roof diverter flashing installed as needed?
Parapets damaged or leaking?
Chimney crick installed as required?
Roof and flashing free of debris?
Gutters clean?

Penetrations
Penetrations properly sealed?
Penetrations properly functioning
(if applicable)?

Other Considerations
Sprinklers directed away from the building?
Grade slopes away from building?
Clearance between siding and grade?

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3.1. Tools and Equipment

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EIFS inspections don't require a whole lot of tools and equipment. In fact, you really only need three pieces of equipment.

 # 1. Ladder: The classic step ladder is common in households because of its versatility. It can be used indoors or outdoors, but it isn't very helpful (or safe) to use against a wall. Extension and telescoping ladders are great indoor/outdoor ladders that lean against walls for projects like cleaning gutters. Other ladders to consider include versatile multi-position ladders, twin ladders that can hold two people at once, podium ladders for 360-degree work, and attic ladders. *Never lean a ladder against an EIFS building without protecting the EIFS from impact damage.*

Aluminum Ladders

Aluminum ladders are lighter than most fiberglass options without compromising stability,, making them ideal for household jobs like painting. However, they are electrical conductors, so if you're planning on doing electrical work, use a fiberglass ladder instead.

Fiberglass Ladders

Fiberglass ladders are typically more durable, stable, and heavier than aluminum or wood models. They're weather- and flame-resistant, and they are not conductors of electricity, making them the best choice if you're working near power lines or electrical wires.

Wood Ladders

Wood ladders are sturdier than you might think. However, they can erode with time and when exposed to water and humidity. They are technically non-conductive, but they can be conductive when wet and some have metal bearings that are conductive.

Height

The height of a ladder and its reach height are two different considerations. Before starting your project, measure the height of the space you're working in, whether that's the height of your ceiling or roof. Different ladder styles have different reach heights to keep you safe while working. Step ladders typically have a reach height of 4 feet above the ladder height: meaning an 8-foot ladder has a 12-foot reach height. Multi-position ladders have a 1-foot reach height above the ladder height, and extension ladders have a reach height that's 1 foot less than the height of the ladder. If you're looking for an attic ladder or fire escape ladder, measure the ceiling height or height from your window to the ground.

Safety

Safety is the most important thing to keep in mind when using ladders, so make sure you're using the right ladder for the right job. Every ladder has a weight capacity and duty rating ranging from Type 3 to 1AA. Type 3 starts at a weight capacity of 200 pounds and is recommended only for indoor household use. Type 1AA is the most sturdy ladder with a weight capacity of 375 pounds for professional and home use.

When using a ladder, double-check that it's positioned correctly and on stable ground. It's also a good idea to have someone around to spot you or provide extra stability.

 # 2. Moisture Meter: NEVER POKE HOLES IN YOUR EIFS. INSIST ON NON-INVASIVE INSPECTIONS. High levels of moisture that go untreated are the main cause of harmful mold growth in the home. With the MM9 combo moisture meter, scanning large areas of EIFS is easy with the pinless pad sensor. Once moisture patches are detected, flip open the cap to expose the pin sensors for more exact moisture content readings.

- Water damage is the first sign of mold
- Use scanning pinless pas sensor to detect general areas of moisture
- Use the pins to find exact moisture content to know just how bad the damage is
- Follow moisture to its source to prevent further damage
- Check over time to be confident the problem is solved

 # 3. Smart-Phone: It takes you very little time to take a photo with your smartphone camera and sharing photos is a snap.